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Ljubljana talks in law and economics

University of *Ljubljana* FACULTY OF **ECONOMICS**
Publishing

Faculty of Economics University of Ljubljana

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Ljubljana talks in law and economics

Publisher: Ekonomska fakulteta v Ljubljani,
For publisher: Dean Prof. Dr. Metka Tekavčič

Editorial board: Prof. Dr. Mojca Marc (predsednica), Doc. Dr. Mateja Bodlaj,
Lekt. Dr. Nadja Dobnik, Prof. Dr. Marko Košak,
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Reviewers: Prof. Dr. Tjaša Redek in Prof. Dr. Jasminka Pecotić Kaufman
Proofread by: Murray James Bales

Cover page
designed by: Robert Ilovar
Design and layout: Nina Kotar

Printed by: Copis, d.o.o., Ljubljana
Edition: 100 copies

Ljubljana, 2018

CIP - Kataložni zapis o publikaciji
Narodna in univerzitetna knjižnica, Ljubljana

33(497.4:4)
34(497.4:4)

BUITEN, Miriam
Ljubljanja talks in law and economics / Miriam Buiten, Mitja Kovač. - Ljubljana : Ekonomska fakulteta, 2018

ISBN 978-961-240-346-1
1. Kovač, Mitja, 1976-
297360128

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PREFACE

The economic analysis of law, or law and economics, may be defined as "the application of economic theory and econometric methods to examine the formation, structure, processes and impact of law and legal institutions". It explicitly considers legal institutions not as existing beyond the economic system but as variables within it, while looking at the impacts of changing one or more of them on other elements of the system. In the economic analysis of law, legal institutions are not seen as being fixed outside the economic system, but as belonging to choices to be explained. This approach is not merely advocated for legal rules with an obvious link to economic realities such as competition, economic organisation, prices and profits, and income distribution, which correspond with competition law and industrial regulation, labour law and tax law. Law and economics aims to apply an economics approach not only to such areas of economic regulation readily associated with economics, but to all areas of law.

The idea of applying economic concepts to better understand law is older than the current movement, which dates back to the late 1950s. Key insights of law and economics can already be found in the writings of the Scottish Enlightenment thinkers. The Historical School and the Institutionalist School, active on both sides of the Atlantic roughly between 1830 and 1930, had similar aims to the current law and economics movement. During the 1960s and 1970s, the Chicago approach to law and economics reigned supreme. After critical debates in the United States between 1976 and 1983, other approaches came to the fore. Of these, the neo-institutionalist approach and the Austrian approach, both corresponding to schools within economics proper, are worth noting. Law and economics has progressively developed in countries outside the United States where it remains the single-most influential jurisprudential school. After the mid-1970s, it first reached the English-speaking countries, then other countries as well.

Law and economics is also a very prestigious scientific discipline and, among other prominent scholars, features several Nobel Prize laureates for economics (Ronald Coase, Garry Becker, Douglas North, Oliver Williamson, George Akerloff, Oliver Hart and Richard Thaler).

This book is setting sail on one of the most mysterious paths a human can ever take – the path of eternal scientific curiosity, doubt and the quest to establish greater wisdom. It represents an intellectual start up, an intellectual endeavour of the youngest generation of thinkers of Ljubljana, or those connected with Ljubljana, who have just entered the exciting, thrilling field of law and economics. Following the footsteps of the above-

mentioned Nobel prize winners, these students represent the best, most outstanding young intellectual potential Ljubljana has to offer to the world of law and economics. "Ljubljana talks in law and economics" represents a unique student-scholarly-expert research group in law and economics that brings together young Slovenian and European intellectuals (from the Netherlands, also the Philippines and the USA) who have identified the most pressing inefficiencies and legal problems. This book is the outcome of this research group's endeavours, providing a broad assessment of the identified problems, inconsistencies, inefficiency, legal practice and cases, together with the application of economics methodology and corresponding mitigating tools and techniques for interpretation.

The contributions cover the most intriguing and challenging issues faced by Slovenian policymakers, scholars, practitioners and law makers (addressing current case law, enforcement practices, recent legislation and jurisprudential developments in the area of contract law, public law, insolvency, health law and EU law). The problems are identified by students, national experts and national enforcement authorities (bottom-up approach) and reflect actual problems in current EU and Slovenian legal practice. The obstacles and issues so identified are then addressed in a series of chapters by the brightest and most promising minds of Slovenia or those who are in some way related to Ljubljana thinkers, students who are dissatisfied with superficial answers and instead wish to dig deeper and dare to ask the most intellectually challenging questions.

Special gratitude is also due to Professor Roger van den Bergh from Erasmus University of Rotterdam for his extraordinary, fascinating, inspiring and path-breaking series of "Ljubljana lectures" which we have been privileged to follow that provided the base model for the "Ljubljana talks in law and economics" initiative.

We are also grateful to Rebeka Koncilja, Sandra Durasevič, Barbara Leskovec Nastav, Martina Petan, Maja Urh and Aleš Popovič for their daily, round-the-clock care and immense organisational support. We are also indebted to Rhea Nina Klanjšek for her excellent English-editing service. All contributing authors would like to acknowledge their gratitude to the Faculty of Economics University of the University of Ljubljana, particularly Tomaž Ulčakar as the official responsible at the publisher.

We could not have completed this book without the cooperation and support of Schoenherr Attorneys at Law, Ljubljana (Austria-Slovenia), which kindly hosted several research meetings and provided the necessary financial support.

Finally, thanks are due to all of the contributing authors for their highly beneficial, fruitful and insightful, and enthusiastically given contributions. They were all willing to contribute on relatively short notice, for which we are immensely grateful.
This book therefore is a genuine and beneficial by-product and reflects the collective wisdom and ideas of the youngest generation of law and economics thinkers from Ljubljana, or those with some relationship with Ljubljana. We all hope you enjoy reading it.

Ljubljana – Rotterdam – Mannheim, August 2018
Miriam Buiten and Mitja Kovač

"De einige manier om beter te worden is je eigen werk afkeuren – the only way to get better is to reject your own work"

Erasmus Desiderius, "De correspondentie van Desiderius Erasmus. Deel 7: Brieven 993-1121, 1 September 1519

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GENERAL INTRODUCTION

Miriam Buiten and Mitja Kovač

1. INTRODUCTION

Commerce and manufactures can seldom flourish in any state which does not enjoy a regular administration of justice, in which the people do not feel themselves secure in the possession of their property, in which the faith of contracts is not supported by law, and in which the authority of the state is not supposed to be regularly employed in enforcing the payment of debts from all those who are able to pay. Commerce and manufactures can seldom flourish in any state in which there is not a certain degree of confidence in the justice of government.

Adam Smith in The Wealth of Nations (1776)

Adam Smith, the founding father of economics as a scientific discipline, was often ahead of his time in *The Wealth of Nations* in which he prophetically noted the crucial role of law for the wealth of nations. His marvellous insight into the role of legal institutions for the efficient functioning of markets and consequential wealth of nations actually places him as one of the first law and economics scholars. The economic analysis of law, or law and economics, may be defined as "the application of economic theory and econometric methods to examine the formation, structure, processes and impact of law and legal institutions"[1]. It explicitly considers legal institutions not as given outside the economic system, but as variables within it, and looks at the effects of changing one or more of them on other elements of the system. In the economic analysis of law, legal institutions are not treated as fixed and external to the economic system, but as belonging to choices that need to be explained. This approach is not merely advocated for legal rules with an obvious link to economic realities such as competition, economic organisation, prices and profits, and income distribution, which correspond today with competition law and industrial regulation, labour law and tax law. Law and economics has the ambition of applying an economics approach not only to these areas of economic regulation that are readily associated with economics, but to all areas of law.

1 Posner 2003.

The idea of applying economics concepts to better understand law is older than the current movement, which dates back to the late 1950s. Key insights of law and economics can already be found in the writings of thinkers of the Scottish Enlightenment. The Historical School and the Institutionalist School, active on both sides of the Atlantic roughly between 1830 and 1930, had similar aims to the current law and economics movement. During the 1960s and 1970s, the Chicago School approach to law and economics reigned supreme[2]. In the wake of critical debates in the United States between 1976 and 1983, other approaches came to the fore. Of these, the neo-institutionalist approach and the Austrian approach, both corresponding to schools within economics proper, are worth mentioning. Law and economics has progressively found its way into countries outside of the United States where it remains the single-most influential jurisprudential school. After the mid-1970s, it reached the English-speaking countries, then other countries as well.

Moreover, law and economics is also a very prestigious scientific discipline and, among other prominent scholars, features several Nobel Prize laureates for economics (Ronald Coase, Garry Becker, Douglas North, Oliver Williamson, Oliver Hart and Richard Thaler).

Further, the flowing tide of economics cannot be stopped, a tide that is indeed breaking down the walls and palisades of the almighty legal fortresses around the planet. To paraphrase Lord Denning, both lawyers and economists must learn to become amphibious if they wish to keep their heads above the water. Economics' importance for and impact on law has in recent years been generally recognised and, if you are a legal scholar, a member of the judiciary or a practising competition lawyer, mastery of economics is becoming a key tool for successful and effective decision-making. Courts, governmental authorities and litigating parties are employing an ever-growing number of economic arguments to support their cases. Moreover, economics offers a set of insights, suggestions, practical tests, econometric and statistical techniques that make application of the law more effective and efficient. Such techniques and insights enable the generation of robust economic arguments that may be employed in order to support and strengthen legal theories, the law-making process and legal arguments.

In addition, law and economics uses legal norms as variables in economic analysis of the legal system, with a focus on the following: a) the nature and origin of the existing legal system and its distribution of rights; b) the effect of the legal structure on allocative efficiency; c) the necessary conditions for the development and emergence of efficient legal structures; and d) the ways an efficient legal structure can be implemented.[3]

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2 MacKaay 1999.

3 Schaefer and Ott 2004.

Lawmakers also often ask how a different rule will alter human behaviour. Economics provides a scientific theory to predict the effects of legal rules on behaviour. Namely, for economists, different legal rules look like prices and people respond to those rules much like they respond to prices.[4] Besides efficiency, economics also predicts the effects of policies on distribution. Namely, economics understands how laws affect the distribution of income and wealth across classes and groups, thereby providing a valuable analytical tool for informed policy decision-making and day-to-day law-making.[5] To sum up, economics is a powerful tool for analysing a vast range of legal questions.[6]

This book is an embarking on one of the most mysterious paths a human can ever take – the path of eternal scientific curiosity, doubt and the quest to establish greater wisdom. It represents an intellectual starting point for the youngest generation of thinkers from Ljubljana, or those associated with Ljubljana, those who have just embarked on an exciting, thrilling field of intellectual endeavour –law and economics. Following the footsteps of the previously mentioned Nobel prize winners, these students are the best, most outstanding young intellectual potential Ljubljana has to offer to the world of law and economics. "Ljubljana talks in law and economics" is the product of a unique student/scholarly/expert research group in law and economics that brings together young Slovenian and European intellectuals (from the Netherlands, also the Philippines and the USA), who have identified the most pressing inefficiencies and legal problems. This book is the outcome of this research group, providing a broad assessment of the identified problems, inconsistencies, inefficiency, legal practice, and cases together with the application of economics methodology and corresponding mitigating tools and techniques for interpretation.

The contributions cover the most intriguing and challenging issues faced by Slovenian policymakers, scholars, practitioners and law makers (addressing current case law, enforcement practices, recent legislation and jurisprudential developments in the areas of contract law, public law, insolvency, health law and EU law). The problems are identified by students, national experts and national enforcement authorities (bottom-up approach) and reflect actual problems encountered in current EU and Slovenian legal practice. The obstacles and issues so identified are then addressed in several chapters by the most promising, young brightest minds of Slovenia or those with a Ljubljana connection, students who are dissatisfied with superficial answers, and instead wish to dig deeper and dare to ask intellectually the most challenging questions.

4 Cooter and Ulen 2016.

5 Ibid.

6 Posner 2003.

This book represents an intellectual starting point and addresses the importance, implications, practices, problems and the role of law and economics in various areas of legal scholarship. It contains 11 chapters, all written by either expert attorneys or the most gifted students in the field. Each chapter provides a thorough analysis of a certain topic related to law and economics, a review of cases and decisions and a personal reflection on avenues for future research.

This book is divided into five parts. Part I deals with topics of contract law and economics, Part II with different topics of European Union law and economics, Part III looks at corporate law and economics, insolvency and class actions, Part IV reflects on health and public law and economics, while Part V presents discussions on labour law and economics.

Part I of the book features Bente van Hattem. In her insightful opening chapter on the ever-perplexing issue of surrogacy contracts, she asks whether one should treat a baby as a commodity. In this chapter, van Hattem advocates the mandatory judicial preauthorisation of each individual surrogacy contract and argues that surrogacy contracts should be checked on a case-by-case basis before a surrogacy is set in motion in order to detect any abuses during the negotiation procedure. Moreover, she argues that such a system ensures that both parties are informed as required and meets the requirements of the legal system applying in the relevant country. The sources of inefficiency that may arise and influence the contract during the surrogacy process are thereby minimised.

Andreja Fakin and Klara Ogrizek in Chapter 2 address the puzzling issue of psychological pressures in the law of obligations and their economic impacts. This chapter considers some examples of psychological pressures (surprise, time pressure, gratitude, consumer guilt) and their legal regulation in (consumer) law. The chapter argues that where there are exogenous influences on the decision-making process manifested in psychological pressures (surprise, time pressure, gratitude, consumer guilt), the right to withdraw from the contract is an inefficient legal instrument from the perspective of law and economics. These influences are better regulated by the institute of undue influence since it enables an assessment of the facts in each individual case, while encouraging consumer diligence when entering into legal transactions, thus ensuring greater efficiency in the long term.

In Chapter 3, Paul Aubrecht argues that the way judges handle economic evidence depends considerably on the institutional context. In common law jurisdictions, the preclusion of claims involving new technologies and practices from public adjudication holds the potential to frustrate the production of precedent and harm public welfare, while in civil law jurisdictions the production of decisions and information will be

frustrated. Aubrecht then argues that the use of arbitration and preclusion of class actions for a claim that has no possibility of leading to the production of precedent may benefit public welfare by lowering the cost burden on public courts. The weighing up of social costs and private costs against the social benefits and private benefits can point to a combination of rules and procedures that can be used to maximise welfare for a given tort claim.

Ambrož Homar in Chapter 4 examines the effect of recent aeroplane crashes on stocks of American airlines and aeroplane manufacturers that have been involved in such crashes. His chapter employs the event study methodology and shows the negative influence of crashes up to 12 days after an accident with a level of statistical significance of 99%. The average first-day abnormal return exceeds 4% and the negative effect seems to continue to influence the stock performance up to Day 6 following the accident when the average cumulative abnormal return reaches -12.5%. The results are also robust with regard to changes in the observation window.

Moreover, the paper identifies the market reaction when aeroplane manufacturers' stock price is much less pronounced. The maximum cumulative abnormal return does not exceed 1.3% in the first 15 days of trading, but seems to persist through to Day 30 and beyond. Further, the analysis shows that crashes which resulted in more than 50 fatalities are associated with higher absolute abnormal returns than those which caused 20 to 50 fatalities. In addition, the results demonstrate negative cumulative abnormal returns in the first days following a crash.

Part III of the book deals with general topics in the field of corporate law and economics. In the first chapter on the law and economics of simplified compulsory settlements, namely Chapter 5, Larisa Vrtačnik argues a delicate balance of creditor/debtor interests must be ensured in the process of simplified compulsory settlement. While creditors desire maximised returns, in the process of financial reorganisation debtors seek the company's survival while managers and shareholders of the debtor hope to keep their jobs and shares in the reorganised company. In order to make the simplified compulsory settlement procedure more attractive to debtors, the legislator has offered many 'carrots' to ensure an optimal start to the procedure, which is also in the interest of creditors. In addition, according to Larisa the regulation aims to make the procedure simpler, more affordable and faster and, to that end, sacrifices many instruments that have been put in place in the regular compulsory settlement procedure to ensure that creditors' interests are protected and the possibility of debtors misusing the procedure is minimised. While the removal of an individual safeguard and its consequences may be justified by the efficiency targeted in a simplified compulsory settlement, the question is whether that remains the case when we review the overall result of such numerous simplifications.

The next chapter (Chapter 6) deals with the question of *unus pro omnibus, omnes pro uno*. Sara Ermenc summarises in this chapter the new Slovenian class action legislation. She argues that one may confirm the effectiveness of the assessed legislation, albeit it has yet to be substantiated by case law. Ermenc states that this legislation contains instruments that will help improve judicial protection: the very enforcement of the law, the publicity, scope and circle of actively legitimised beneficiaries. Moreover, she also argues that all regulations are only actually tested in practice, and ZKolT is no exception. Ermenc emphasises that one may certainly expect changes that are indispensable for the law's development via case law and conditio sine qua non for the effective protection of legal subjects. Some experts have complained that regulation of the system provided by ZKolT is in clear contrast with the basic principles of the civil procedure, the equality of parties and the court's impartiality, which may hold some relevance. It is also true that collective (class) protection is specific such that the regulation should be adjusted to suit its characteristics.

In Chapter 7, Anja Magdič discusses the puzzling and highly significant issue of the challenges faced by the new EU directive on the quality of water intended for human consumption. She argues that the proposed new Drinking Water Directive is a legislative response to the challenges of the presence of technology. Updating the parameters and its values in line with the latest scientific research, ensuring a more holistic approach to drinking-water-related hazards, increasing transparency and reducing unnecessary bureaucracy are vital for obtaining high quality water for European Union citizens in the future. Yet, however noble the cause, the principles laid down in the Treaties should always be respected. National parliaments and their chambers are, via the process of scrutiny, the guardians of European Union legislation. For that reason, discussions on the issue of subsidiarity in the member states are essential for guaranteeing a cohesive legal system. Magdic also argues that Slovenia is no exception, especially given the huge water resources Slovenia possesses. Moreover, Magdic emphasises that, compared to other equivalent countries, Slovenia already has a very progressive policy with regard to many aspects of the proposal, especially those regarding parameters and their values.

Chapter 8 on the law and economics of drinking water is written by Julija Horvat Zeilhofer. It overviews law and economics studies on water and argues that water is a scarce natural common resource. Horvat Zeilhofer contends that arguments on the privatisation of drinking water contain contradictions. Yet, as Horvat Zeilhofer asserts, if water is considered a public good, people take water supplies for granted and do not use it rationally (free-riding problem, moral hazard and opportunism). This may in some way justify the view that water should be a marketable good. She also introduces the work of the renowned economist Elinor Ostrom who has developed three models that describe the problem of collectively managing shared resources,

models that are most often used to provide a foundation for recommending either state or market solutions. According to the theory of the tragedy of the commons, people use public resources selfishly, nobody thinks of others or the next generations. In the game theory model of the Prisoner's dilemma, individuals cannot achieve rational collective outcomes. They can only be rational within their own strategies. In the logic of the collective action model, people do not see a big enough incentive to work towards a common goal. In this model, individuals act more according to their personal needs than the common needs of society. Horvat Zeilhofer also emphasises that, to avoid the tragedy of the commons, neither central government control nor privatisation are the only possible solutions. She argues that common resources can be successfully managed. Therefore, the risk of leaving unrenewable natural resources in private hands seems much too great. The state's role is to provide a regulation that is based on the insights of economics.

In an impressive study in Chapter 9 by Aira Ramos, the author compares the cost of commonly used anti-hypertensive drugs between the innovator and generic versions, showing varying outcomes on the cost difference between the samples. Ramos argues that the narrow choice of substitutes for first-line antihypertensives, such as the diuretic furosemide and the beta-blocker atenolol that have no generic versions available in the market, nullifies the opportunity costs for patients from choosing a cheaper version for their medicine since generic versions are known to be cheaper than the brand-name product. A similar situation can be seen, Ramos argues, with the ACE inhibitor captopril as the only available drug is in generic form; while this is a cost-saving option, it negates patients' possibility of choosing their preferred drug. Concerning the result for ARB, losartan, where the price of the branded Cozaar manufactured by Merck Sharpe Dohme equals the price of Lorista that is manufactured by Krka, the equality of prices is best explained by considering the drug-pricing regulations in Slovenia because many factors are being taken into account in pricing pharmaceuticals. On the other hand, the price difference of €36, namely 23% cheaper for the generic version of the calcium-channel blocker amlodipine, is a good indicator of cost savings for patients undergoing this therapy. Ramos also finds that the market for first-line antihypertensive drugs in Slovenia is sub-optimal. The lack of generic market competition can contribute to higher medicine prices in Slovenia and, in turn, to higher health spending. The health authority should further study the mandatory generic substitution and its positive economic effects since many European countries have already adopted this policy to cut pharmaceutical expenditure. In addition, Ramos suggests that doctors and pharmacists should adjust and analyse the price of medications prior to their initial dispensing, and consistently use the International Non-Proprietary Name (INN) while prescribing to avoid brand patriotism. Ramos also emphasises that patients should be taught that the effect of generic medicines is comparable to that of the brand-name (innovator) drug.

In Chapter 10, Eva Jelovčan conducts a descriptive comparative investigation of the regulatory framework for healthcare in England, Germany and the Netherlands. She argues the assessed healthcare systems clearly show how different historical events and governmental decisions have formed and shaped respective health legislation in geographically neighbouring countries. The rise in costs, exacerbated by inefficiencies, advancements in medical technology and the rising costs of pharmaceuticals, is the biggest problem and the trigger of most of the legislative reform carried out in all three countries. Increasing the efficient use of healthcare resources can substantially improve the performance and avoid multiple aspects of serious inefficiency such as society's reduced willingness for funding, the denial and poor quality of treatment to patients in need due to the inappropriate use of resources, and wasted opportunity costs when funds could be used better in other sectors (education, technology, infrastructure etc.).

Part IV of the book deals with labour law and economics. In the last chapter, Chapter 11, Nađa Vujović provides an insightful and outstanding analysis of the economic effects of maternity leave in Slovenia. She examines the maternity leave legislation in Slovenia, compares it with that in other EU countries and investigates whether there is a link between a country's economic development, the length of its maternity leave and the percentage share of salary paid during maternity leave. However, it should be noted that the chapter exclusively analyses the maternity leave provisions and excludes the related parental and childcare leave, which in Slovenia are always combined with maternity leave. Vujović argues there is no specific link between a country's level of development and the length of the maternity leave it grants. She measures development with GDP per capita, the HDI, the Gini coefficient, unemployment rate, and gender pay gap. Vujović finds no clear trend since both EU countries with the shortest (Germany) and longest maternity leave (Sweden) are among the most highly developed. While some countries less developed than Slovenia have longer maternity leave (for example Hungary), one can also detect that countries more developed than Slovenia have longer maternity leave (like the UK). According to Vujović, a solution for extended maternity leave that might have the smallest negative impact on the economy is to set a time limit on maternity leave up to which salary is fully reimbursed to mothers, with the possibility of extending maternity leave at a lower share of salary. This may, however, entail a trade-off between time spent with children and money, which is a negative outcome as both choices bring significant opportunity costs. Moreover, her results show a positive correlation between longer maternity leave and a child's health and development of cognitive function. This might be partly due to the benefits of prolonged breastfeeding, which is more likely when maternity leave is longer. Many factors influence an individual's cognitive development, including breastfeeding and extended contact with the primary caregiver. Vujović also emphasises that investing in good parental care policies is the key factor and may result in an increase in the HDI

(since it considers, among other factors, health, education and wealth), but also in GDP. Further, Vujović argues that any trade-off between the length of maternity leave and the share of salary paid might in the long run pay off due to the possibilities of enhanced economic and societal development.

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PART I. CONTRACT LAW AND ECONOMICS

Bente van Hattem

CHAPTER 1. SURROGACY CONTRACTS: TREATING BABIES AS COMMODITIES?

1. INTRODUCTION

Surrogacy is a booming global business. The Permanent Bureau of the Hague shows the surrogacy industry grew internationally between 2006 and 2010 by 1000%.[7] Surrogate motherhood has become enormously popular in the last 25 years and is an emerging area of discussion. In the past, there was judicial and legislative silence on surrogacy because it was simply seen as a taboo.[8] However, the practice's growing societal acceptance means such silence has created problems that now call for an adjustment of the law.[9] Surrogacy refers to an arrangement between a couple who are unable to have a child due to the wife's infertility and where a fertile woman agrees to conceive the husband's child through artificial insemination, carry it to term, then surrender all parental rights to the child.[10] Surrogate motherhood gives an infertile woman a chance to be a mother. Yet, the procedure under which surrogacy is performed does not always provide all the guidelines to prevent problems from occurring. An example is the legal uncertainty about surrogacy contracts at the time of the "Baby M. case". From the moment this baby came into this world, she was entangled in a complex dispute between her biological mother and the couple who were supposed to raise the baby based on a surrogacy contract.

The main cause of the discussion on surrogate motherhood is that an agreement is involved whereby both parties, the married couple and the surrogate mother, cannot fully provide performance until the baby is born. Another controversial topic is the payment that often accompanies surrogacy. This payment determines two different kinds of surrogacy: (1) altruistic surrogacy, when the surrogate mother is compensated for costs she incurred during the pregnancy; and (2) commercial surrogacy, when the

7 Finkelstein, Mac Dougall, Kintominas & Olsen, 2016.

8 Margalit, 2014.

9 Margalit, 2014.

10 Keane, 1980.

surrogate mother receives a bigger sum of money than just compensation for the costs accompanying the pregnancy, as allowed in the American legal system.[11]

To tackle the uncertainty that may arise when using the services of a surrogate mother, an enforceable contract between the surrogate mother and the intended parents of the baby could be a solution. With such a contract, the two parties can set in concrete the terms they have agreed on. However, enforcement of such a contract appears to be difficult, as seen in the Baby M. case discussed later in this chapter.

Moreover, the legislation on surrogate motherhood varies depending on the legal system of the country in which the surrogacy takes place. In recent years, there has been a trend called "surrogacy tourism" whereby Dutch couples search in the United States for a potential surrogacy mother because the Dutch legislation is characterised by strict regulations on surrogacy.[12] Dutch case law shows that couples, particularly male same-sex couples, often travel to California to enter into surrogacy arrangements there.[13]

Why do these Dutch couples go to the USA for surrogacy? Is the legal system on surrogacy enforced there more efficient than the Dutch one? The primary question addressed in this chapter is whether particular rules and laws regarding surrogacy are more efficient than others. A potential answer to this question is formulated by comparing the Dutch and American legal systems with regard to three main characteristics, namely: (1) the use of an enforceable contract; (2) the payment accompanying the surrogacy; and (3) the procedure of surrogacy. By examining different views on surrogacy and the use of contracts and comparing two divergent legal systems, a first step is taken towards finding a suitable and appropriate regulation in which surrogacy is organised optimally and problems are minimised.

The first section of this chapter provides different views on surrogate motherhood and the use of surrogacy contracts and addresses the problems affecting surrogacy contracts. This is essential for establishing the basis for comparing legal systems in the second section. An illustration of the surrogacy difficulties that can emerge when there are no strict rules and laws follows in the third section, with a law and economics analysis of the Baby M. case and a proposal for improvements based on this. In the final section, concluding remarks are provided.

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11 Margalit, 2014.

12 https://www.rtlnieuws.nl/nederland/naar-de-vs-voor-draagmoeder-schrijnend-dat-dit-niet-voor-iedereen-is-weggelegd

13 Curry-Sumner & Vonk, p. 8.

2. SURROGACY CONTRACTS

2.1. Employment of Surrogacy Contracts

Contracts exist to provide order in the arrangement between parties for the exchange of commodities. One party wants a good or service in the future, and the other party can supply the good or service, which gives rise to the mutual desirability of a contract.[14] Parties enter a contract in order to secure investment in a mutually beneficial project[15], which may be as simple as exchanging a commodity. But are babies commodities or gifts? Posner argues that babies are commodities because they have value and can therefore be exchanged through contracts.[16] Dolgin argues that babies are gifts and that it is impossible to buy gifts for oneself.[17] A gift is a "total social fact, a fundamental structure of the relationship between people in a society, which always retains an element of its giver".[18] This means there is some kind of personality imbued in the gift. Three main obligations are involved in gift-giving: (1) the obligation to give; (2) the obligation to receive; and (3) the obligation to reciprocate.[19] Reciprocity does not have to be in material terms[20] and is something that is expected, but not demanded.[21] Gifts cannot be exchanged fairly because it is not always possible to put a price on a gift and compare it with other goods.[22]

Surrogacy contracts can be drafted in a way such that the baby is viewed as a commodity or so that the baby is viewed as a gift. Which definition of baby is used depends on whether money is transferred between the parties and, if so, when and how. Further, the definition depends on whether the contract is binding or not. When money is exchanged between the parties, the baby is regarded as a commodity but, when there is no exchange of money, the baby is viewed as a gift.

A surrogacy contract involves the creation of life and the organisation of a family, which is more than just the transfer of a commodity. Family members do not enter into contracts with each other because familial relationships are not treated as market relationships that are documented in contracts. In the marketplace, people exchange

14 Shavell, 2003.
15 Posner, 2002.
16 Posner, 1989
17 Dolgin, 1990.
18 Polese, 2008, p. 50.
19 Mauss, 2002.
20 Polese, 2008.
21 Dolgin, 1990.
22 Dolgin, 1990.

commodities and this kind of exchange does not sustain relations. Commodity exchange is an economic exchange between free agents that does not establish a commitment between people like a gift exchange does. Due to this difference between commodities and gifts, the rules applied to most contracts may not automatically apply to surrogacy contracts.[23]

On the contrary, when taking a more economics-based view and treating the baby as a commodity, surrogacy contracts make perfect sense. Surrogacy contracts would not be made unless the parties involved believe it would benefit both sides. This means that the benefits will be greater than the cost of the exchange for both parties. On one hand, the surrogate mother believes the benefits of helping a couple obtain the baby they always wished for, or, in the American legal system, the financial compensation, exceed the costs of being pregnant, giving birth and surrendering the baby. On the other hand, the intended parents believe the benefits of having a baby outweigh the costs entailed in not conceiving the baby themselves or, in the American legal system, paying the surrogate mother. So, ex ante, all parties involved in the contract are better off.[24]

The most common argument levelled against surrogacy contracts is that they are not truly voluntary because the surrogate mother does not know what she has agreed on in advance.[25] If a surrogate mother signs such a contract and does not know how distressed she will be when it is time to surrender the baby, a net increase in welfare may not be the result of the contract. If the parties signing the contract do not know what they are committing themselves to, the contract cannot be relied on to maximise welfare.[26] However, how is it possible to prove that women who are involved in surrogacy contracts, on average, overestimate the distress they feel and do not correctly estimate or even underestimate this? Most surrogate mothers already have children and, in some countries the law even provides that only women who have already given birth to a child can become a surrogate mother, such as in the Netherlands.[27] Therefore, the female involved should be able to estimate the feeling of distress when giving up the baby.[28]

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23 Dolgin, 1990.

24 Posner, 1989, p. 22.

25 Posner, 1989, p. 24.

26 Posner, 1989, p. 24.

27 Vgl. Richtlijn 18 NVOG: hoogtechnologisch draagmoederschap, 1999.

28 Posner, 1989, p. 25.

A second argument against surrogate motherhood contracts is that it is a form of 'baby selling' whereby a baby is exchanged for money.[29] Yet, people tend to forget that the baby is not only owned by the biological mother, but also equally by the biological father who, in the case of surrogate motherhood, is one of the intended parents. The biological mother does not sell her baby, she sells her parental rights.[30]

Further, the opponents of surrogacy contracts state there is a priori unequal socio-economic power of the contracting parties. This results in unequal and discriminative terms in the contract against the emotionally, economically or socially weaker party. This gap between the two parties can cause the economic and emotional exploitation of the weaker party, in this case the surrogate mother.[31] This supports the views against surrogacy contracts. Yet, modern contract law minimises this problem through multiple doctrines, such as good faith, fairness, an increased obligation of disclosure, trust, reasonableness and unconscionability. In addition, there are doctrines that allow parties to not comply with their contractual responsibilities, such as exploitation, public policy, frustration of purpose, and economic duress. These doctrines can help solve intrinsic contractual problems.[32]

2.2. Circumstances of Surrogate Motherhood Affecting Contracts

Like all contracts, surrogacy contracts entail risks. As humans are usually regarded as risk-averse, they try to minimise these risks.[33] Theoretically, a complete contract would describe all possible contingencies and risks, but transaction costs and the foreseeing of events with a low probability mean that all contracts are incomplete.[34] Actions of the couple, the surrogate mother or the course of nature can increase the risks associated with surrogate motherhood. To solve any of these sorts of problems, the court must consider the objective intention of all parties involved.[35]

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29 Lascarides, 1997.

30 Posner, 1989, p. 28.

31 Margalit, 2014.

32 Margalit, 2014.

33 A party which is risk averse will always prefer a certain profit to the prospect of fluctuating profits, provided the expected value of the certain profit is not less than the expected average of the prospective profits by more than some positive value. A risk-neutral party is indifferent between a prospect of uncertain profits and a certain profit, provided that the expected average of the prospective fluctuating profits is equal to the certain profit. A party that is risk seeking will always prefer a fluctuating profit to the prospect of certain profits, provided the expected average of the fluctuating profit is greater than the expected value of the certain profit. Chiles & McMackin, 1996.

34 Posner, 2002.

35 Lascarides, 1997.

The first kind of circumstances that may arise are those caused by the surrogate mother's actions. Problems arise when she refrains from performing her part of the obligations agreed on in the contract. Two important things can happen: (1) the surrogate mother wishes to retain custody of the baby; or (2) the surrogate mother seeks an abortion.[36]

Lascarides believes that such a refusal to perform entails a material breach.[37] With respect to the custody issue, the surrogate mother must surrender the baby to the couple. Regarding to the issue of actions, the baby can no longer be surrendered. In the American legal system, the intended parents are therefore released from the obligation to pay the money specified in the contract.[38] In this situation, the court should award the couple damages to restore the reliance.[39] Expectation damages are awarded to place the injured party in the position they would have been had the contract not been breached. Yet, crucially, how does one put a monetary value on life? This is not doable and, therefore, the court should only calculate reliance damages for the injured party, that is, the couple.[40] In line with this, Margalit argues that the surrogate mother has the most information about herself and has control over her emotions. If not, she should not have entered into the surrogacy contract. In addition, she shows that other scholars even take this a step further. If the surrogate mother has a change of heart, she should then be asked to return the money or even pay additional compensatory damages.[41] This view is supported in the American legal system where several leading decisions show that when the surrogate mother changes her mind she should not be exempted from fulfilling her contractual obligations.[42] Moreover, Margalit shows that a review of US courts' rulings reveals that in the majority of cases where the surrogate mother so reconsiders, the court rejects this as a basis for invalidating the contract.[43]

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36 Lascarides, 1997.

37 Lascarides, 1997.

38 Lascarides, 1997.

39 Lascarides, 1997.

40 Lascarides, 1997.

41 Margalit, 2014

42 See Margalit 2014, who refers to Johnson v. Calvert, 851 P.2d 776, 782 (Cal. 1993); Tanya Feliciano, Davis v. Davis: What About Future Disputes? 26 CONN. L. REV. 305, 349 n. 354 (1993). For courts' attitude towards the initial intended parenthood of the intending parents as the prevailing factor, see Janet L. Dolgin, Solomon's Dilemma: Exploring Parental Rights: The "Intent" of Reproduction: Reproductive Technologies and the Parent-Child Bond, 26 CONN. L. REV. 1261, 1294 (1994).

43 See Margalit, 2014 who refers to Matter of Baby M, 537 A.2d 1227 (N.J. 1988). For another legal dispute following a surrogate mother's change of heart, see J.F. v. D.B., 66 Pa. D. & C.4th 1, 12–16 (Ct. Com. Pl. 2004) and the other verdicts enumerated in Marla J. Hollandsworth, Gay Men Creating Families Through Surro-Gay Arrangements: A Paradigm for Reproductive Freedom, 3 AM. U. J. GENDER & L. 183, 186 n. 5 (1995).

Modern contract law offers a doctrine for dealing with the *a priori* uncertainty regarding surrogacy agreements. The relational contract theory enables a surrogacy contract to be adjusted if that is needed due to a change of mind or other altered circumstances. The common relational contract theory keeps the contract flexible and dynamic because it is not definite at the moment the contract is signed. During performance and execution of the contract, the terms agreed on are inspected as well and may be adjusted to new circumstances if both parties see this as necessary.[44]

The second kind of problems which may arise are those caused by actions of the couple. If an abortion clause is included in the contract, the couple has the right to order an abortion. However, Lascarides also considers this a material breach of the contract such that the surrogate mother does not have to perform anymore.[45] In the American legal system, the surrogate mother receives expectation damages; in other words, full payment as if the contract had been performed as promised.[46]

Problems can also occur due to the course of nature, such as a miscarriage or the delivery of twins, thereby influencing the terms of the contract.[47] The couple may claim non-performance because the other party is in breach of the contract. However, there is no material breach by either party in such situations because neither party deliberately influenced the standard process.[48] While these are circumstances that influence the contract, neither party can prevent them from happening. Therefore, performance should not be excused, unless both parties agree.[49] According to the contract's purpose, the surrogate mother has to complete one full pregnancy. Whether she gestates one or two babies or whether she has to undergo more than one pregnancy because the first pregnancy was a miscarriage does not affect the initial purpose of the exchange.[50] One important note here is that, in the case of miscarriage, the surrogate mother must act in good faith, otherwise a breach of contract would ensue. Under the terms of the contract, the surrogate mother needs to provide the service through pregnancy, refrain from any behaviour that might harm the foetus, and regularly obtain prenatal care.[51]

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44 Margalit, 2014, p. 453.
45 Lascarides, 1997
46 Lascarides, 1997
47 Lascarides, 1997
48 Lascarides, 1997
49 Lascarides, 1997
50 Lascarides, 1997
51 Lascarides, 1997

Like all other contracts, those on surrogacy should be examined for any abuses in the bargaining process, such as by way of fraud, undue influence, duress or unconscionability. If an abuse is found, the court must decide that the contract is voidable by the injured party.[52] Unconscionability requires more attention as the opponents of surrogacy often argue these contracts are unconscionable in order to make them unenforceable.[53] In the American legal system, courts can declare a contract voidable based on unconscionability only if two components are present: procedural unconscionability and substantive unconscionability. Procedural unconscionability focuses on the procedure of the contract and whether there was no meaningful choice, such as gross inequality in bargaining power, education, unfair surprise or inability to read the contract. Substantive unconscionability concentrates on the fairness of the exchange. Are there any oppressive terms which unreasonably favour one party? It is only when both components are present that the court may decide to refuse to enforce the contract.[54]

The opponents argue that surrogacy contracts satisfy both elements of unconscionability. Procedural unconscionability is satisfied because the contract benefits the prospective parents at the cost of the surrogate mother. In addition, substantive unconscionability is satisfied because surrogacy mothers must follow the advice of the doctors. This advice may include a Caesarean section or another medical procedure which is an oppressive term that is unfair to the surrogate mother.[55] However, opponents overlook one important fact: unconscionability is determined on a case-by-case basis. Cases differ in their terms and the facts that accompany those terms. Therefore, courts must review every contract and bargaining process to determine whether procedural and substantive unconscionability are present. It is impossible to generalise this to all surrogate contracts.[56]

2.3 The Enforcement Power of Surrogacy Contracts

Viewing the baby as a gift, Dolgin argues the biological mother should be granted a revocation period.[57] This period should be the same as when parents put their babies up for adoption. It provides the biological mother a chance to rethink her decision after the baby has been born. After the revocation period passes, all parental rights should be transferred to the contracting parents. The contract is fully binding at this

52 Lascarides, 1997
53 Lascarides, 1997 and Margalit, 2014, p. 449.
54 Lascarides, 1997
55 Margalit, 2014, p. 450.
56 Lascarides, 1997.
57 Dolgin, 1990.

point and enforceable thereafter.[58] Margalit also supports the idea of, as he calls it, a cooling off period in which one party can have a change of heart. She suggests that if this occurs the parties should renegotiate based on the theory of modern contract law which allows more freedom of contract, including renegotiation. She argues the parties to the contract themselves, and not the court, are best placed to decide what is the optimal solution regarding the changed circumstances.[59]

Posner stands in contrast by viewing the baby as a commodity and arguing that it follows from simple economic analysis that the contract must be enforceable to guarantee the mutual benefits. If the contract is not enforceable, why would the intended parents enter into such a contract?[60] There is be no certainty they will get the baby after it is born if the contract is unenforceable. They can insert options and rights for the surrogate mother to retain her parental rights after the baby is born, but that is up to the parties involved.

There is one important objection to Posner's line of reasoning, namely the analysis does not consider that a surrogacy contract also has effects on other parties. In particular, the baby who is born and handed over to the intended parents. The fact a third party is affected who cannot provide consent makes the claim that the transaction is no longer Pareto superior.[61] Pareto superior means that at least one person is made better off by the transaction and no one is made worse off.

Posner undermines this objection with the following argument. It is very likely the baby is made better off because, without the contract between the two parties, the baby would probably never have been born. Even if it is almost impossible to verify this, it would be extremely unlikely that, when the baby grows up, it would rather not have been born.[62]

Society does not agree on the buying and selling of any good or service. For example, people are not allowed to buy and sell slaves or enter into suicide agreements. Since the enforcement of a surrogate contract is regarded by some as endorsing the notion of the baby as a commodity, it may be placed in this category as well.[63] However, as Posner argues, allowing the enforcement of surrogacy contracts may not have such a great impact on the attitudes and norms of society since such attitudes already exist.

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58 Dolgin, 1990.

59 Margalit, 2014, pp. 461–462.

60 Posner, 1989, p. 23.

61 Posner, 1989, p. 23.

62 Posner, 1989, p. 23.

63 Posner, 1989, p. 26.

According to him, surrogate motherhood belongs to a different category, namely the category which contains heavily criticised but permitted practices . An example of such a practice is the sale of blood to blood banks.[64]

According to Margalit, surrogacy contracts may be enforced because modern contract law can successfully cope with the classical problems of contracts pointed to by their opponents . These problems are due to the inflexibility of traditional contract law. Modern contract law, on the other hand, is sensitive to the special characteristics of a contract. The modern law offers flexibility and complexity that provides better tools to cope with contractual problems. It allows the initial contract to be adjusted by the parties following renegotiation. Because surrogacy contracts deal with human rights, which are important, total withdrawal from or rigid enforcement of such contracts may cause damage and therefore might not always be the optimal solution. It is impossible to anticipate all future scenarios and modern contract law has found ways to deal with this impossibility.[65]

To ensure the enforceability of a surrogacy contract with respect to modern contract law, administrative mechanisms should be employed as soon as possible: during the contract negotiation period. The parties involved in the contract should receive independent, reasonable and sufficient legal counselling. Further, they should be given comprehensive information about the medical chances and risks that, for example, a perfectly healthy baby might not be born. Both parties should receive the necessary social, psychological and other support. In the contract, different possible scenarios should be included, such as the birth of a 'sick' child, the divorce of the soon-to-be parents or the death of a party. It is also important to make sure the economic gap between the parties does not interfere with the parties' free will, especially that of the surrogate mother. In addition, various prerequisites according the state of the surrogate mother before entering the contract can be inserted to minimise the chance of the surrogate mother changing her mind.[66]

64 Posner, 1989, p. 27.

65 Margalit, 2014.

66 Margalit, 2014, p. 464.

3. A COMPARISON OF THE DUTCH AND AMERICAN LEGAL SYSTEMS

3.1. Dutch Law

The regulation of surrogacy contracts in the legal system of the Netherlands is extensive and complicated. The surrogacy mother and the couple that wants the baby can agree on a contract, but its legal enforceability is weak.[67] The surrogacy mother cannot be forced to fertilise because it is against the self-determination of a woman over her body.[68] Moreover, the surrogate mother cannot be forced to surrender the baby after giving birth and the couple cannot be forced to accept the baby.[69]

However, the contract can force the couple to pay the costs associated with the pregnancy, the labour, and the possible loss of income due to the pregnancy. An important note here is that these expenses may not exceed the actual costs because that would then be associated with commercial surrogacy, which is illegal in the Netherlands.[70]

The Dutch Society of Obstetrics and Gynaecology's guidelines on high-technological surrogacy require clinics to draw up their own protocol regarding surrogacy.[71] The following conditions must be included in the protocol: (1) there must be medical grounds for the procedure; (2) the surrogate mother must already have one or more living children whom she gestated and gave birth to without complications; and (3) adequate information must be provided to the surrogate mother and the intended parents. Moreover, the doctor responsible should issue a statement that the conditions mentioned above have been met and that he or she justifies the treatment. This must precede the surrogacy procedure.[72]

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67 An annulment of the surrogacy contract is enabled by Article 3:40 BW of the Dutch legislation which states that a legal act cannot be contrary to order public, morality or the law. See Article 3:40 BW Dutch legislation

68 It is a fundamental right that everyone shall have the right to inviolability of his person, without prejudice to restrictions laid down by or pursuant to an Act of Parliament. See Article 11 Constitution, Dutch legislation.

69 Van Groenigen, 2012, see compelling justification in Book 1 BW, Dutch legislation.

70 See Articles 151b and 151c of the penal code, Dutch legislation.

71 *Hoogtechnologisch draagmoederschap*, Richtlijn Nederlandse Vereniging voor Obstetrie en Gynaecologie, No. 18 January 1999, <http://www.nvog.nl/>.

72 Dutch Second Chamber 25 000-XVI, No. 51, p. 2.

In all cases that do not involve IVF, the surrogate mother remains the biological mother of the baby.[73] As long as there is no commercial element and the parties involved follow the rules for transferring the child from their birth family to another family, the parties are not in breach of Dutch law.[74]

The transfer of full parental rights in surrogacy agreements will not take place if any party involved objects to. This means the surrogate mother as well as the intended parents have no legal duty to hand over or accept the baby, even when a contract has been entered into. Since in surrogacy agreements the child is below six months of age, the baby may only switch homes with the consent of the Child Protection Board.[75] The procedure differs depending on the marital status of the surrogate mother.

When the surrogate mother is married, full parental status can only be transferred to the intended parents by way of joint adoption. Before this can happen, the surrogate mother and her husband must give up their parental responsibility.[76] If the divestment procedure is successful, the intended parents can be given joint guardianship. This is almost the same as parental responsibility. It is only after one year of taking care of the child that the intended parents can file for adoption. There is no special surrogacy adoption procedure and therefore the normal criteria that apply to adoption are relevant in cases concerning surrogate motherhood.[77]

When the surrogate mother is unmarried, the baby will only have one legal parent: the surrogate mother. She will hold all the parental responsibility. The intended father may then acquire the status of a legal parent through recognition with the surrogate mother's consent. The intended father can apply for sole parental responsibility, with the result that the surrogate mother loses her parental responsibility.[78] Subsequently, the intended mother can adopt the child after she has taken care of that child for a year together with the intended father. Further, all other adoption criteria should be met.[79] The different steps entailed are shown in Figure 1.[80]

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73 Curry-Summer and Vonk, 2011, see Article 1:198 DCC.

74 Van Groenigen, 2012.

75 Article 1:241(3) DCC and Article 1 Foster Children Act *(Pleegkinderenwet)*.

76 Article 1:1228 (1)(g) and Article 1:266 DCC.

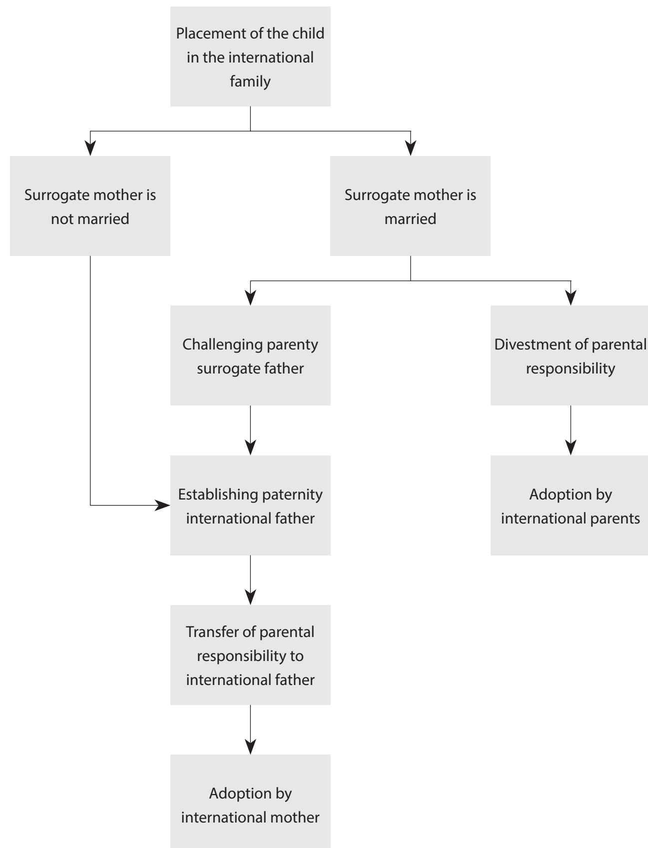
77 Curry-Summer and Vonk, 2011.

78 Curry-Summer and Vonk, 2011, see Article 1:253c DCC.

79 Curry-Summer and Vonk, 2011.

80 Reprinted from "National and international surrogacy: An Odyssey", by I. Curry-Sumner, and M. Vonk, 2011, Int'l Surv. Fam. L., 259, p. 5.

Figure 1. Overview of the necessary steps in surrogate motherhood under Dutch law



3.2. American Law

In the past, American law stated that in every state the transfer of a baby between the biological mother and the biological father is legal. American law only applied when a surrogacy contract was made between two parties. If this was not the case, the law was silent.[81]

In general, non-commercial and non-contractual surrogacy agreements did not cause legal problems because there was no payment and no binding contract. The process only involved adoption by the biological father's wife or girlfriend and the surrender of parental rights by the biological mother. When commercial and contractual

81 Dolgin, 1990, p. 525.

obligations were introduced, the process became more complex since there was a pre-birth contract which obliged the biological mother to surrender her parental rights immediately upon birth of the baby in return for financial compensation.[82] This situation is examined in the Baby M. case discussed later.

Nowadays, all federal states in the USA have different positions on surrogacy, varying from complete prohibition to full acceptance and regulation. In this sense, states can be roughly divided into three main groups: states that have legislation, states that only have case law, and states without any regulation at all.[83] To introduce uniformity across America, model laws were enacted in 1988 to provide the limits within which the states can formulate their own legislation.[84] The two main models will be discussed.

On one hand, Model A allows surrogate motherhood but only if there is a written agreement – a contract – between the surrogate mother and the intended parents. Before the surrogacy procedure starts, the judge must authorise the contract. If the contract is not approved, the process of surrogacy cannot start.[85] This is specified in section 5 of the Uniform Status of Children of Assisted Conception Act of 1988.[86]

Some of the criteria considered by a judge are the medical and emotional state of all parties involved, their living conditions, and the voluntariness of the agreement. The agreement can only be used by couples without any other possibility of becoming pregnant and the couple involved needs to be suitable for raising a baby. If the surrogate mother is married, her husband must agree with the surrogacy. Moreover, the intended parents should be given professional information about the consequences of surrogate motherhood. The costs of the pregnancy, child birth and aftercare should be arranged and compensation for the surrogate mother is possible

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82 Dolgin, 1990.

83 Finkelstein, Mac Dougall, Kintominas & Olsen, 2016, p. 8.

84 Van Groeningen, 2012, p. 37.

85 Van Groeningen, 2012, p. 38.

86 Section 5, Surrogacy Agreement

> (a) A surrogate, her husband, if she is married, and intended parents may enter into a written agreement whereby the surrogate relinquishes all her rights and duties as a parent of a child to be conceived through assisted conception, and the intended parents may become the parents of the child pursued to Section 8.
>
> (b) If the agreement is not approved by the court under Section 6 before conception, the agreement is void and the surrogate is the mother of a resulting child and the surrogate's husband, if a party to the agreement, is the father of the child. If the surrogate's husband is not a party to the agreement or the surrogate is unmarried, paternity of the child is governed by the Uniform Parentage Act.

provided it is proportional. Further, a lawyer is named to serve the interests of the unborn baby during the approval procedure. The couple can end the contract at any time before the surrogate mother becomes pregnant. The surrogate mother can end the contract within 180 days of the pregnancy commencing. When this period is over and the contract is approved by a judge, the intended parents become the legal parents of the baby.[87]

As an example, the state of California is analysed. In California, there is a law that allows and regulates full surrogacy, but only by way of contract. Compensation is also allowed for the surrogate mother yet the law provides no clarification on whether there is a reasonable limit on the amount paid to the surrogate mother. Anyone can be a surrogate or intended parent, even people who are not Californian citizens, meaning there is no residency requirement. Pre-birth parentage orders are also allowed[88], but are only effective after the moment of birth.[89] Dutch couples often travel to California to enter into surrogacy contracts due to the legislation there. A Dutch couple who enters a surrogacy agreement in California is able to be given legal parental responsibility of a child born under Californian law. First, both parties – the surrogate mother and the intended parents – must agree on the obligations and terms of the surrogacy contract. The next step is to file a petition with the court to obtain a "judgement of parentage". The judgement of parentage states that any rights of the surrogate mother are terminated and that the intended parents are the baby's legal parents.[90]

In contrast stands Model B, also specified in section 5 of the Uniform Status of Children of Assisted Conception Act of 1988[91], which states that the surrogacy contract is void and that a woman, despite acting as a surrogate mother, is the legal mother of the baby. This model is closer to Dutch law. The legal mother is the woman who gives birth to the child. The difference between American and Dutch law is found in model A of the American law. According to model A, the terms of the surrogate motherhood are legally defined.

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87 Van Groeningen, 2012, pp. 38–39.

88 Court order assigning legal parentage status to the intended parents prior to the birth of the child.

89 Finkelstein, Mac Dougall, Kintominas and Olsen, 2016.

90 Curry-Sumner and Vonk, 2011.

91 Section 5. Surrogate agreements

> An agreement in which a woman agrees to become a surrogate mother or to relinquish her rights and duties as parent of a child thereafter conceived through assisted conception is void. However, she is the mother of a resulting child, and her husband, if a party to the agreement, is the father of the child. If her husband is not a party to the agreement or the surrogate is unmarried, paternity of the child is governed by the Uniform Parentage Act.

In the Netherlands, the law does not allow this possibility with the consequence that it depends on the view and decision of the judge.[92]

However, in practice these model laws have had limited success in establishing legal uniformity.[93] Even with the limits of the models being given, there is still a lot of divergence in the legislation of different states. The states can be divided into three main categories of surrogacy legislation, namely: (1) states where surrogacy is expressly prohibited; (2) states where surrogacy is expressly allowed; and (3) states where surrogacy is not clearly addressed. New York, New Jersey, Indiana and Michigan are the four states that explicitly prohibit surrogacy, implying that surrogacy contracts are void and unenforceable.[94] There are 14 states that allow some form of surrogacy, regulating the area by statute. Even in this category, there is diversity in the approach taken to surrogacy not only with regard to allowing compensation and who can be intended parents and surrogate mothers but also the process of surrogacy.[95] The last category, namely, states where surrogacy is not clearly addressed, shows the variety of legal positions that can emerge when surrogacy is not addressed by statute.[96]

4. A LAW AND ECONOMICS ANALYSIS OF THE BABY M. CASE

4.1. The Baby M. Case

All of the tensions and contradictions discussed thus far can be found in the Baby M. case[97] involving a custody fight between intended parents and a surrogate mother. The biological mother – Mary Beth Whitehead – wished to retain parental rights over the baby, while the biological father – William Stern – wanted to enforce the surrogacy contract in the New Jersey court in 1988.

Mrs. Whitehead agreed to bear a child for the Sterns and terminate her parental rights in exchange for USD 10,000 and the payment of all fees and expenses incurred during the pregnancy. Under the terms of the contract, Whitehead was obliged to assume all risks, including the risk of death, incidental to the conception, pregnancy and

92 Van Groeningen, 2012, p. 41.

93 Finkelstein, Mac Dougall, Kintominas and Olsen, 2016, p. 8.

94 Finkelstein, Mac Dougall, Kintominas and Olsen, 2016, p. 9.

95 Finkelstein, Mac Dougall, Kintominas and Olsen, 2016, p. 9.

96 For examples of different positions in this category, see Finkelstein, Mac Dougall, Kintominas & Olsen, 2016, p. 10.

97 Matter of Baby M, 217 N.J. Super. 313, 537 A.2d 1128 (1987), aff'd in part and rev'd in part, 109 N.J. 418, 537 A.2d 1227 (1988).

childbirth, including but not limited to, postpartum complications. William Stern, on the other hand, was entitled to terminate the contract if the child miscarried in the first four months, in which case there would be no compensation for Whitehead. Moreover, the foetus had to be tested before the twentieth week of pregnancy and, if the foetus was genetically or congenitally abnormal, an abortion would follow upon the demand of William Stern. Mr. Stern's obligation was to pay the surrogate mother USD 1,000 if her pregnancy ended in miscarriage, a mandated abortion or stillbirth after the fourth month, or USD 10,000 upon Whitehead surrendering her baby after giving birth. Further, Mr Stern had to pay all medical expenses not covered by Whitehead's insurance and pay USD 7,500 to the Infertility Centre for administrative work. This amount was non-refundable.[98] The problem arose before the birth of baby M. when Mrs. Whitehead decided she wanted to retain the parental rights and custody of the baby.[99] Therefore, the case was brought to the court by Mr. Stern, who asked the court to enforce the surrogacy contract.[100]

The New Jersey Superior Court[101] prioritised the best interests of the baby and viewed the other issues as less relevant.[102] This approach made the superior court decide the surrogacy contract was still valid. Whitehead should terminate her parental rights, Mr Stern should be given full custody and the baby should be adopted by Elizabeth Stern, William's wife. Judge Sorkow of the superior court regarded the contract as only inconsequential. According to Dolgin[103], the leading principles followed by Judge Sorkow were very old-fashioned. Families should consist of two parents and live a stable life. They should be protected from unstable outsiders. Judge Sorkow believed that Mr and Mrs Stern fit this image the best.[104] According to him, Mary Beth and Richard Whitehead were emotionally and financially unstable and Mary Beth was unable to be a good mother to baby M. She was characterised as manipulative and unreliable because she had breached the surrogacy contract.[105]

98 Areen, 1987.
99 Lascarides, 1997.
100 Dolgin, 1990, p. 535.
101 17 N.J. Super 313, 525 A.2d 1128 (1987).
102 Dolgin, 1990, p. 536.
103 Dolgin, 1990, p. 536.
104 Dolgin, 1990, p. 537, see 217 Super. 313, 397–98, 525 A.2d 1128,1170.
105 Dolgin, 1990, p. 537, see Id. at 395–96, 525 A.2d at 1169.

The depiction of Judge Sorkow may be viewed as biased[106] because the judge assumed that a family is composed of two parents and children whereas other definitions of family exist. Mrs Whitehead was considered as someone who had promised to provide the Sterns with the means to create a family and not as a mother. Therefore, she had to honour the business agreement between autonomous, self-interested parties: the surrogacy contract.[107]

Hearing the case on appeal, the New Jersey Supreme Court[108] decided as follows: the surrogacy contract was invalid and the payment of money to the biological mother was unlawful.[109] The Supreme Court stated the biological parents of baby M. remained her two parents. No legal relationship was recognised between the baby and Mr Whitehead, the husband of Mrs Whitehead, or Elizabeth Stern. Mrs Stern was therefore not given any legal rights to the baby, while her husband was given custody of the baby.[110] The surrogacy contract was declared invalid because it conflicted with public policy and state law. Certain relevant statutory criteria had not been met concerning the termination of Mrs Whitehead's parental rights.[111] No revocation right for Mrs Whitehead was included in the contract, which is contrary to the New Jersey law.[112] The Supreme Court considered the transfer of money from Mr Stern to Mrs Whitehead as payment for adoption, not for Mrs Whitehead's services.[113] The law of New Jersey prohibits the transfer of money with respect to the placement of a child for adoption and the payment was therefore unlawful.[114] It was also prohibited to take babies or children away from their biological parents without any urgent need. In conclusion, the court ruled that babies could not be exchanged for money and that contract could not do away with motherhood.[115] Thus, the court compared the practice of commercial surrogacy with baby-selling.[116]

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106 As Dolgin formulates it, see Dolgin, 1990, p. 537.

107 Dolgin, 1990, p. 539.

108 109 N.J. 396, 537 A.2d 1227 (1988).

109 Dolgin, 1990, p. 536.

110 Dolgin, 1990, p. 540.

111 See Dolgin, who refers to 109 N.J. at 425–29, 537 A.2d 1242–43. The termination of parental rights in New Jersey could be affected only pursuant to a voluntary surrender of a child to an agency approved by the state or to the Division of Youth and Family Services along with a document acknowledging termination or pursuant to a showing of parental abandonment or unfitness. Id. at 426, 537 A.2d at 1242.

112 *Id*. at 429–34, 537 A.2d at 1244–45.

113 Dolgin, 1990, p. 540.

114 Lascarides, 1997.

115 Dolgin, 1990, p. 541.

116 Lascarides, 1997.

4.2. Normative Policy Suggestions and Discussions

The Baby M. case is a classic example of what happens when there is legal uncertainty regarding surrogacy. As a consequence, the baby found itself directly in a fight between their mother and father[117], a situation far less likely to occur where there are clear laws and rules. Moreover, at the time of the Baby M. case, surrogacy was less socially accepted than nowadays. This is also noticeable from the argumentation of Judge Sorkow as well as the New Jersey Supreme Court. The time has come for surrogacy to be more generally accepted in society, making the call for legal certainty a natural consequence.

In order to prevent situations like the Baby M. case happening in the future, some adjustments should be made to the rules and laws of surrogacy. It is becoming clear that the Dutch legislation was formulated at a time when there was no such thing as surrogacy since the law does not clearly distinguish between the biological and the legal parents, a key difference when talking about surrogacy.[118] Moreover, Dutch law can create problems for the enforceability of a surrogacy contract. Not all aspects of a surrogacy contract can be enforced[119] and, while this is understandable, the question arises of whether the use of a surrogacy contract in this way makes any sense. Besides, the procedure that has to be followed in the Netherlands is very complicated and time-consuming, hence one reason that couples there travel to America, specifically California, to enter into a surrogacy arrangement.[120] American law nowadays is not as strict as Dutch law in the states that work with model A, which facilitates an easier process for surrogate motherhood. This difference is due to the fact that model A allows surrogacy and sets out a clear and consistent procedure to be followed in order to start the surrogacy process. Yet, states can choose between the models and there is no federal legislation addressing surrogacy.[121] Therefore, in America there should be greater specificity, uniformity and enforcement of the legislation.[122] This would reduce the necessity and frequency of trials regarding surrogacy, while providing more certain and more consistent guidance for courts called on to decide in surrogacy cases.[123]

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117 Posner, 1089, p. 29.
118 Van Groeningen, 2012, p. 22
119 Van Groeningen, 2012, p. 23.
120 Curry-Sumner & Vonk, 2011.
121 Drabiak, Wegner, Fredland & Heift, 2007, p. 302.
122 Drabiak, Wegner, Fredland & Heift, 2007, p. 302.
123 Drabiak, Wegner, Fredland & Heift, 2007, p. 302.

I argue that the best way to organise and regulate the surrogacy process is according to model A and to ensure consistency with this model in different countries or states to avoid inter-country or inter-state problems. Below, I briefly discuss the benefits of this model.

Following Margalit, the development of modern contract law enables the enforceability of surrogacy contracts. With the flexibility, sensitivity and complexity of modern contract law, negative issues concerned with surrogacy contracts can be minimised.[124] But until this is a reality in practice in all places in the form of clear and functional laws, like in model A, that minimise the chances of problems occurring, I believe it is important to find an interim solution. My proposition regarding the optimal law is, in line with Margalit and model A, for there to be mandatory judicial preauthorisation for every individual surrogacy contract.[125] This means that the surrogacy contract should be checked on a case-by-case basis in order to detect any abuses in the negotiation stage before a surrogacy is set in motion. Moreover, this would thereby ensure that both parties are informed as required and meet the requirements of the legal system applying in their country. This would also minimise problems in the process that might influence the contract as discussed above.[126] Only when the court legitimises the surrogacy after having thoroughly analysed the contract and the surrounding circumstances can the surrogacy go forward. Costs and time can be saved by regulating the process before it actually proceeds, instead of resolving matters afterwards in a legal process.

I argue it is important to appoint a party to represent the interests of the surrogate baby, and this should always be obligatory. Despite the fact an unborn child is not seen as a person in law, his/her interest cannot be overlooked.[127] In the Dutch legal system, this might be the Dutch Child Protection Council, for example, which supervises the surrogacy procedure and represents the unborn child's interests before, during and after the surrogacy. In the event of any disputes after the surrogacy, the Dutch Child Protection Council should seek to provide the best possible option for the baby.[128]

Regarding the difference between commercial and non-commercial surrogacy, non-commercial surrogacy still involves certain social and moral dilemmas, but raises fewer legal difficulties than commercial surrogacy[129] because payment means more

124 Margalit, 2014.
125 Margalit, 2014, p. 466.
126 Margalit, 2014, p. 467.
127 Van Groeningen, 2012, see Article. 1:2 BW, Dutch legislation
128 Vlaardingerbroek 2003, p. 178.
129 Dolgin, 1990, p. 548.

issues need to be taken care of, such as the amount of the payment, when the payment should be made and what to do in the case of non-performance. Such issues can be provided for in a contract, but payment increases the chance of conflict. When payment accompanies surrogacy, moral issues become more in focus due to the tendency to appear like baby-selling.[130] However, permitting commercial arrangements may prevent surrogacy from happening illegally and moving underground.[131] In that way, permitting but regulating may be seen as a way to avoid abuses of any party involved.[132] Therefore, I believe that a payment exceeding the costs involved in a surrogacy should be allowed but regulated to prevent it from becoming blown out of proportion for the service delivered. In any event, at all times the specifics of the payment should be clearly stated in the contract, as in all contracts involving payment. Examples of these specific details are the amount, the manner and time for making payment and what happens in the eventuality of non-performance or non-payment.

5. CONCLUSIONS

Baby M. and all other babies involved in surrogacy can be viewed as a commodity or a gift. Those opposed to the use of surrogacy contracts view the baby as a gift and argue that such contracts should not be permitted because: (1) the contracts are not truly voluntary; (2) the contracts support the idea of baby-selling; (3) there is a priori unequal socio-economic power of the contracting parties; and (4) surrogacy contracts satisfy both components of unconscionability. The proponents of these contracts, on the other hand, view the baby as a commodity and criticise the arguments of the opponents. They argue it is not a case of baby-selling, but of selling parental rights. Modern contract law means the unequal socio-economic power of the contracting parties is minimised and the voluntary entering into a contract is ensured. Moreover, unconscionability is not generalisable because surrogacy contracts should be looked at on a case-by-case basis.

Different circumstances that occur during the surrogacy can affect a surrogacy contract. These circumstances can be caused by the surrogate mother, the intended parents or mother nature. In each case, it should be decided what kind of consequences that brings for the contract and this should be clearly stated. Further, a surrogacy contract should be examined in respect of any abuses during the bargaining process, just like for all other kinds of contracts, to ensure the chance of breaching the contract is as low as possible.

130 Dolgin, 1990, p. 548.

131 Dolgin, 1990, p. 549.

132 Dolgin, 1990, p. 550.

Examining an individual surrogacy contract prior to the start of the surrogacy process with the help of modern contract law can minimise the likelihood of these problems occurring.

Whether surrogacy contracts should be enforced is another point of discussion that attract a range of different views in both the literature and practice. While some argue there should be a revision (cooling-off) period included in the contract or surrogacy contracts should never be enforceable, others contend that if contracts are not immediately enforced the mutual benefits will not be guaranteed. Modern contract law provides the tools needed to make surrogacy contracts enforceable by employing administrative mechanisms already during the negotiation phase and throughout the whole process that follows.

According to Dutch law, surrogate motherhood is only legal when it is altruistic and, if a contract is made, it is not enforceable. Moreover, the Dutch procedure is a complicated, time-consuming process when surrogacy is entailed. Therefore, couples often travel to other countries where commercial surrogacy is allowed, such as America. Nowadays, every state in America provides a choice between two different models that provide the rough boundaries within which the states should develop their own legislation. Model A allows surrogate motherhood, provided there is a written agreement, a contract, between the two parties which is authorised by a judge. Model B is closer to Dutch law where a surrogacy contract is void. In practice, the legal approaches taken to surrogacy vary widely across the states.

The Baby M. case shows the consequences of having no clear, uniform legislation on surrogacy. Because surrogate motherhood was not regulated well in American law back then, the court's decisions evoked a lot of discussion. This case shows how important it is to establish rules and regulations, for a suggestion is made in the last part of this chapter. Using both modern contract law and mandatory judicial preauthorisation for each individual surrogacy contract enables surrogacy contracts to be enforced. Enforceable surrogacy contracts could be the solution to prevent cases like Baby M. happening in the future. Moving forward in the field of surrogacy legislation would enable society to see the positive side of surrogacy again: facilitating couples to become parents.

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CHAPTER 2. PSYCHOLOGICAL PRESSURES AND THE LAW OF OBLIGATIONS: A LAW AND ECONOMICS PERSPECTIVE

1. INTRODUCTION

A decision-making process can be very complex.[133] It turns out that humans, despite having an ability to decide and possessing material information, do not always make economically efficient choices.[134] Reasons for deviations from economically efficient decisions can be found (inter alia) in external pressures which limit the ability of consumers to reach a decision. The findings of psychology, which explores possible influences and elements in the decision-making process, are also used by salesmen when introducing new techniques for marketing and selling their products, considering that emotions play a significant role in human decision-making.[135] They accompany the intention to increase the consumption of the products they create (external) irritations, manifesting in psychological pressures that can narrow consumers' ability to make economically efficient decisions. The law should adapt to these new sales techniques as well due to the risk of the decision-making process and thus the will of consumers becoming distorted. When drawing a line in regulating these external influences, revealed as psychological pressures on the consumer's decision-making process, it is advisable to consider the findings of both psychology and of law and economics.

The chapter concentrates on some examples of psychological pressures (surprise, time pressure, gratitude, consumer guilt) and the ways they are legally regulated in (consumer) law. As a central example, the sale of cosmetic products publicly exposed in the media and upon which the Higher Court in Ljubljana recently issued its decision in two specific cases is chosen.[136] The case is used as a starting point for research into the possible effects on the exercise of free will of external influences that take the form of psychological pressures (but do not amount to misrepresentation).

133 Kahneman 2016, pp. 11–565; Tor 2008, pp. 245–272.

134 Humans possess limited cognitive resources and are affected by motivation and emotion. They are boundedly rational. Tor 2008, p. 242.

135 Trzaskowski 2016, p. 1.

136 Higher court in Ljubljana I Cp 691/2017, 15.09.2017.

This chapter evaluates the solutions provided for by the law for such impacts on the consumer's will from a law and economics perspective.

It is argued here that where there are exogenous influences on the decision-making process in the form of psychological pressures (surprise, time pressure, gratitude, consumer guilt) the right to withdraw from a contract is an inefficient legal instrument from a law and economics' perspective. The institute of undue influence is better suited for regulating these influences since it enables an assessment of the facts in each case, while also encouraging consumer diligence when concluding legal transactions, thereby leading to greater efficiency in the long run.

This chapter first presents the chosen case and then the reasoning used in the ruling of the Higher Court in Ljubljana, followed by analysis from a law and economics' perspective. A presentation of other possible legal solutions in the existing system of the law of obligations in Slovenia is then given, along with an economic analysis of these solutions with the aim to find the most economically efficient legal institute for regulating psychological pressures in the will-formation process in legal transactions.

The limitations of this contribution should also be considered since internal and external influences are involved, and a separate treatment of the topic necessarily entails the inability to assess the synergetic effects of both influences. Moreover, these influences are usually accompanied by misleading practices or other forms of information manipulation which are not addressed in this article.

2. SLOVENIAN EXAMPLE

A company is engaged in the sale of high-quality cosmetic products and offers cosmetic services along with these products.[137] The company developed its sales strategy by inviting consumers to a cost-free facial care treatment and then offering them the products used during that free service.

The initial business contact with a potential consumer was made by phone. The company obtained phone numbers from its former customers, but without the consent of the potential consumer, and offered the cost-free facial care treatment using top products with the explanation that the offer of a free treatment was made on a friend's recommendation. The consumer was not specifically warned the ulterior motive of the treatment was to sell products. The treatment was given on the seller's business premises and was personal, taking an hour and a half. Consumers were often surprised by the price of the products as a set of them cost EUR 1,470,00.

137 Higher Court in Ljubljana I Cp 691/2017, 15.09.2017.

Should the consumer have considered the price too high (despite the treatment's potentially beneficial effects), the seller started to convince the consumer that they should do something to reward themselves and buy the products, and that a special discount was available that could only be used on that day. This selling technique (procedure) was used in the presented case. Further, in the selected case the consumer had a skin problem, whereby blood vessels and acne (bumps) were shown.[138] During the course of treatment, the salesperson kept repeating that the consumer's skin condition was poor, even terrible. At the end, the consumer signed a contract to purchase the set of products. A few days later, he returned the products and wished to withdraw from the contract. The company refused to accept the withdrawal and claimed the consumer had no right to do so. As the consumer refused to pay the contract price (payment was postponed at the time of concluding the contract), the company sued him for the contractually agreed sum.

2.1 Reasoning applied in the Ruling

Of several cases commenced regarding this company's[139] sales of cosmetic products, two rulings were issued, both by the Higher Court in Ljubljana.[140] Since the facts in each case are almost identical, we present just one of the cases[141] although the arguments used were the same in both cases.

The reasoning of the Higher Court in Ljubljana's ruling, where we limit ourselves to the reasons relevant to the subject matter, shows that in this case it was not a matter of a classic consumer contract of sale because the consumer had been invited by telephone (the number being obtained without the potential consumer's consent). Further, the consumer was told they were being invited for a cost-free facial care treatment rather than a presentation of products for purchase, and thus found himself in an unexpected situation once the company started to persuade him to make a purchase. The element of surprise was even greater as the company's business premises neither looked like a store nor a traditional beauty salon. In the Higher Court's opinion, the average consumer would not expect a free-of-charge facial treatment to be used as part of a marketing activity. The court therefore concluded this was a specific method of sale not explicitly regulated by Slovenian law but, due to the method of invitation and the personalised individual treatment of the consumer, was closest to those contracts

138 In the case of the Higher Court in Ljubljana II Cp 2381/2017, 13.02.2018, the consumer had problems with acne and oily skin.

139 At the Local Court in Ljubljana, 20 cases like the presented one were filed in 2016.

140 Higher Court in Ljubljana I Cp 691/2017, 15.09.2017, Higher Court in Ljubljana II Cp 2381/2017, 13.02.2018.

141 Higher Court in Ljubljana I Cp 691/2017, 15.09.2017.

regulated in Article 43 of the ZVPot[142] (off-premises contracts). In such cases, the consumer finds himself in an unexpected position as the seller catches him off-guard by convincing him to buy products. The consumer is therefore under psychological pressure to buy products because he must immediately decide on the purchase. The consumer is therefore unable to verify the product, nor compare the quality and prices with similar products – they can only rely on the seller's statements. Further, the tendency to agree to make a purchase after a cost-free service stems from social norms of reciprocity, which create in an individual the feeling that some repayment is required for the services received from the trader.

Psychological pressure also arose from presenting the consumer's skin condition as terrible and by offering a special discount that could only be used if purchasing immediately. In these circumstances, the consumer was unable to make a deliberate or at least an unburdened decision, which led the court to conclude that the provisions governing the entering into of a contract away from business premises applied and that the consumer's purported withdrawal in the cooling-off period was effective. The court concluded that in such cases the right to withdraw is necessary to allow the consumer to reconsider his business decision (cooling-off period) and to form his true contractual will. The mere fact the purchase was not mandatory does not mean the consumer was under no psychological pressure.

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142 Art. 2 (8) of Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights amending Council Directive 93/13/EEC and Directive 1999/94/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council [2011] OJ L304 (Directive 2011/83/EU): "Off-premises contract" means any contract between the trader and the consumer:
(a) concluded in the simultaneous physical presence of the trader and the consumer, in a place which is not the business premises of the trader;
(b) for which an offer was made by the consumer in the same circumstances as referred to in point (a);
(c) concluded on the business premises of the trader or through any means of distance communication immediately after the consumer was personally and individually addressed in a place which is not the business premises of the trader in the simultaneous physical presence of the trader and the consumer; or
(d) concluded during an excursion organised by the trader with the aim or effect of promoting and selling goods or services to the consumer;
Art. 2 (9) of Directive 2011/83/EU: "Business premises" means:
(a) any immovable retail premises where the trader carries out his activity on a permanent basis; or
(b) any movable retail premises where the trader carries out his activity on a usual basis;
Both articles of Directive 2011/83/EU were transferred to Slovenian law in Article 43 of ZVPot (Zakon o varstvu potrošnikov, ZVPot, Ur. l. RS, no. 98/04, with amendments) with identical text.

In the presented case involving the described psychological pressures, the Higher Court in Ljubljana recognised the right to withdraw from the contract and, therefore, the legal regulation of this right and economic analysis of its economic efficiency are presented below.

3. THE RIGHT TO WITHDRAW

In the European Union, the legislator is particularly concerned with consumer protection. For the purposes of promoting economic activity, it is crucial to ensure the necessary legal certainty for all participants in legal transactions with a focus on consumer protection. In addition to specially identified vulnerable consumers (such as children, the elderly etc.)[143], who are the subject of special regulation due to their specific characteristics, the European legislator is concerned with consumers' legal protection in general.[144]

The vulnerability of consumers is mainly reflected in their inferiority with regard to information.[145] Next to that, special attention is paid to psychological impacts and pressures on the way consumers form contractual will. Especially problematic in this regard are situations in which the consumer: (1) is subjected to time pressure prior to entering into a contract; (2) feels they are unable to leave the seller's business premises or place of sale; and (3) being overwhelmed with feelings of gratitude.[146] In the field of the law of obligations, the European legislator has specifically established the right to withdraw from a contract where such pressures are particularly common, for example, in sales conducted away from business premises and by way of distance selling.[147] The right to withdraw gives the consumer an opportunity to terminate the contractual relationship within a specified time (cooling-off period) without any (just) reason: the contract may be terminated for reasons on the seller's side (product defects, delay) or the buyer's side (the consumer changes their mind, finds a better deal). Thus, during the cooling-off period the right to withdraw is absolutely at the discretion of the consumer.

The right to withdraw interferes immensely with the *pacta sunt servanda* rule and thus also with legal certainty. Therefore, this right should be restricted as much as possible.

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143 Trzaskowski 2016, p. 12; Paragraph 34 of the Preamble to the Directive 2011/83/EU.

144 In that regard, numerous directives were adopted, the most relevant being Directive 2011/83/EU on consumer rights.

145 For more on the subject, see: Fakin 2015b, pp. 335–364; for more on the subject from a law and economics' perspective, see: Kovač 2011.

146 Preamble to Directive 2011/83/EU. For more on the subject, see Chapter 4.3.

147 Directive 2011/83/EU.

Further, when considering the justification of the right to withdraw it is necessary to examine all of its possible effects on contract law. An economic analysis of the impacts of the right to withdraw in cases relating to external pressures during the period of contract formation is given below.

3.1. Economic Analysis of the Right to Withdraw

In principle, contracts that do not reflect the preferences of consumers are economically inefficient as they reduce general well-being.[148] Consumers' preferences may inter alia be exogenously distorted by surprise, time pressure, psychological entrapment, inability to easily terminate contract negotiations and other manipulative tactics that might lead to a contract being entered in which the consumer's preferences are not met.[149] As a result, a contract may be concluded even though the consumer does not need the product or its value (for the consumer) is less than the price representing the seller's actual costs in a competitive market.[150] Such contracts are economically inefficient.

Law and economics literature notes that the right to withdraw should be granted when the benefit of doing so outweighs the costs.[151]
The benefit of the right to withdraw is that it enables consumers to later – after entering into a contract – terminate legal transactions that do not reflect their preferences because, for example, they were entered into under worse conditions than otherwise might have been or the price does not reflect the true value of the good/s (or service/s) for the consumer.[152] In contrast, long-term efficiency benefits should also be considered: consumers ought to show due diligence while contracting.[153] This can be achieved (at least for future transactions) if they are bound by a contract. In principle, the promotion of due diligence by learning is desirable.[154] Namely, when entering into legal transactions everyone should take care of their own interests and preferences since transactions entered into in this way can be most efficient since every individual knows their preferences best and therefore the only costs of such a contract are transactional, that is, the costs of deciding and declaring one's will.

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148 Hirsch 1988, p. 134.

149 Eidenmüller 2010, p. 12; Hirsch 1988, p. 134.

150 Eidenmüller 2010, p. 12.

151 Eidenmüller 2010, p. 5. It should also be noted that the contractual arrangement is not a reliable indicator in determining the efficiency of the right of withdrawal since the same reasons for which an unwanted contract could have been concluded led to an agreement on the right to withdraw (Eidenmüller 2010, pp. 6, 12).

152 Eidenmüller 2010, p. 5.

153 Eidenmüller 2010, p. 6.

154 Ibid.

Enabling the right to withdraw from a contract would thus be inefficient in the long run as it would not promote consumers' due diligence given that people would rely on the possibility of withdrawing from a contract if they change their minds.[155]

The costs of the right to withdraw are: (1) the transaction costs of exercising the right to withdraw; (2) legal uncertainty during the cooling-off period; and (3) delayed or abandoned consumption.[156] It should be stressed that all costs in a competitive market are ultimately borne by consumers as a whole.[157] Therefore, all consumers, regardless of their personal wishes to (not) rely on the right of withdrawal, bear the costs of the legally established right to withdraw which in practice is only used by certain consumers.[158]

H. Eidenmüller notes that enabling the withdrawal from a contract is only justified where, due to the distortion of consumer will, the majority of contracts would be terminated within the timeframe of the cooling-off period.[159] In that regard, the author finds reasons exist that justify the right to withdraw in doorstep sales and sales on an excursion (two of the four types of off-premises contracts)[160] where the main problem is that the initial irritation is caused by the salesmen (doorstep sales) or there is no possibility to leave the marketing site prematurely (excursion).[161] Such irritations create pressure that distort the consumer's will, an outcome that could be corrected in a cooling-off period. The author concludes that, given the brief time available to correct the purchase decision, it seems reasonable to allow the right to withdraw from a contract for these two types of off-premises contracts.[162]

Yet the author's reasoning is questionable by contending that only irritations caused by the fact the consumer has no possibility of prematurely leaving the marketing site and where the initial irritation is created by the salesmen can be corrected during the cooling-off period. We argue that the circumstances of surprise and gratitude are also aspects that may be corrected in the cooling-off period (as confirmed in both cases presented where both consumers returned the goods within the cooling-off period),

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155 Ibid.

156 Eidenmüller 2010, p. 5.

157 Eidenmüller 2010, p. 5; Tor 2008, p. 324 (The right to withdraw increases the costs of products and therefore harms rational consumers).

158 Ibid.

159 Eidenmüller 2010, p. 13; Tor 2008, p. 324; for more on the economic analysis of the existing regulation of the timeframe of the cooling-off period, see: Kovač & Vandenberghe 2018, pp. 354–356.

160 See footnote no. 10.

161 Eidenmüller 2010, pp. 12, 13, 19.

162 Eidenmüller 2010, p. 12.

since it does not take much time to put these two feelings, which indeed during the contract procedure can amount to pressure on the consumer, in context.[163] Moreover, the European legislator has extended the meaning of the word "excursion" to situations where a leisure activity is taking place on the seller's business premises where the reason for the broader scope of application lies in the surprise effect on the consumer entailed in this selling technique.[164] The argument that the consumer is unable to leave the site prematurely is thus not convincing since this circumstance is no longer the (only) one to justify consumer protection when sales on excursions are involved.

Although according to H. Eidenmüller the withdrawal right can be justified in the above described two types of contracts, the right is not justified for all contracts entered into away from business premises. There is no reason to distinguish between manipulation tactics (including surprise) that occur in sales made outside business premises and those on business premises.[165] On the contrary, it may be even harder to get rid of the seller on his 'home ground' while an element of surprise can also be present in the seller's office space. Since in practice there is no reason for the different treatment of contracts concluded away and on business premises, the right to withdraw for both situations should also be regulated in the same way.[166] Regulation of the right to withdraw that treats the situations described in equal manner such that the right would apply to all of the described consumer sales types would be economically inefficient (the costs would outweigh the benefits) because it would be over-inclusive.[167]

To sum up, the right to withdraw in cases of external psychological pressures while entering into contracts away from business premises is only economically efficient where its benefits clearly outweigh its costs, which (at least according to Eidenmüller) is in doorstep sales and sales during an excursion. In other off-premises contracts, the right to withdraw is inefficient since the pressures are the same as in on-premises contracts and consequently those contracts should be regulated in the same manner. Given that the costs of the right to withdraw are ultimately borne by consumers as a

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163 For more, see Chapter 4.4.1.

164 DG Justice guidance document concerning Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council from June 2014.

165 Eidenmüller 2010, p. 13.

166 Ibid.

167 Eidenmüller 2010, p. 13. Similar reasons also apply to distant sales: Kovač & Vandenberghe 2018, pp. 351–354.

whole[168], the regulation that enables the right to withdraw in all off-premises contracts is not an efficient way of regulating the described pressures (surprise, gratitude, inability to leave the place of sale, time pressure etc.) because the costs of the right outweigh its benefits.

3.2. Efficiency of the Right to Withdraw in the Jurisprudential Context

Although we question the reasoning of Eidenmüller concerning the economic efficiency of the right to withdraw from a contract in cases of a sale on excursion and doorstep sales, we ought to provide some comments on the presented case because the type of sale entailed in the presented case is seen by the Higher Court in Ljubljana as being similar to cases of sales made on excursions.

Regarding the possibility to withdraw from the contract in the presented case, it is noted that, although the judgment of the Higher Court in Ljubljana refers to the similarity with a contract enter into during an excursion, the pressures emphasised in this case as being similar to those in sales during an excursion are: (1) the surprise effect for the consumer because they did not expect sales to be involved; and (2) being grateful for the cost-free facial care treatment (the same as the consumer on an excursion is grateful for the experience). From a law and economics' perspective, these circumstances do not justify an extension of the right to withdraw which, according to Eidenmüller, is only economically efficient if the consumer's right to leave the sales venue is impaired. Pressure that would manifest itself in an inability to leave the place of sale was not mentioned in the verdict because it did not exist.

The right to withdraw from a contract is therefore not (at least from the law and economics' perspective) an appropriate legal remedy for the psychological pressures existing in the presented case (surprise, time pressure, gratitude etc.) for the reasons already discussed in Chapter 3.1. We therefore need to examine other possible legal remedies or legal institutes that govern such pressures.

4. POTENTIAL REMEDIES FOR PSYCHOLOGICAL PRESSURES IN SLOVENIAN LAW

Jurisprudence on psychological pressures in the precontract phase in Slovenian law is very scarce. While this does not mean that there are no psychological pressures when concluding legal transactions in Slovenia, one should instead question why it is so rare. The reasons probably lie in consumers' ignorance of their legal rights which is connected, inter alia, with the underdevelopment of certain legal institutes in legal

168 Eidenmüller 2010, p. 5; Tor 2008, p. 324.

theory (and thus also in case law) regarding psychological pressures, as well as in the costs of exercising such rights.

The problem of psychological pressure in the period of contract formation primarily lies in the area of an error of volition (will). Psychological pressures can, in fact, cause the stated will as well as the contracted (business) will to be different from the desired, actual will a party would have had in the absence of such psychological pressures. In both Slovenian law and comparative law, we seek a balance between will theory and the theory of the statement made while concluding legal transactions. While the former protects the interests of the individual, the other is intended to protect legal transactions and legal certainty.[169] The Slovenian legislator's view is that the risk of error in contract formation should be borne by the party whose actual will does not correspond to the stated one.[170] Exceptions are expressly regulated in the event of threat, for essential (material) excusable mistakes in repayable legal transactions, mistakes in the motives in legal transactions not involving the repayment of money, and fraud.

4.1. Threat

Unlike in the case of mistake where the consumer is mistaken about a certain fact, psychological pressure results in a restriction on one's freedom of decision-making.[171] The same applies in the event of a threat which causes a justified fear that becomes the reason for entering into a contract (45 OZ[172]). The threat is generally understood as the announcement of jeopardy that will occur if the one under pressure of that outcome does not act in a certain way. The threatening person wants a particular legally binding statement of will from another person with the aim to benefit (or a third person) from the favourable legal consequences from that statement being agreed to. The threat acts indirectly through the fear it arouses in the contracting party. However, the fear must be justified, i.e. when it is apparent from the circumstances there was a serious danger to life or to a physical or other important legal good (reputation, honour, wealth, employment) of the contracting party or to anyone else (45 (2) OZ).[173]

In the presented case, it seems the only thing the consumer feared was the loss of the benefits offered by the company. Although the legal standard of justified fear is subjective, it is safe to say that such benefits do not meet the legal standard of an

169 Markesinis et al. 2006, p. 307; Bork 2011, p. 337; Wolf & Neuner 2012, p. 463.

170 Articles 45–49 of the Obligacijski zakonik (OZ, Ur. l. RS, no. 83/01, with amendments).

171 Lorenz 1997, p. 446.

172 Obligacijski zakonik (OZ, Ur. l. RS, no. 83/01, with amendments).

173 Cigoj 2000, pp. 120–121.

important legal good and therefore the fear in this case is unjustified. Consequently, the requirements for the threat were not met. Another point worth mentioning is the salesperson's claims of the consumer's skin being in a bad, even awful condition. The court did not assess the acuteness of the skin involved, nor does it follow from the parties' arguments that any kind of time pressure in the sense of the need for immediate treatment of the skin was applied, rather the salesperson's statements were simply a subjective assessment of the state of the consumer's skin. Therefore, we may conclude that psychological pressures, such as those mentioned in the present case, did not meet the requirements for justified fear and thus also those for threat.

4.2. Mistake and Fraud

The Slovenian law specifically regulates the question of the motives (reasons) for establishing contracts: a mistake in the motive is in principle not essential (non-material) and therefore not regulated by law. However, if a such mistake was decisive in the decision to enter into a contract which entails an obligation for the mistaken party by way of a non-repayable obligation (47 OZ), then it is essential, provided that it is excusable (the mistaken party has fulfilled the required standard of care – due diligence, 46 (2) OZ). A mistake which is essential and excusable enables the mistaken party to rescind a contract (voidability, 46 OZ).

In the presented case, the motive for entering into the contract might have been a sense of gratitude which, in relatively short timeframe, flattened itself when placed in the context. Another motive may be a mistake concerning the subjective value of things: the consumer is mistaken about how much the product is worth to him, subjectively. Law always considers how much a certain thing is worth objectively to an individual, that is, with regard to its properties. A mistake about the value of things, if it does not relate to the essential characteristics of the object, is therefore not essential (it is a mistake in motive) and so the burden for making the non-essential mistake lies on the mistaken party.[174] Indeed, the law is not concerned by the fact that an object has a lower value for the party than the value they are willing to pay for it at the time of concluding the contract. Such a mistake is a mistake in the motive and therefore not covered by the legal institute of essential mistake as regulated in section 46 OZ that enables the mistaken party to rescind the contract. If there is a discrepancy between the object's usefulness and its actual value, which is not due to the essential characteristics of the object but a delayed reflection of a party, there is a mistake in motive that does not entitle the mistaken party to any legal remedies in the case of repayable transactions.

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174 Higher Court in Ljubljana I Cpg 287/2013, 17.12.2014, Higher Court in Celje Cp 1443/2004, 17.08.2005; Higher Court in Ljubljana II Cp 1996/2014, 19.11.2014

Another purpose of preventing legal transactions being entered into under time pressure is that the party is informed about the market situation. An error in the market situation is a mistake in motive and as such does not constitute an essential mistake.

The fact the time pressure arises due to actions of the seller also raises the question of whether the requirements for fraud are met:[175] the party wants the other party to make the error with the intention of achieving a material gain (49 OZ). In the presented case, the requirement of making an 'error' about the facts was neither claimed nor established for the purpose of creating psychological pressure to limit free decision-making seen in the information field (no actual mistake was present), so that the party concluded a transaction that he would otherwise not have (had he been aware of information about the market situation).[176]

Therefore, whether originating from a contracting party or not, external influences can be covered in the actual reality of the mistake in motive. However, it is necessary to draw attention to the limited application of a mistake in motive for the legislator has determined that, with the intention to provide legal certainty and promote the due diligence of the parties, the contract is voidable due to a mistake in motive only where the legal transaction is nonrepayable. The institute of a mistake in motive therefore has limited application and, in this specific case, it could not be applied.

4.3. Usury

Usury is another legal institute that is concerned with procedural fairness and therefore regulates the process of contract and will formation.[177] In Slovenian law, a contract is void if concluded in such a way that one party has exploited the hardship, difficult financial situation, insufficient experience or frivolity of the other party , thereby gaining benefits which are clearly disproportionate to what he has committed himself to give or do (119 OZ).

In Slovenian case law, usury is most commonly referred to when a difficult financial situation has been exploited. There is little case law regarding other possible circumstances a party can exploit (subjective element of usury) in the formation of a contract. This is also the case with the subjective standard of distress. Whether 'distress' also applies to time pressure is unclear, nor is it clear whether other pressures involved in the presented case could be covered by this legal institute. In legal theory,

175 Lorenz 1997, pp. 498–499.

176 LG Oldenburg MDR 1969, 392; Lorenz 1997, pp. 498–499.

177 Probst 2008, pp. 182–184.

it seems that the standard is the same as for threat, that is, if an important legal good is being threatened,[178] which was not the case in the above described sale of cosmetic products.

Nevertheless, usury is also concerned with substantive fairness and therefore in order for a contract to be void the objective element must also be met: the benefits for the exploiting party to the transaction must be in clear (gross) disproportion to what they have themselves committed to give or do.[179] This requirement is not met in the presented case, even though the cosmetics are in a higher price range. Moreover, the court did not test the non-proportionality in terms of the price of the product (if it corresponds to its manufacturing and marketing costs). Indeed, in contrast to law and economics, the law focuses on the objective value of a product and disregards the product's usefulness for the specific consumer.[180]

4.4. Undue Influence

In comparative law, the institute of undue influence is recognised and enables a contract to be rescinded if it was entered into under an undue influence, which may also include psychological pressures.[181] Undue influence originates from the common law system which distinguishes between actual and presumed undue influence.[182] The difference between the two is that a presumed undue influence is acknowledged by virtue of the existence of a special relationship between the parties (for example: parent–child, teacher–student, attorney–client).[183] For this reason (at least in recent case law), the requirement of a clear/gross disproportion between the charge and the counter-payment must (also) be met to determine an undue influence.[184] The described disproportion between the duties of the parties does not need to be present in actual undue influence where there is, in fact, an undue influence.[185] The burden of proof lies on the affected party. They must prove that during formation of the contract the contractor had the opportunity to influence them, that they did so, that the influence was undue, and that the legal transaction was entered into due to this influence.[186]

178 Cigoj 1984, p. 240.
179 This requirement is also crucial in comparative law: for more, see: Probst 2008, pp. 182–184.
180 For more, see Chapter 4.2.
181 Lorenz 1997, p. 454; Probst 2008, pp. 178, 213–214.
182 Lorenz 1997, p. 457; Probst 2008, pp. 178, 213; Chen-Whishart 2006, pp. 233–234.
183 Lorenz 1997, p. 458; Chen-Wishart 2008, pp. 203–204; Bigwood 1996, pp. 509–513; Probst 2008, pp. 213–216; Chen-Whishart 2006, p. 234.
184 Lorenz 1997, p. 457; Chen-Wishart 2008, pp. 203–204; Probst 2008, p. 214. Critically on the requirement of gradual diminution, see: Bigwood 1996, p. 513.
185 Lorenz 1997, p. 461, Probst 2008, p. 214.
186 Lorenz 1997, p. 462; Court of Appeal, Bank of Credit & Commerce v Aboody (1990) 1 Q.B. 923

In German law, direct influences on the freedom of decision-making (*Überrumpellung*) are not explicitly or comprehensively regulated by law. The term *Überrumpellung* refers not only to situations which amount to a threat, but to all kinds of direct psychological impacts, including, for example, effects that (in the 'victims') give rise to feelings of opportunity (instead of pressure or force). The requirements to be met are: 1) there are unlawful effects in the precontract stage; and 2) such effects must prevent a free decision-making process.

Notwithstanding that the institute is not expressly regulated by law, there are various legal bases for this institute in German theory based on either an extension of the field of application of threat (par. 123 BGB)[187] or the use of usury (par. 138 BGB) to cover the psychological impacts on the decision-making process.[188] What seems most convincing is derivation of the protection through the *culpa in contrahendo* rule (par. 311 (2) BGB) and the principle of good faith, thus making the primary sanction compensation.

Überrumpellung represents the second (in addition to negligent misrepresentation) pillar of the protection of contractual freedom within the scope of *culpa in contrahendo*, which is often neglected.[189] A direct impact on the creation of business will must be present through impermissible psychological pressures.[190] In the case of active behaviour, the exploiter recognises the lack of freedom in the other party's decision-making process and takes steps to take advantage of this situation.[191] Consequently, a legal transaction is concluded that otherwise would not have occurred.

Regarding undue influence, the most important question to be answered is which kinds of exogenous influences need to be regulated.[192] There is a reasonable fear that legal certainty and the abuse of law are at risk through the generalisation of protection through *Überrumpelung*.[193] It is necessary to find the line between a permissible influence on decision-making freedom and an impermissible influence, which is not easy.

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(967); Probst 2008, pp. 213–214.

187 Bürgerliches Gesetzbuch (BGB).

188 Schindler 2005, pp. 177–181; Markesinis et al. 2006, pp. 253–254. The expansion of the doctrine of undue influence into the fields of civil law should not surprise since the doctrine is a reasonable source of inspiration to those legal systems which adopted a narrow concept of usury and thus find themselves faced with a statutory gap when cases of undue pressure arise that come neither within the scope of duress nor of usury (Probst 2008, p. 217).

189 Lorenz 1997, p. 445.

190 Ibid.

191 Lorenz 1997, p. 496.

192 Lorenz 1997, p. 498.

193 Bigwood 1996, p. 507. The same is emphasised in common law: Chen-Wishart 2008, p. 214.

The boundary between permissible and impermissible persuasion lies in the use of persuasive means (for example, it is impermissible to use surprise combined with time pressure);[194] in these cases, the party had an opportunity to decide for or against but, despite a more rational decision not to conclude the legal transaction, he decided to enter into it.[195] Undue influence covers cases where a relationship of authority or addiction is exploited, whereby the influence must be active in terms of appealing to feelings of solidarity, love, gratitude, responsibility etc., as means of persuasion.[196] This group also encompasses feelings of a moral duty.[197]

Culpa in contrahendo protects an individual (differently than the right to withdraw in off-premises consumer contracts) by considering their own abilities in each case.[198] Therefore, it is necessary to establish if the victim could have resisted such an influence.[199] In the case of active behaviour, the exploiter's guilt (intent or negligence) must be shown, namely as to the impermissibility of the influence and causation.[200]

The principle of good faith (5 OZ) in Slovenian law (the same as in the German and common law system) demands that during the formation of the contract a party to some extent takes care of the interests of the other party.[201] Such care certainly (also) includes protection against impermissible influences on the formation of will. The principle of good faith can therefore represent a legal foundation for regulating undue influence in Slovenian law. In this regard, it should be emphasised that, in the same way as under comparative law, not every impact on the formation of will is regulated, only those whose intensity exceeds permissible limits.

For the purposes of this paper, we limit ourselves to active influences. The sanctions for violations of active undue influence can be found in the general provisions on liability for damages (the same as for violations of the duty to inform)[202] since, unlike the German the institute of *culpa in contrahendo*, in Slovenian law this is not yet explicitly regulated.

194 Lorenz 1997, p. 500.
195 Ibid.
196 Lorenz 1997, p. 500.
197 Ibid.
198 Lorenz 1997, p. 502.
199 Ibid.
200 Lorenz 1997, p. 509.
201 For more on that subject, see: Fakin 2015a, pp. 89–104.
202 Fakin 2015a, pp. 89–104.

Regarding the requirements for undue influence, we note what has to be met in the German and common law.[203] The 'victim' must demonstrate that:

1) the party had the opportunity to influence the victim's will-formation process due to the authoritative role, dependence etc.,
2) there was an influence;
3) the influence was impermissible;
4) due to the influence a legal transaction was entered into (a causal link);
5) the victim was unable to resist the influence; and
6) the contracting party acted with malice.

An analysis of whether the requirements were fulfilled in the presented case is given below.

4.5. Undue Influence in Case Law

In common law, it is recommended that before any serious allegation of undue influence is brought before the court the attorneys consult with psychologists to help them find reasons on which they can build a case. With the intention of improving understanding of the institute, to prove the seriousness as well as the reality of the interference of psychological pressure in the decision-making freedom through impermissible influences, the findings of psychology will be considered in this paper. In the following chapter, we first give a general overview of findings made in psychology on influences on the creation of the will of consumers through pressures used by salesmen in the marketing and selling of products, followed by analysis of an actual case. At the same time, the way the (legal) requirements for undue influence is fulfilled will also be observed.

4.6. Consumer Guilt

One 'unethical' sales technique vendors use that affects the consumer's decision-making process is by creating a feeling of need and causing a sense of guilt in the consumer with the intention to encourage them to purchase a specific product. Research shows that even mild emotional states may significantly impact the cognitive processing and social behaviour of individuals, where the sense of guilt induces a consumer's behaviour when deciding on a purchase.[204]

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203 For more on the requirements to be met in common law, see: Bigwood 1996, pp. 506–513; Probst 2008, pp. 213–216, 219, 223.
204 Burnett & Lunsford 1994, pp. 33–43.

Most selling techniques based on the use of guilt as a persuasive technique try to motivate the consumer to buy the product in such a way that the consumer overcomes the feeling of guilt by making the purchase.[205]

Guilt is a fundamental feeling that arises when the violation of personal and social rules and moral standards is being considered.[206] Feelings of guilt give rise to regret, concern, self-incrimination and self-indulgence in people and result in an empathetic attitude towards another, motivating people to provide retribution or compensation.[207]

These feelings of excited blame and guilt which affect the decision-making process when entering into a contract are covered by the term "consumer guilt". Consumer guilt is an emotion experienced by a consumer because they are violating moral, social and ethical principles, whereby the violation lies in the possibility of failing to purchase a product whose purchase is governed by social, moral and ethical principles.[208] The sense of violating one's internal moral standards consequently lowers the prospective buyer's self-esteem.[209] Due to the intensity of the feelings of guilt aroused in an individual, they may decide to buy a product (or service) which they would otherwise not purchase (in the absence of those created feelings of guilt). By deciding to purchase the product, the level of guilt feelings causing discomfort to the buyer are reduced to an acceptable level.[210] Feelings of guilt greatly burden the individual, thereby encouraging and motivating them to correct the situation, to provide redemption or compensation for having violated the internal norms, values and expectations of society.[211] Sellers can trigger multiple types of guilt (financial, health, moral, social responsibility) at the same time so that the effects of the different types reinforce each another.[212]

The term consumer guilt is defined as a negative emotion that results from a consumer's opinion that clashes with their internal values and norms. Consequently, the consumer experiences a lower self-image due to their decision. Guilt is a crucial factor that affects attitudinal as well as behavioural intentions.[213] The unpleasant internal states aroused by guilt lead an individual to act in such a way that softens the negative emotions; namely, doing good deeds, not causing harm to others,

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205 Ibid.
206 Bei et al. 2007, pp. 405–408; Lascu 1991, pp. 290–295.
207 Lascu 1991, pp. 290–295
208 Burnett & Lunsford 1994, pp. 33–43; Lascu 1991, pp. 290–295.
209 Bei et al. 2007, pp. 405–408.
210 Lascu 1991, pp. 290–295.
211 Burnett & Lunsford 1994, pp. 33–43.
212 Ibid.
213 Burnett & Lunsford 1994, pp. 33–43.

self-criticism and self-punishment.[214] Individuals who feel guilty in a given situation, compared with individuals who do not feel guilty, show more helpful and altruistic behaviour.[215]

4.7. Undue Influence and Slovenian Case Law

In the presented case where the seller refereed to the consumer's poor skin condition and convinced him to buy cosmetic products, the seller triggered feelings of guilt and shame in the prospective consumer for their insufficient care for health and self-maintenance. Research shows that creating a sense of blame and shame in the consumer also reduces their self-esteem. Moreover, guilt and shame in the consumer result in anxiety.[216] In the event the consumer is not interested in buying the cosmetic products, by raising feelings of guilt and shame in the consumer in the seller's reference to the level of selfcare, his appearance and health causes discomfort in the consumer, something that can be reduced by buying the product. The goal of such sales techniques is to anticipate the expectation that, in the event of failing to purchase the product offered, people will feel guilty, whereby sellers suggest buying to avoid this feeling and repair the damage done.[217] Purchasing the product would thus entail reparation for the lower level of care of the consumer's skin in the past.

In the described case, the seller dedicated himself personally to the consumer on an individual basis, provided him with facial care, thereby putting him in a situation in which the consumer felts obliged to repay the seller for the service.
With the offer of time-limited discounts, the seller encouraged the consumer to make an immediate purchase, preventing him from reconsidering the decision and its consequences.[218] Moreover, due to the time pressure, the consumer was prevented from being able to compare products with similar characteristics (price and quality) and to thus choose the best product for him.[219] The seller encouraged the consumer to decide to make an impulsive purchase, resulting in an unfavourable transaction for the consumer. It has been found that in situations where they are expected to make a decision under time pressure individuals become anxious and impulsive.[220]

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214 Ibid.
215 Ibid.
216 Lascu 1991, pp. 290–295.
217 Burnett & Lunsford 1994, pp. 33–43.
218 Trzaskowski 2016, p. 8; Trzaskowski 2013, p. 25.
219 Trzaskowski 2016, p. 5.
220 Maule et al. 2000, pp. 283–301.

Regarding the seller's ability to influence the consumer's will-formation process in the presented case, we may conclude the seller had this ability because he acted as an expert in facial care services. In addition, the seller had a role of authority due to the intensity and variety of the effects (irritations) he carried out. The effects described in this chapter also occurred (actual undue influence) and the influence was also impermissible (as discussed in Chapter 4.4.). The outcome of these effects was that a legal transaction was entered into (causal link). Therefore, we may conclude that the circumstances show the fact that there was an impermissible influence.

4.8. Requirements Concerning the Ability to Resist the Influence and the Malice of the Seller

In the presented case, it is also important whether the consumer had an opportunity to resist the influence. If he had been able to not to bend under the influences, the requirements for undue influence would not have been met. This requirement depends on the variety and intensity of the influences (as already discussed in Chapter 4.4.1.2.), and on the consumer's personality traits.

An important variable impacting the effect of triggering 'guilt' is self-image.[221] Research on the interaction between guilt and self-image shows that individuals with lower self-esteem are more susceptible to threatening appeals than those with higher self-esteem.[222] Another important variable regulating the effect of arousing feelings of guilt is the locus of control.[223] Individuals with an external control locus who believe their social acceptability depends on external factors (other people, circumstances) are more receptive to recommendations on how to lower the level of guilt so triggered contained in advertisements compared to individuals with an internal control locus. Research shows that individuals with an external control locus are more likely to follow the suggestions contained in the guilt arousals compared to individuals with an internal control locus.

Therefore, personal characteristics also add to the ability to resist undue influences. Since the court in the presented case did not explore these circumstances, an unambiguous conclusion on this cannot be given.

Regarding the fault of the seller, we could argue the seller knew or ought to have known (since in the presented case he was in actual contact with the injured party) that any way of manipulating a person's emotions could distort the consumer's will-formation

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221 Lascu 1991, pp. 290–295.

222 Ibid.

223 Ibid.

process. Therefore, we can presume this requirement was met in the described case. We may conclude that, in the event of satisfying the requirement that the consumer was unable to resist the influence, the elements concerning the ability to resist the influence and the fault of the seller for the undue influence would be met as the undue influence arose during personal business contact (in the precontract phase).

4.9. Economic Analysis of Undue Influence

The legal solution proposed to regulate the psychological pressures by the institute of undue influence should also be tested from a law and economics' perspective. In this regard, it is necessary to start with the assumption that the marketing of products is economically desirable.[224] This assumption builds on the view that for the purposes of enabling a functioning market people must be informed.[225] One of the ways people obtain the information they need to make their business decisions (for example, quality, product usability, price) is marketing.[226] Further, marketing is important for competition which ultimately is for the benefit of consumers.[227]

The entrepreneurial function of marketing is to increase the quantity of sales. With that intention, sellers employ various techniques, approaches and tactics to persuade consumers. From an economic point of view, such effects are desirable if the legal transactions that are carried out increase social welfare. A problem arises if the influences on the will-formation process limit freedom in decision-making.[228] Economically, such influences on the decision-making process are undesirable because they do not correspond to consumers' preferences and are therefore inefficient because they do not meet the value of the social welfare that could be achieved had the will of the consumer not been distorted.[229] As this distortion represents a cost, legal transactions burdened by such an error of will should not be executed.[230]

In the law and economics model we are following, the aim is to promote marketing on one hand and to prevent the execution of those legal transactions that do not reflect the true will of the consumer on the other.[231] At the same time, we wish to promote

224 Trzaskowski 2016, p. 1.
225 Trzaskowski 2016, p. 1; Ben-Shahar & Posner 2010, p. 1.
226 Ben-Shahar & Posner 2010, p. 1.
227 Trzaskowski 2016, pp. 17–18, 33.
228 Trzaskowski 2016, p. 1.
229 Trzaskowski 2016, p. 1, 33.
230 Trzaskowski 2016, p. 33.
231 Eidenmüller 2010, p. 5.

the due diligence of market participants because it has beneficial effects in the long term.[232]

Regulation is only needed relative to influences that are economically inefficient.[233] This is achieved by, in principle, permitting influences in the area of trade. Therefore, there is generally no need to regulate marketing influences as marketing is generally a desirable activity and consumers should thus bear the costs of unwanted contracts. This is also the leading principle in law: everyone must take care of their own interests and benefits (the principle of autonomy and contractual freedom)[234] so that the risk of unwanted legal transactions is to be borne by every individual himself.[235]

The basic principle that the 'victim' (weaker party) bears the cost of an unwanted contract should be altered when their decision-making ability is limited.[236] An impact which affects the decision-making process of a contracting party should be avoided as the ensuing transaction does not correspond to their preferences and therefore lowers the social welfare. Such impacts should be avoided by the party that can do so at a lower cost (least-cost preventer).

In principle, the weaker party (for example, a consumer) will be able to resist the influences but in certain cases can only do so at significant cost, such as, for example, by obtaining a professional opinion, bringing along a third party to negotiations etc.[237] Such steps entail a (significant) cost. If the consumer is able to resist the impacts at minimal cost (by reflection), it is economically efficient that they bear the cost of any unwanted transaction (least-cost preventer). This 'rule' also promotes due diligence when entering into contracts and prevents the opportunistic behaviour of weaker parties.[238]

If a party can only resist pressure at a significant cost, a further analysis is necessary: to determine which party is the least-cost preventer, we must compare the costs the weaker party (consumer) would have had if they wished to prevent the influence and the costs that would have been incurred by the seller to prevent it. Based on general

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232 Eidenmüller 2010, p. 6.

233 Trzaskowski 2016, p. 2.

234 The heart of the contract is deep respect for the individual's liberty and therefore binding agreements should reflect one's voluntary choices. For more on that subject with a focus on undue influence, see: Bigwood 1996, pp. 505–506.

235 For more, see Chapter 4.4.

236 Trzaskowski 2016, p. 3.

237 Epstein 1998, p. 115.

238 Eidenmüller 2010, p. 6.

social norms and experience, the seller knows (or should know) that certain business practices hold the potential to considerably influence the motivation of consumers to enter into a legal transaction. If the negotiations take place in person, the trader can find out at minimal cost that the consumer is vulnerable. In such cases, the seller's costs of preventing such an undue influence occurring are lower than the costs for the buyer (since his costs are significant as he is unable to resist the influence by himself). Therefore, the seller is the least-cost preventer and it is economically efficient that he bares the cost of the unwanted contract. In this way, the seller is motivated to behave carefully (due diligence being economically desirable) in the marketing of products and that in the future they do not use business practices that limit the ability of consumers to decide.[239] This also reduces the likelihood a legal transaction will be entered into in which consumer will is distorted in the future, disincentivising the seller's use of those influences.

Undue influence considers the described circumstances in the requirement for an inability to resist the influence on the side of the victim, something that is individually determined. The requirement of intention on the side of the seller must also be met for a legal remedy to be invoked. The difference between the institute of undue influence and the proposed economic model is seen in how to measure those effects. In law, facts need to be proven by experts, witnesses or are presumed to exist if they are commonly knowledge. The economic model suggests that we should consider the costs needed to prevent such influences as the measurement. Further, the law (as opposed to the proposed economic model) does not compare the costs but looks at both requirements that consider the due diligence of the parties separately. Moreover, both requirements in law should be satisfied in order for the legal remedy to be granted. However, it is true that if the requirement of minimal costs on the consumer's side is met in the economic model, it is likely the same would be determined in law (as the consumer was able to resist the influence himself, without needing to bring a friend with him or seek other opinions), namely, that the requirement of an inability to resist is not met and therefore the end result would be the same in both approaches: the contract should be executed.

An individual approach, as in the case of the institute of undue influence, is efficient in terms of economic analysis. Due to this individual approach, the costs of enforcing legal remedies for undue influence are high, thereby meaning that only those influences which are of greater importance for consumers will be sanctioned. This consequence of high transactional costs is economically efficient because only influences of more considerable importance for parties should be regulated.

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239 Trzaskowski 2016, p. 3.

We may thus conclude that the institute of undue influence is economically quite efficient.

In the specific case, we can conclude that where the consumer is only able to resist the influence at a significant cost the seller is the least-cost preventer because he should be aware of the potential to greatly influence the consumer by using the described marketing techniques and can determine the consumer is vulnerable since the business contact was personal (the seller's costs of his awareness are therefore minimal). The seller should accordingly bear the cost of this unwanted legal transaction. Thus, the final result in the presented case is the same as in law: the cost of the unwanted transaction should be borne by the seller.

5. CONCLUSIONS

Psychological pressures are a reality of modern marketing and selling techniques. As the science of psychology advances and finds new elements that influence the decision-making process, sellers will be ready to target those elements if they make consumers buy their products.

The question is whether the law should regulate these kinds of influences. The answer may be hidden in law and economics' reasoning which suggests it is inefficient to allow the right to withdraw in all contracts entered into where there was a potential danger to the will-formation process. Therefore, the law should find other methods to regulate contracts for which the contractual will was distorted.

We have found that undue influence is an efficient way of regulating psychological pressures because it promotes marketing and selling techniques that spread information among consumers and increases market competition. Undue influence also enables the individually assessment of different cases. Further, it promotes the due diligence of both parties when entering into contracts and shifts the risk of an unwanted contract to the seller only when the seller's costs of preventing the undue influence were higher than the costs for the consumer, provided the consumer could only avoid the undue influence at significant cost. It is only in these cases that a remedy in law is granted. Therefore, we conclude that the institute of undue influence is an economically efficient legal institute to regulate psychological pressures in the field of the law of obligations.

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PART II. PROCEDURAL AND FINANCIAL LAW AND ECONOMICS

Paul Aubrecht

CHAPTER 3. THE ARBITRATION OF CLASS ACTION TORT CLAIMS AND THE PUBLIC GOOD: THE USE OF DIVERGENT APPROACHES FROM A LAW AND ECONOMICS PERSPECTIVE

1. INTRODUCTION

States (nations) take various approaches to adjudicate tort claims which are common to a class of victims.[240] The divergence of approaches arises from not only a state's law, but also its legal tradition as common law and civil law jurisdictions have different judicial roles for adjudicating mass tort claims. In both common and civil law jurisdictions there is a unique convergence of problems emanating from the use of arbitration for mass tort claims. These problems can be examined using law and economics methods to consider how the different processes and rules affect public welfare.

Tort liability is used to create incentives for parties to take due care in order to solve a market failure which occurs when tortfeasors are not forced to internalise the negative externalities they create.[241] Some tort claims can be collectivised to create efficiencies when the value of individual common claims is low. The use of new technologies and practices by tortfeasors may become a source of tension for courts applying due care standards as new risks may materialise which the existing care standards are

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240 A forthcoming article by the author will address the use of arbitration for tort claims from a comparative legal perspective. The divergent approaches taken by states are generalised for the purposes of this article, although some specific examples are provided.

241 According to L. Visscher, "In the economic analysis of tort law, minimization of primary accident costs, (deterrence), secondary accident costs (optimal risk spreading and risk bearing) and tertiary accident costs (administrative costs) is regarded as the central objective" (Calabresi, 1977, pp 24 ff). "The prospect of being held liable and having to pay damages provides potential tortfeasors with behavioral incentives." "In engaging in activities, people create externalities, i.e. a probability for others to suffer losses as a result of this activity. Tort law is regarded as an instrument that can provide behavioral incentives to the actors, so that they internalize these externalities"; Visscher 2008, p. 1.

incapable of addressing. A fundamental question of legal systems concerns how a changing world changes legal duties and standards of care.

Contracts to arbitrate and contracts to preclude class-wide claims complicate how the law determines due care standards. In both common law and civil law jurisdictions, due-care standards can be considered a type of public good. There is a need to weigh the costs and benefits of using various adjudication procedures and collective claims rules when considering the economics of mass torts, as the underdevelopment of due care standards or underproduction of information from the public adjudication of these claims may be welfare reducing. The following chapter considers the adjudication of mass tort claims and some of the factors at play when determining the forum, standard of care and collectivisation process which maximises the welfare benefits of adjudication.

This chapter is structured as follows. In the first part, a number of relevant factors concerning this context are discussed. In part two, the focus is on several common misperceptions held by economic experts advising the national court. In the third part, observations are made about how judges handle economic evidence. Part four concludes.

2. DIVERGENT AND SIMILAR CHARACTERISTICS OF COMMON LAW AND CIVIL LAW

There are different approaches to the use of arbitration in tort claims across states. Some of this reflects differences between common law and civil law. While there are numerous differences between the two systems, one of the most significant for the purposes of negligence is the source of law.[242] In civil jurisdictions, laws are nearly exclusively codified.[243] In contrast, common law is based not only on written law or statutes, but also on legal precedents created by judicial rulings. The role played by the judge varies in the two systems. Judges in civil law jurisdictions interpret the law, while judges in common law jurisdictions both interpret the law and produce law

242 For a historical comparison between common law and civil law jurisdictions, see: Dainow 1966, p. 419.

243 According to Dainow (1966), "Generally, in civil law jurisdictions the main source of basis of the law is legislation, and large areas are codified in a systematic matter" and "Although in the form of statutes duly enacted by the proper legislative procedure, these codes are quite different from ordinary statutes." Dainow 1966, p. 424.

through precedent.[244] The differences in the two systems have in fact not led to vastly different outcomes. Even if the results of the two systems are "so close to each other, the methods used to reach them are nevertheless extremely divergent, and the matter is not that simple".[245]

2.1. Common Law, Civil Law and Standards of Due Care

Common law stands apart from civil law in its use of precedents to create standards of due care, while judges' interpretation of laws in civil law may fill in gaps in legislation. The efficiency of the common law theory depends on the ability of judicial systems to adjudicate claims and formulate new rules.[246] Although "[p]recedent has 'public good' aspects that may result in underproduction in a private market", what must also be considered is how "to the extent that the costs and benefits of precedent will be borne (in the future) entirely by the parties to the suit in which the precedent is created, precedent is a private rather than public good".[247] While the private good aspect of precedent may be felt individually, the public good aspects of precedent are not necessarily diminished because it is also a private good to some. This is particularly true when the underproduction of public goods creates a cost for consumers, third parties or the public. Code interpretation and gap filling in the civil law jurisdiction

244 In civil law, "when a court applies a law, it has to interpret that law; in the process of interpretation the court may well extend the scope of the law considerably beyond that originally contemplated. By this method of interpretation and by filling in gaps where the written law is silent or insufficient, the civil law court can be considered as 'making' law, interstitially. In this manner, the utilization of prior decisions is mainly on points of interpretation of written text, whereas in the common law, the decisions are themselves the source of the law and 'make' law 'from the whole cloth', as it were". Daionow 1966, p. 426.

245 Dainow 1966, p. 434.

246 According to Landes and Posner (1979), "the common law system of rule creation is biased in favor of efficiency not necessarily because of any systematic judicial preference for efficient outcomes but as a function of the sample of cases that are likely to be litigated in a system where the decision to sue or litigate and the investment in litigation are private"; Landes and Posner 1979, p. 273. Several other authors have addressed the efficiency of the common law theory including Priest 1985, and Rubin 1977.

247 Landes and Posner 1979, p. 261. It is also important to consider the following: "Both judicial services-dispute resolution and rule creation-are more accurately described as intermediate goods (inputs) than as final goods. Dispute resolution is not a good in itself but an input into compliance with socially desired standards of behavior. Rule creation is not desired in itself either but is a means of particularising the standards of socially desired behavior in order to promote compliance with them. For the present, however, it will be more convenient to regard dispute resolution and rule formation as the final products of a judicial system rather than as an input into the real final product-which is right behaviour". Landes and Posner 1979, p. 236.

may also be considered as a type of public good. The adjudication of a claim produces information which is a type of public good separate from but related to precedent or interpretation. The information produced by public courts can be used by private individuals, firms, in the legislative process and by regulatory authorities that enforce public laws. The difference between common law and civil law may show how the balancing of efficiency and flexibility influences legal outcomes.[248]

2.2. Tort Law

A tort is defined as an "act or omission that gives rise to injury or harm to another and amounts to a civil wrong for which courts impose liability".[249] In civil law, the concept of negligence is similar to the concept as found in common law, although not all torts necessarily involve negligence. Tort law has changed much over the past half-century. Tort law on product liability now "generates complicated legal and economic issues – of industrywide apportionment of liability, probabilistic causation, and retroactive liability – that would have appeared bizarre to a lawyer dealing with defective products in the 1950s whose practice was one of warranty interpretation and routine negligence".[250] The use of novel technologies and new practices is a driving force of the development of tort laws.[251] Tort law in Europe varies from state to state. The European Group on Tort Law has proposed a "common framework both for the further development of national laws and for uniform European legislation" in order to "avoid further divergence of piece-meal rule-making on the national as well as the European level".[252] The different approaches to developing standards of due care, both within Europe and across the globe, partly reflect the divergence in legal cultures. Proper standards of due care are essential for a tort system to function effectively as standards that minimise the primary, secondary and tertiary costs of torts should be established.[253]

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248 According to Kerkmeester, and Visscher 2003, "[D]ifferences between judge made law and statute law have to be taken seriously and they might have an influence on the efficiency of the produced legal rules. Also, mainly because of the commitment to precedents, one should be cautious regarding possible differences between judge made law in common law and on the continent. Common law judge made law might be more efficient yet less flexible than civil law judge made law, but on the other hand the (largely codified) civil law statute law might be more efficient yet less flexible than the common law statute law". Kerkmeester, and Visscher 2003, p. 4.

249 Cornell LLI, *Definition of Tort*.

250 Priest 1985, p. 462.

251 Bartlett 1981, p. 337.

252 Koch 2005, p. 191.

253 When considering the work of Calabresi, Faure comments: "In order for liability law to be efficient, total accident costs (Primary, secondary and tertiary) should be minimized". Faure 2017, p. 82. Also see Calabresi 1970, p. 28.

Simultaneously, the way accidents may lead to the creation of benefits, in this case the production of a public good, should be considered, where the law should aim to maximise those befits given the costs of accidents.

Laws do not always examine *ex ante* potential harms created by new technologies and practices. It is only after a new technology or practice has emerged that the law reacts when claims are brought and comes to regulate the technology and externalities caused by that technology.[254] Schäfer comments, "[b]efore the industrial revolution tort law was a rather unimportant field" however, "[w]ith steam engines, modern traffic (locomotive, motor vehicles) and hazardous products the number and severity of accidents rose dramatically" and "[t]his gave rise to the development of modern tort law, especially the negligence doctrine and the slow expansion of strict liability for risks caused by very dangerous activities".[255] Novel technologies and practices often give rise to new consumer products and tort law has developed, in part, to impose standards of due care for consumer products, as well as medical services based on new technology.

A social welfare optimum of care "will clearly reflect both the costs of exercising care and the reduction in accident risks that care would accomplish".[256] According to Shavell, "the social goal will be take to be minimization of the sum of the costs of care and of the expected accident losses".[257] The need for the court to determine the optimal rule means courts must spend judicial resources to determine what the optimal care level is for both parties. If the court is not involved in establishing standards of due care, then legislative resources must be used. Determining "the standard of due care often requires some sort of weighing of the magnitude of risk against the disutility or cost of more careful conduct" which "suggests that due care is in fact found by a process that operates as if it were designed to identify behavior that minimizes total social costs, or at least approximately so".[258] Importantly, the impacts of cost minimisation and welfare maximisation are closely related within the context of accidents.

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254 According to Bartlett, "[t]he law regulates social relations and, because science and technology frequently alter the pattern of such interaction, the evolution of the law results, in part, from social changes which have been precipitated by technological advances", Bartlett 1981, p. 337.

255 Schäfer 1998, p. 570.

256 Shavell 2003, Ch. 2, p. 2.

257 Ibid.

258 Shavell 2003, Ch 2, pp. 10–11.

2.3. Public versus Private Adjudication

Adjudication can be considered as a production process. Landes and Posner identify how "[a] court system (public or private) produces two types of services", the first being "dispute resolution" and the second being "rule formation".[259] With regard to the rule-formulation aspect of adjudication, Landes and Posner describe two problems with private adjudication: 1) the private judge has "little incentives to produce precedents"; and 2) the possibility of "inconsistent precedents which could destroy the value of a precedent system".[260] Judges in a civil jurisdiction are not generally burdened with the producing of rules, but by interpreting rules and resolving disputes.[261] According to Landes and Posner, "the precedent-creating function of adjudication, more than the dispute-resolving function, may invite public intervention in the judicial-services market".[262] Considering the types of cases public and private adjudicators are to compete for, "[t]he general conclusion is that we can expect more efficient rules of contract and commercial law... than of tort or criminal law, because parties to contracts face a competitive supply of court systems".[263]

The value of a precedent influences who will bring a claim because "where the likeliest outcome is a precedent that will strengthen an existing inefficient rule, litigation will be avoided because its expected yield is negative" and "if the parties have asymmetrical stakes, the conclusion that there will be little litigation in areas dominated by inefficient rules is weakened".[264] The party which benefits from an efficient rule is incentivised to litigate while a party which benefits from an inefficient rule has an incentive to use arbitration to preclude the possibility of the inefficient rule being changed. Standards of due care for new technologies and practices are underdeveloped when the supply of claims which could lead to the production of a precedent in a common law jurisdiction are diverted from public courts to private arbitration by a party which would benefit from an inefficient old rule being applied to a new problem. This may also lead to the underproduction of rule interpretation or gap filling in civil law jurisdictions.

259 Landes and Posner 1979, p. 236.
260 Ibid, p. 238.
261 Dainow 1966.
262 Landes and Posner 1979, p. 242.
263 Ibid, p. 258.
264 Landes and Posner 1979, p. 261.

2.4. Arbitration

Informal forms of mediation and arbitration have existed for millennia in both "primitive society, as well as in modern civilization".[265] The arbitration of commercial disputes became generally accepted across the globe upon adoption of the New York Convention.[266] Even if commercial arbitration law has largely become *jus cogens*, there are limits to its application, since "a court shall refuse recognition or enforcement of an award if it finds that the award is in conflict with the public policy of its state".[267] The adoption of international legal norms in commercial arbitration leaves a large gap between what is considered *jus cogens* and the multiple approaches used in the arbitration of tort claims. Modern consumer contracts, medical service contracts and employment contracts, particularly in the USA, often include arbitration clauses to settle disputes arising from the contract. The arbitrability of tort claims raises numerous questions which are independent of commercial disputes, creating the need to consider the cost and benefits of arbitrating tort claims separately from commercial disputes. The ability of parties to freely negotiate on terms of their agreements is generally seen as beneficial to society. The Supreme Court of the USA found the United States Arbitration Act, more commonly known as the Federal Arbitration Act, is to be broadly applied to contracts in which parties have agreed to arbitrate tort claims.[268] The trend in the USA is that tort claims are increasingly being sent to arbitration.[269] Extending the scope of arbitration to cover tort claims has not been as extensive in other jurisdictions. States in the EU have taken different approaches to the use of arbitration for tort claims, specifically when considering the use of directives which

265 Emerson 1970, p. 156.

266 The New York Convention.

267 Vadi 2015, p. 368.

268 The Supreme Court of the United States has expanded the use of arbitration to cover a broad range of legal disputes including tort claims. One relevant case concerns tort claims for wrongful death due to negligent nursing home treatment, Marmet Health Care Ctr., Inc. v. Brown. For a historical overview of the Federal Arbitration Act, see Szalai 2016.

269 One recent example of how arbitration is used for tort claims involves the car service UBER. UBER's US terms of service include an arbitration clause which had been used to divert tort claims for sexual assault by UBER drivers to arbitration. Bad media attention raised by a CNN report on the use of arbitration for tort claims related to the sexual assaults caused UBER to change its arbitration clause to exclude claims for sexual assault by UBER drivers. This change was part of a public relations effort by UBER. O'Brein 2018.

limit the use of arbitration clauses in consumer contracts.[270] There is a need for a comprehensive comparative analysis of the use of arbitration for tort claims.

Arbitration can benefit parties to a dispute, but may also be detrimental to parties not involved in the dispute. According to Shavell, the "general policy of the law should be to enforce ex ante ADR agreements".[271] However, Shavell identifies two instances when this general policy should not apply.[272] One exception occurs when "a party to an agreement was not properly informed about relevant information" such as "information about the legal process or the character of ADR".[273] This exception is particularly acute when there is widespread signing of contracts with arbitration clauses where no reading problem is involved.[274] Another exception Shavell identifies is when an "agreement to use ADR would negatively affect third parties".[275] When the parties are informed and their contract to arbitrate does not negatively impact third parties, the law should respect the parties' preferences stated in the contract.[276]

3. COLLECTIVE ACTIONS

In the USA, class actions are available in federal cases under Rule 23 of the Federal Rules of Civil Procedure which requires, among other things, a representative class, class certification, and a number of procedural requirements before a claim will be adjudicated by a federal court.[277] Some benefits of the US class-action system include, "a reduction in legal costs, faster progress through the judicial system, increased consumer protection (as the strength in numbers means less of an individual burden, a complaint is more likely to be pursued), which provides for a stronger claim, which,

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270 According to the 2014 study for the JURI Committee of the European Parliament, "In contrast to the approach adopted in the USA, the EU has taken a more restrictive approach to consumer arbitration, although policies on the admissibility of pre-dispute arbitration clauses vary from one Member State to another. The fairness of consumer arbitration clauses within European Union Member States is controlled by domestic legislation that derives from each State's implementation of the Unfair Terms Directive" (Directive 93/13/EC). Cole et al. 2014, p. 207. In Germany, the code directly addresses the issue of arbitrability in the Tenth Book of the Code of Civil Procedure Sections 1025 – 1066.

271 Shavell 1995, p. 8.

272 Ibid.

273 Ibid.

274 According to De Geest, "Most people sign standard term contracts without reading them. This gives drafters an incentive to insert one-sided, inefficient terms"; De Geest 2015.

275 Shavell 1995, p. 8.

276 See Shavell 1995.

277 F.R.C.P. 23.

in turn, forces businesses to take such claims more seriously".[278] Some negative aspects of a class action include an overly extensive opt-out system, which can lead to free-riding and claim preclusion, forced settlement, excessively punitive damages, and scrupulous behaviour by attorneys.[279]

There are significant differences between mass claims in the US and European systems.[280] According to Valguamera, the two approaches have distinct characteristics that differentiate who can bring claims and how they are adjudicated:

> *While the American class actions can be brought by any given class member, the European group action models usually restrict this power to selected subjects, such as associations. While the American class action uses an opt-out/mandatory mechanism to determine who will be bound by the judgement, the European models prefer the opposite opt-in solution. While the American class action can be used to litigate, in principle, all subject-matters, the Europeans have preferred piecemeal regulation, restricting the application of the group action devices to a few selected legal fields.*[281]

Another important difference between the USA and the EU lies in the use of punitive damages in collective actions. While punitive damages are generally available in the USA, they are mostly not available in European jurisdictions.[282] This limitation on punitive damages may increase what Cooter and Ulen describe as an "enforcement error", which can be understood as the "ratio of compensated victims to total victims".[283] Since not all victims will join in a collective action when there is an opt-in requirement, the likelihood of an enforcement error increases under an opt-in rule because more claims are litigated individually or not litigated at all by the "rational plaintiff" if the claim is individually negative in value.[284] A welfare-reducing situation occurs if a tortfeasor can minimise their liability costs when punitive damages and

278 O'Sullivan 2010, p. 129.

279 Ibid.

280 Germany recently enacted the "Musterfeststellungsklage" which addresses the use of mass claims.

281 Valguarnera 2010, p. 2.

282 According to Koziol, "Regarding European law, it is true that, in principle, the continental civil law systems disapprove of punitive damages (although one has to confess that there are some departures from this idea). Further, one has to remember that England and Ireland are part of Europe and the European Union (although England sometimes gives the impression that it prefers to forget this). The English and Irish common law system is, of course, familiar with punitive damages, although not to the same extent as the U.S."; Koziol 2007, p. 748.

283 Cooter and Ulen 2016, p. 260.

284 The "rational plaintiff" concept used by Cooter and Ulen is discussed in sec. 4.6.

collective actions are not available since the law is unable to make the tortfeasor fully internalise the damages their torts have caused. Cooter and Ulen comment that "the efficiency loss due to enforcement error can be offset by augmenting compensatory damages with punitive damages".[285] In Europe, the combination of opt-in requirements and the lack of punitive damages may lead to a rise in the rate of enforcement errors in tort or negligence claims.

4. ANALYSIS OF ADJUDICATING MASS TORT CLAIMS: THE CART BEFORE THE HORSE?

Adjudication can create costs and benefits for the parties involved, as well as externalities for third parties.[286] According to Rubenstein, "the positive externalities of individual lawsuits can be grouped into four sets of effects: 1) decree effects; 2) settlement effects; 3) threat effects; and 4) institutional effects".[287] Collective lawsuits and claims diverted to arbitration have these effects as well, although they are not necessarily all positive. For instance, the decree effects of arbitration may be negative as the use of arbitration produces no decree effects and arbitration constrains the volume of input cases from which courts ultimately produce public decrees. The use of arbitration for cases which hold no potential to produce decree effects can create positive institutional effects if private courts are equally capable of adjudicating the claim as public courts. The externalities created by any given adjudication forum and procedure rules might be hard to identify with certainty when looking at a class of tort claims *ex ante* but, when considering the *ex post* effects of any forum or rule, some insights can be drawn about the costs and benefits of each.

Although an *ex ante* analysis needs some amount of good foresight (as in assigning a qualitative value to a claim concerning its likelihood of leading to a precedent), it can still be useful to consider how the characteristics of claims may make the use of arbitration or collective actions more likely or not to maximise public welfare.

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285 Cooter and Ulen 2016, p. 260.

286 It is useful to consider the primary, secondary and tertiary costs of accidents, as addressed by Calabresi 1970

287 Rubenstein 2005, p. 17. According to Rubestein, "Individual lawsuits resulting in judicial decisions produce external decree effects", "[i]ndividual lawsuits resulting in settlements, not judicial decisions, may nonetheless have similar positive externalities as settlement effects", "[t]he very threat of individual litigation, absent settlement or decree, may also produce positive social benefits" and "[b]y enabling litigation, the class action has the structural consequence of dividing law enforcement among public agencies and private attorneys general and of shifting a significant amount of that enforcement to the private sector". Rubenstein 2005, pp. 17–18. See Rubenstein (2005) for a full explanation of these effects.

If the efficient forum and rule can be properly determined for similar claims which use similar standards of due care, then this type of analysis might help lower the transaction costs of future similar claims and promote the maximisation of public welfare.

4.1. Welfare Maximisation

Considering the welfare implications of using a particular adjudication process and a particular rule, the costs and benefits of each combination of adjudication and claim collectivisation rule should be compared. The input/costs and output/benefits of such claims need to be differentiated between public and private: *Output: Social Benefit (SB)*, *Private Benefit (PB)*; *Input: Social Costs (SC)*, *Private Costs (PC)*. The socially optimal goal is to maximise the sum of the social benefits and private benefits minus the sum of social costs and private costs.[288] Four possible scenarios should be considered: 1) Litigation involving a collective action; 2) Litigation not involving a collective action; 3) Arbitration involving a collective action; and 4) Arbitration not involving a collective action.

The utility arising from use of public adjudication involving a class action will be the sum of the Social Benefits (SB) of the litigation involving class action (*c*) and the Private Benefits (PB) of *c*, minus the sum of the Social Costs (SC) of *c* and the Public Costs (PC) of *c*: $\sum(SBc+PBc) - \sum(SCc + PCc)$; for litigation not involving a class action (w): $\sum(SBw+PBw) - \sum(SCw + PCw)$; for arbitration involving a class action (a): $\sum(SBa+PBa) - \sum(SCa + PCa)$; for arbitration not involving a class action (n): $\sum(SBn+PBn) - \sum(SCn + PCn)$. For any given set of common claims, these four possibilities can be considered to determine which combination of rule and process is welfare maximising. For the purposes of comparing the four possible combinations, some of the primary, secondary and tertiary costs and benefits are considered.[289] In addition, there is a need to consider the value of the claim because positive and negative value claims lead to different welfare levels. In this analysis, it is important to consider how the cost minimisation of accidents is directly related to the maximisation of public welfare.

4.2. The Costs and Benefits of Arbitrating

It is generally believed that arbitration limits both system costs for the public judiciary and private costs for the individual litigants. A claim diverted to arbitration has the immediate effect of lowering the public costs of administering courts and in some

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288 It is important to make sure the costs and benefits are not double counted for third parties as some third-parties are private and some are public.

289 This is not an exhaustive analysis, rather a preliminary assessment for use in future research.

cases, if not most, lowering the private costs of pursuing or defending an individual claim. When the second- and third-order effects of arbitration are considered, the ability of arbitration to limit public costs and private costs becomes less clear. Depending on the potential of a claim to produce a precedent, fill gaps or produce information, and the potential for a claim diverted to arbitration to dilute due-care incentives for tortfeasors, the arbitration of mass tort claims may lead to increased public or private costs.[290]

4.3. The Economics of Mass Torts

Class actions can be used in certain circumstances to reduce the costs of litigation. According to Cooter and Ulen, "class actions ideally consolidate litigation to achieve economies of scale and provide a legal remedy for small injuries that are large in aggregate" and "are sometimes used to reduce total litigation costs in mass torts".[291] Priest notes how "[t]here is no reason not to realise economies of scale of large claims just as of small claims".[292] There is a potential to create economic efficiencies which can be a benefit to both public and private interests. The combination of contractual provisions to procced by arbitration and preclude class action may dilute the economic efficiencies of using class actions for common claims. If private contracting reduces the public welfare benefits of public adjudication and the efficiencies of using collective actions, then any resulting increase in private benefits must be higher than the loss of those benefits for arbitration with class action waivers to be welfare efficient.

4.5. Preclusion of Collective Actions in Contracts

Many types of contracts which give rise to a tort claim include a waiver clause which precludes collective actions for common claims.[293] Hylton identifies several "factors driving class litigation waivers" including the "low productivity of precaution, high

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290 According to Hylton, "An agreement to commit future disputes to an arbitration forum may or may not reduce deterrence. If the arbitration forum has superior accuracy properties than the typical court, committing to arbitration may enhance deterrence. The reason is that a more accurate forum will punish the guilty and exonerate the innocent with higher likelihood. Such a system creates a wider gap between the payoffs for legal compliance and legal noncompliance, which enhances incentives to comply with the law"; Hylton 2016, p. 24.

291 Cooter and Ulen 2016, p. 426.

292 Priest 1999, p. 481. Priest adds that there are often "grounds which may caution aggregating large claims in a class", specifically with reference to what are considered "blackmail settlements"; Priest 1999, p. 482.

293 A recent Federal case from the USA, Meyer v. UBER Technologies, Inc., upheld an arbitration agreement found within the electronic terms of service agreement for using the UBER telephone app, which also included a class waiver.

cost of taking care, and high expected litigation costs".[294] In light of these 'factors', contracts which preclude collective actions may act as a signal that the drafting party is taking less than due care, but enough care to prevent the claim from becoming a positive value claim.[295] It may also be a sign that the product or service has a quality which may lead to a common claim among its users or purchasers and the drafter is trying to avoid the high litigation costs they anticipate. The value of these clauses in a contract should be considered when parties enter into an agreement.[296]

Contracting parties should consider what happens with the cost savings arising from the use of a class action waiver clause.[297] Are the cost savings passed onto potential victims or do they fully benefit the tortfeasor? If firms seize the entire economic benefit of using a preclusion clause, then the value of the contract decreases for the consumer and increases for the producer, which may act as a form of redistribution between the contracting parties of the contract's benefits and may indicate there is a lack of competition in the market.[298] If the savings are passed on, the contract may reflect the value of the bargain.[299] Has an industry colluded to preclude collective actions across the industry through arbitration clauses and class action waivers? If an entire industry colludes to prevent litigation concerning new technologies or practices used across the industry, the ability of legal institutions to create efficient standards of due care for these new technologies and practices is then hampered, while competition should lead to a differentiation in the market concerning the use of arbitration and

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294 Hylton 2016, p. 22.

295 According to Chappe, "Ex ante arbitration is viewed as a mean of signaling some aspects of the product quality"; Chappe 2002, p. 27.

296 Interestingly, Hylton finds the "free rider problem" has "implications for the welfare consequences of class action waivers" as "inefficient waivers can occur in the positive expected value setting, just as in the negative expected value setting"; Hylton 2016, p. 22.

297 According to Hylton, "class litigation waiver agreements may be signed even when they reduce the welfare of all parties collectively. No assumption of strategic bargaining is necessary for this inefficiency outcome. The key is the divergence in the private and the social incentive to waive for the pivotal victim who sits at the class viability threshold"; Hylton 2016, p. 3.

298 Ware argued that "[a]ssuming that consumer arbitration agreements lower the dispute-resolution costs of businesses that use them, competition will (over time) force these businesses to pass their cost-savings to consumers". Ware 2001, p. 91.

299 Hylton considers how a class waiver may be efficient if the value of the waiver is conferred on the contracting parties up front. "The deterrence benefit of actual class litigation is not sufficiently large for some class members to justify the litigation cost, and for those individuals, it would be socially (and privately) efficient if they executed a class action waiver, thereby saving the litigation costs"; Hylton 2016, p. 11.

class action waiver clauses.[300] If there are differences in contract terms for arbitration or class action waiver among firms in an industry, this may indicate competition in the market which reflects consumer preferences.

Parties must have the information they need to understand the value of any such preclusion. Uninformed parties may not be able to understand the value of agreeing to the preclusion. Hylton found that "[i]n the standard litigation scenario, waivers between informed agents enhance society's welfare, because they are exchanged when and only when the deterrence value of litigation is less than its cost" while "[i]n the class litigation scenario … waivers between informed agents might be exchanged even though they reduce society's wealth".[301] The use of class action preclusion can only be effective for the tortfeasor if enough victims are precluded from the class. The potential for the waiver becoming effective may depend on what Hylton calls the "pivotal perspective victim" who has the potential to waive the rights of the whole class because their agreement to waive can determine the "class viability threshold", making the class claim either viable or not.[302] An individual may exploit this position provided they have this information, and "hold up the injurer for the entire value of the benefit the injurer would receive from the preempting of the class action".[303]

The use of a class action waiver also has social consequences.[304] Due care levels taken by tortfeasors and victims can be influenced by the preclusion of class action claims, but the value of the claim matters.[305] If claims are positive in value, preclusion likely leads to increased litigation costs for both parties, costs which are more likely to be bearable by tortfeasors that commit the mass tort than for the victims of mass torts. If claims are negative, preclusion may lead to lower litigation costs due to claims not being filed

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300 According to Hylton, "Any degree of competition should generate diversity in the set of contracts offered to potential victims. Contractual diversity should lead to efforts to sort potential victims into classes within which waivers may or may not be efficient"; Hylton 2016, p. 11.

301 Hylton 2016, p. 29.

302 Hylton 2016, p. 31.

303 Hylton 2016, p. 17.

304 According to Hylton, "A waiver agreement discards the threat of litigation, and for that reason dilutes the deterrent threat that had been provided by litigation. On the other hand, the waiver saves litigation costs. Where the forgone deterrence benefits are small, and the litigation costs avoided are large, waivers enhance society's welfare"; Hylton 2016, p. 24.

305 Hylton comments that "it is incorrect as a general matter to suggest that an optimal litigation system would funnel all low-level injuries through the class action mechanism. If the deterrence benefit is low relative to the cost of litigation, waiver is appropriate, even for those low-level injuries that could be taken to court only through class action device. Moreover, because of the option to waive, made possible by the threat of class action, the victims of low-level injuries receive superior compensation than they would have obtained through litigation"; Hylton 2016, p. 12.

according to the reasoning of a "rational plaintiff".[306] The firm which can force a class action waiver is in a position to become a repeat player in arbitration, which allows the firm to gather information from multiple claims and develop expertise in defending the claim in arbitration.[307] Incentives to take due care may be diluted by the use of waivers when the damages remain small.[308]

4.6. Settlement Effects of Collective Actions

Despite the potential economic efficiencies of class action, there are potential costs of a class action which are welfare reducing. "Blackmail settlements" occur when "the mere act of certifying a class may be enough to convert low-merit claims into such a high risk of catastrophic failure that the defendant will be impelled to settle" with the class "even though it might have won each individual contest with members of the class".[309] Facing a large judgement increases a defendant's willingness to settle, and Priest finds that "where damages are a substantial issue, the combination of the expansion of liability, the uncertainty of the process, and the way our class action procedures are devised, almost always leads to automatic settlement or guaranteed settlement once a class action is certified".[310] In the case *In the Matter of Rhone-Poulenc Rorer, Inc.*, Judge Posner considered the possibility of a blackmail settlement, the likelihood of success of a class action, and other factors concerning a class certification given that multiple individual cases had already been adjudicated with regard to the underlying common claim in the defendant's favour.[311]

According to Judge Posner, when the potential for blackmail settlements is great because the aggregate value of the potential claim is high "it is not a waste of judicial resources to conduct more than one trial".[312] 'Blackmail settlements' seem more likely to occur when the class size is large and when punitive damages are available. If the combination of a large class of claimants and the availability of punitive damages leads to blackmail settlements, there may be a need to limit or lower the availability of

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306 The cost benefit analysis of the "rational plaintiff" used by Cooter and Ulen is discussed in sec. 4.6.

307 According to Horton and Chandrasekher, "[E]xtreme repeat players may be more dexterous within the arbitral forum than other companies. This could stem from top-flight legal services, superior information, or the ability to pool resources"; Horton and Chandrasekher 2015, p. 123

308 According to Hylton, "Given that some victims fail to assert their claims, the injurer may not be forced to pay in full for the losses caused by his conduct. If the shortfall in damages is large enough, the injurer will not have an incentive to take socially desirable care"; Hylton 2016, p. 21.

309 COOTER and ULEN 2016, 426.

310 Priest 1999, p. 482. Addressing the US class action system.

311 In the Matter of Rhone-Poulenc Rorer, Inc., at 1298.

312 In the Matter of Rhone-Poulenc Rorer, Inc., at 1300.

punitive damages in collective actions.[313] The preclusion of collective actions for claims which will not lead to blackmail settlements might lead to firms becoming undeterred to commit mass torts. The underuse of the preclusion of collective actions which result in a blackmail settlement may lead to over deterrence. The key is to identify when the cost of potential blackmail settlements exceeds the efficiencies gained from collectivising claims.

4.7. Valuing the Case and the Rational Plaintiff

The value rational parties attribute to a claim prior to adjudication influences how and if claims are filed. In the situation of negative value claims, there will be no economic incentive for victims to pursue claims.[314] When there is no incentive for the victims to pursue a claim, tortfeasors will have a lower incentive to take due care to prevent the harm occurring as private claims are unable to make the tortfeasor internalise harms they cause. Claims should be filed for positive value cases. The collectivisation of claims makes the issue more complicated. A critical point for the tortfeasor to keep in mind is the point at which the individual claim will become a positive value case. According to Cooter and Ulen, "[t]he rational plaintiff files a complaint if its expected net payoff is positive: $EVC \geq FC \rightarrow$ file legal complaint; $EVC < FC \rightarrow$ do not file legal complaint".[315] A utility-maximising tortfeasor will consider the incentives of potential claimants to file a suit. With class action preclusion, the damage a tortfeasor can cause to the victim without having to defend a claim is damage up to the point where the individual claim becomes positive in value.[316] If the tortfeasor knows what this point is, they should take only enough care to prevent the expected value of the claim from becoming positive, even if the legal standard of care is higher. By acting below the legal standard of care, the tortfeasor can decrease its care costs. By acting above the level of care which would lead to a positive value claim, the tortfeasor can avoid being responsible for the externalities caused by acting below the standard of care.

By precluding collective actions for positive value cases, the value of each case may decrease for individual claimants as the transaction costs incurred by individuals

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313 See Priest 1999.

314 This section relies heavily on the methods used by Cooter and Ulen to calculate when a rational plaintiff will file a claim. There is an additional need to consider how plaintiffs may not be rational in valuing their claims, but for the purposes of this analysis only the rational plaintiff is considered. There is a need to further research on how irrational plaintiffs in mass tort claims may over- or undervalue their claims and this may be a topic which may be addressed by the author in the future.

315 Cooter and Ulen 2016, p. 389.

316 Hylton identifies how there is a "class viability threshold" which makes it "so the class lawsuit will have a positive expected value"; Hylton 2016, p. 7.

increase, but so long as the case remains positive in value the claim should be filed. For positive value cases filed individually, the increased transaction litigation costs can be weighed against the cost of litigating all the claims in one collective action to the number of total claimants. The larger the size of the class, the greater the transaction cost savings produced by the collective action. The cost savings need to be discounted because the litigation cost of a class action claim is higher than any one individually litigated claim, and some parties may opt-out or not opt-in. The increase in transaction costs from using class action waivers is not proportional for claimants and defendants. A single defendant facing multiple claims can develop a specialisation in the claim from being a repeat player, which may lower the per-case transaction costs.[317] Multiple single plaintiffs cannot coordinate to the same degree as a single defendant can. Class action preclusion can be seen by defendants as a way of increasing costs, asymmetrically, for the claimant class, making a case more likely to be negative in value.

4.8. Punitive Damages

Punitive damages may be used to force potential tortfeasors to take due care when courts are unable to ensure that all victims are compensated. According to Cenini et al., "[p]unitive damages should be awarded within a class action if and only if there are frictions that could prevent the injured party from taking legal action even on a class action basis" as "a mixed equilibrium – where the two remedies are combined and punitive damages are awarded within a class action – may be optimal to create optimal deterrence".[318] Cooter and Ulen state that "[a] legal system can save administrative costs by reducing the probability of liability and offsetting this fall with an increase in damages".[319] The use of punitive damages can be used to correct 'enforcement errors' which lead to reduced deterrence. The problem of 'blackmail settlements' may be compounded when punitive damages are available. Punitive damages combined with a higher filing standard which account for the possibility of 'blackmail settlements' for collective actions may be one way courts can decrease the number of claims they administer while still incentivising potential tortfeasors to take due care.[320]

317 Horton and Chandrasekher 2015, p. 123.

318 Cenini et al. 2011, p. 230.

319 Cooter and Ulen 2016, p. 243.

320 Some argue for the need for increased standards for class certification under F.R.C.P. 23. According to Priest, "[I]t's absolutely crucial that there be some review of the ultimate substantive merit of the claim in the class certification hearing, especially if there are substantial stakes at issue" especially considering how "a court should not review the claims in a case on their substantive merit for the purpose of certification;" Priest 1999, pp. 482–486.

As positive value claims should be filed by rational victims, the additional availability of punitive damages will not change their decision to file, but may incentivise victims to invest more in litigation in the hope of obtaining additional punitive damages. If the availability of punitive damages adds more to the value of a claim than the difference between the value of the claim and the value at which the claim would become positive, then a negative value case may become positive with punitive damages. If the availability of punitive damages does not make a negative value case positive, the claim should not be filed by a rational plaintiff. Punitive damages cannot correct the 'enforcement error' if they do not lead to otherwise negative value claims becoming positive value claims. Given that tort liability systems are administered imperfectly, it is unrealistic to collect full damages in claims that are filed from tortfeasors for each person who is harmed.[321] If full damages are not assessed against tortfeasors, they will not have the correct incentives to take due care so long as the damages against them that are assessed are lower than the precautionary costs they avoid by taking less than due care.[322]

4.9. Free-riding by Claimants and Arbitrators

There is a potential for free riding among victims when there is no possibility of class actions as those victims who do bring a suit produce positive externalities for the other victims who have not yet filed.[323] For class actions concerning small claims, the 'expected cost – expected value' balance of law enforcement may be negative on the individual level but positive on the group one.[324] There will be a "positive external effect conferred on other group members" which when "not internalized by the individual law enforcer … may lead to suboptimal law-enforcement".[325] There is a positive external effect created by the individual for the class when a claim brought by that individual serves as a test case which "involves a legal question (or more legal questions) relevant for all group members".[326] This may lead to a situation where "non-active group members free-ride on the efforts of the member initiating the test case".[327]

321 Cooter and Ulen 2016, p. 260.

322 The Learned Hand Formula developed by Judge Learned Hand in United States v. Carroll Towing Co. is often cited as the standard to determine due care by evaluating the probability of loss resulting from an accident and the cost of the precaution to prevent the accident. For a comparative law and economics analysis of the Learned Hand Formula See: Kerkmeester and Visscher, 2003.

323 Nagy 2012, p. 477.

324 Ibid.

325 Ibid.

326 Ibid.

327 Ibid.

This creates an incentive for victims to wait for others to file first.[328] However, this potentially positive externality for the class created by the first claimant is counterbalanced by the potential of the defendant investing in litigation expenditure to counter the benefit, since "if group members sue on an individual basis and the defendant wins against the first plaintiff, this may have a negative impact on subsequent plaintiffs" and the test case "may have precedential value or at least persuasive authority" over the claims of other group members.[329] This incentivises the defendant to "invest much more in winning early cases, because winning in these early proceedings may discourage later law-enforcement", thus lowering their overall expected liabilities.[330] The investment made by defendants in early cases may increase the probability of the defendant winning the early case or may lead to a response of a victim who files early to invest more in their case, with either one decreasing the value of the claim.

There is also free riding which arbitrators and parties to arbitration take from public laws. As laws can be considered a public good, arbitrators use public laws in their arbitration process and gain private financial benefits by providing private adjudication. According to Landes and Posner, parties to an arbitration "may be said to be taking a 'free-ride' on the public legislative-judicial system", albeit not in the traditional sense because "they actually receive less benefit because they have to pay for the arbitrator whereas the state pays for his counterpart in public court systems".[331] The arbitration process itself is "taking a 'free ride' on the precedent-creating activities of the public courts" although it may not necessarily be inefficient.[332] Arbitrators' dependence on precedents created by public courts may not be privately inefficient for claimants even if socially inefficient if other factors such as "a long court queue" make the gains from arbitration an "attractive substitute".[333] If the claim being considered in arbitration has no ability to lead to the production of public goods, the 'free ride' may actually benefit the judicial system by diverting cases which only need to have settled rules applied to the facts of the dispute.

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328 According to Hylton "[t]he two off-diagonal outcomes raise interpretive difficulties because they require one victim to sue immediately while the other one waits, and the victim who waits does better than the one who sues immediately. If either victim could commit to waiting, he could guarantee himself a higher payoff than the one who sues;" Hylton 2016, p. 20.

329 Nagy 2012, p. 469.

330 Nagy 2012, p. 478.

331 Landes and Posner 1979, p. 249.

332 Ibid.

333 Landes and Posner 1979, p. 250. Landes and Posner also make a detailed analysis of the private costs and benefits for using arbitration between two parties, however their analysis does not go into great depth concerning the use of collective actions for arbitration.

4.10. Private Incentives of Judges and Arbitrators

A utility-maximising judge will impose rules which make their job less burdensome, thereby minimising their individual efforts.[334] A judge may not want to spend time overseeing litigation on the same claim between a defendant and a class of plaintiffs over and over. Legal certainty helps prevent these types of claims from being brought before the courts repeatedly. Precedent is used by judges to prevent claims, which will be more certainly ruled in one way, from going through the courts. Procedural rules may be used such as requesting a summary judgement, or a ruling by a judge when there is no dispute over the facts and only a question of the law to be applied.[335] There may be a perverse incentive for judges to overuse a class action in an effort to limit their efforts regardless of the merits of the claim being common.[336] This perverse incentive runs in two directions. When the individual claim is negative, but the collective claim is positive, the collective claim will lead to a greater case load for the court. Other procedural rules which scrutinise the certification of a class may alleviate this perverse incentive.[337]

The arbitrator has different incentives to a judge. Arbitrators receive their compensation based on the number of cases they arbitrate. If an arbitrator can prevent collective actions from taking place, they may consider the impact of preclusion on their future work.[338] If arbitration is allowed on a collective scale, the arbitrator will have a smaller pool of cases for which they may be chosen to serve as an arbitrator. The arbitrator may consider how a higher number of cases benefits their fellow arbitrators.

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334 rding to Landes and Posner "[M]onetary compensation may not be necessary in order to induce judges to produce precedents. The production of precedents may yield substantial nonpecuniary rewards to judges—especially where they are paid salaries unrelated to the number of disputes resolved;" Landes and Posner 1979, p. 242.

335 Summary Judgment is defined as "In civil actions in federal court, either party may make a pre-trial motion for summary judgment. To succeed in a motion for summary judgment, a movant must show 1) that there are no disputed material issues of fact, and 2) that the movant is entitled to judgment as a matter of law." Cornell LLI.

336 This perverse incentive can be seen as the other side of why judges are not paid by their output. According to Landes and Posner "The judge who is not paid proportionately to either his final output or his precedent production, but solely according to the number of cases he decides, will have an incentive to overproduce that input;" Landes and Posner 1979, p. 241.

337 This is similar to line of criticism which was addressed by Priest (1999).

338 See Thompson Reuters Practical Law glossary. "The ability of the arbitral tribunal to rule on the question of whether it has jurisdiction before intervention by national courts. The principle of kompetenz-kompetenz is well established in international arbitration, and is accepted in many national laws."

The decision may also signal a preference for the industry which is challenging the availability of class actions, or the industry make take their decision as a factor which makes them believe the arbitrator is more favourable to the industry.[339] This could be interpreted by victims as a disposition which is unfavourable to claimants. As arbitrators depend on gaining work by being chosen by parties, their impartiality becomes a serious issue. The arbitrator faces a risk that judges do not. Since arbitration is a private adjudication process, the parties involved in a dispute have an influence on determining the arbitrators who serve on the panel.[340] The arbitrator has a financial interest in there being more cases for arbitration. Suppose the following: an arbitrator is faced with a case which is on the borderline of falling either way in terms of allowing a collective arbitration or precluding it. There is no overwhelming support for either decision. What will the arbitrator do? This scenario creates a conflict of interest for the arbitrator. Even if the arbitrator is not chosen to oversee any of the many cases which would result from precluding a collective arbitration, the increased demand for arbitration impacts the number of cases for which they may be chosen because other arbitrators take on the cases resulting from the preclusion decision which, in turn, precludes those arbitrators from serving as an arbitrator for other cases.[341]

4.11. Third Parties

The use of arbitration or class action waivers of mass tort claims may impact third parties.[342] A decrease in due care incentives caused by the use of arbitration may impose costs on third parties. Suppose a victim, or a class of victims, suffers damages, but the value of filing a claim is negative. The damages are for the victims to cover. However, these damages do not necessarily fall completely with the victims, rather the damages may be scattered around the victim. Insurance companies, the state and other parties may be forced to covering the loss. Suppose a victim is insured and their insurance company covers the loss. This cost may be spread among all policy holders. State social insurance and welfare programmes may also be forced to cover the loss, thereby spreading the costs across society.

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339 According to Horton and Chandrasekher "If arbitrators are biased against consumers, then the Court's decision allows them to flex new muscles by holding that tenuously related claims are arbitrable and enforce unfair terms;" Horton and Chandrasekher 2015, p. 120.

340 Landes and Posner address the issue of choice of an impartial arbitrator by the parties; Landes and Posner 1979, pp. 237–239, and pp. 245–246.

341 Horton and Chandrasekher comment "High-level and super repeat players might thrive because arbitrators compete for their patronage;" Horton and Chandrasekher 2015, p. 120.

342 According to Rubenstein "If litigation exchanges take place that benefit the parties but harm third parties, this spillover effect, or negative externality, demonstrates that the system is not in a Pareto optimal state;" Rubenstein 2004, p. 15.

The ability of one party to avoid public sanctions may signal to others a strategy of legal avoidance that leads other potential tortfeasors to act with less than due care, indirectly driving the cost for third parties up.[343]

5. PRODUCTION OF PUBLIC GOODS, PRECEDENT INTERPRETATION AND INFORMATION

Precedent, interpretation and the information produced by courts can be considered public goods since they are non-exclusive and non-rivalrous.[344] According to Landes and Posner, "[t]he social benefits of precedent are not limited to the parties to the case- indeed, if those parties have no interest in future disputes for which the decision in their case might constitute a precedent, they derive zero private benefits from helping to create a precedent" while if there is "such a future interest, or if others who do are somehow represented in the litigation, that the social benefits of precedent can be privately appropriated".[345] A paradoxical relationship develops between private arbitration and public courts. This paradox stems from the fact that "[a]rbitrators typically apply the same rules as courts deciding similar questions, often because the arbitration contract will specify that the arbitrator is to apply the contract law of a particular jurisdiction".[346] As arbitration produces no public good by way of precedent, public interpretation or public information, the arbitrator's reliance on public courts means arbitrators are constricting the production of the rules they use to adjudicate claims. Prior public adjudications may help parties in a dispute determine a settlement value based on similar claims which have already been determined.[347] Precedent and interpretation inform potential tortfeasors and victims of standards of due care and create legal certainty which may also lead to the prevention of harm and avoidance

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343 The issue of regulatory arbitrage is discussed in in Sec. 5.1.

344 According to Cooter and Ulen "A public good is a commodity with two very closely related characteristics: 1. Nonrivalrous consumption: consumption of a public good by one person does not leave less for any other consumer. 2. Nonexcludability: the costs of excluding nonpaying beneficiaries who consume the good are so high that no private profit-maximizing firm is willing to supply the good;" Cooter and Ulen 2016, p. 40. According Rubenstein, "When the legal system is conceptualised as a market for legal claims, it becomes apparent that the product of the individual lawsuit has the characteristics attributed to public goods: all members of society share the good without depleting it and none can be excluded from doing so;" Rubenstein 2005, p. 19.

345 Landes and Posner 1979, p. 274.

346 Landes and Posner 1979, p. 249.

347 See Rubenstein 2005.

of conflicts.[348] This will be greater the more uniform the courts are and smaller when they are more divergent. If precedents are contradictory, there will be a need for continued litigation. So long as there are multiple contradictory precedents, legal uncertainty remains.

The production of precedent, interpretation and information can be differentiated based on the value of claims.[349] Negative value claims may not be brought before courts as there is no economic incentive for potential plaintiffs to file, meaning there will be fewer system inputs in the form of cases. Without a collective action process, no precedent or interpretation will be produced for most negative value claims since no case would be worth commencing. There will be less development of legal certainty and the production of public information by courts when class actions are prohibited for negative value claims. Positive value claims should be filed and may produce precedent, interpretation or information. Positive value claims may increase system costs when there are appeals from the rulings of the court at first instance. Appeal court system costs increase without the collective procedure for positive value claims as more individual litigants can use the appellate process. This increases the opportunities for courts to develop conflicting precedents. The collectivisation of positive value claims limits the input necessary for setting precedents while also limiting the opportunities for conflicting precedents to develop. This hinders the production of precedents for positive value cases and decreases appeal court costs. The impact of collectivisation on the production of public goods thus depends on the value of the claims being collectivised.

5.1. Novel Technology, Products or Practices, and Regulation Avoidance

When there is a novel type of harm being alleged in a claim, the preclusion of public courts from adjudicating the claim limits the production of precedent for both public courts and private arbitrators to use in future cases. According to Alderman, "[t]he development of the common law and the courts ability to continually establish and refine legal rights depends on litigants" and is frustrated by the use of arbitration because "[a]rbitration eliminates litigation in a public forum, precedent-establishing decisions, and stare decisis".[350] The diversion of a class of claims not previously considered from

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348 According to Landes and Posner "Precedents provide information not only on the expected outcome of the current dispute between A and B but also on the likely outcome of similar disputes in the future. This information will in turn affect the allocation of resources across activities;" Landes and Posner 1979, p. 264.

349 This analysis of the value of a claim and the production of precedent is also heavily reliant on the "rational plaintiff" model which Cooter and Ulen describe and which is addressed in Sec. 4.6.

350 Aalderman 2003, p. 11.

review by public courts may be part of a larger scheme of regulatory arbitrage by an industry.[351] Firms can use arbitration to preclude a class so as to limit their potential liabilities and avoid regulation. Fleischer comments that "arbitrage only works if the lawyers involved can successfully navigate a series of planning constraints: (1) legal constraints, (2) Coasean transaction costs, (3) professional constraints, (4) ethical constraints, and (5) political constraints".[352] The use of arbitration and class action waivers likely falls within the first two of these constraints. Judicial review is avoided by going through arbitration and legal constraints are thereby loosened. Transaction costs for firms can be avoided when class waivers result in claims against a firm being negative in value. The last three constraints listed likely fall within firms' efforts to keep the option of arbitration and class waivers available. The use of arbitration and class waivers by firms can be a critical part of a scheme to avoid regulation and the liability regulation could impose on them.

New technologies and practices may lead to novel questions of law when the existing law is incapable of addressing the type of harm created, while the value of a claim may influence whether a public court will ever review the issue.[353] If the value of a claim concerning new technologies and practices is negative, there will be no development of law concerning the new technology or practice unless claims can be collectivised so that the combined value becomes positive.[354] When the value of claims is positive, the adjudication should entail the production of a public good as multiple cases will be litigated over the new technology or practice and a new legal standard of due care should emerge, if necessary. When the adjudication process provided for in a contract prevents the production of precedent concerning a new technology, this amounts to the underproduction of precedent. This is welfare reducing if the private benefits created from arbitration do not outweigh the decrease in the value of the public good arising from the adjudication and may have redistributive effects even where it is not welfare reducing.

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351 ccording to Fleischer, regulatory arbitrage is "the manipulation of the structure of a deal to take advantage of a gap between the economic substance of a transaction and its regulatory treatment;" Fleischer 2010, p. 230.

352 Ibid.

353 According to Aalderman "courts are often called on to deal with individual claims of overreaching, and must regularly deal with the application of traditional principles to newly developed technology;" Alderman 2003, pp. 5-6. Also consider the earlier discussion of how advances in technology lead to the development of tort law. See Bartlett 1981; and Schäfer 1998.

354 See the analysis on the "rational plaintiff" based on the model of Cooter and Ulen discussed in Sec. 4.6.

The production of a public good from adjudication does not just depend on the volume of cases but also the quality of claims. Claims incapable of producing these public goods cannot frustrate the law if they are diverted to arbitration. Some disputes entail legal questions which have a well-settled precedent that simply needs to be applied to the facts of the case.[355] The production of precedent is a function of the number of claims adjudicated and the quality of those claims. When it comes to the production of precedent, a thousand claims which concern a settled legal question which will never lead to precedent are not as valuable as a single claim involving a novel legal question for which no precedent exists. Precluding claims which may produce a precedent by way of judicial review frustrates the common law, while keeping claims incapable of producing precedent from judicial review does not. In civil law jurisdictions, precluding a claim which could lead to a new rule interpretation or fill a new gap should have a similar result. Considering the history of the development of tort law, a claim involving a new technology or practice is more likely to have qualities for which public courts have not yet developed a precedent or interpreted.

The parties involved in a dispute may have an idea whether the dispute is capable of leading to a precedent. Alderman comments that "[t]hrough the sophisticated use of mandatory arbitration provisions, the business sector may engage in a form of selective creation of the common law- selecting which disputes, if any, our courts will be allowed to deal with" which could "stall the development of the common law, or even worse, it may control common law development to accommodate the needs of business".[356] This strategic use of arbitration requires foresight and coordination among potential tortfeasors. Some claims are more susceptible to arbitration. In a 2008 empirical study on the use of arbitration, Eisenberg found that "[t]he consumer contracts and employment contracts arbitration clause rates are strikingly different from the rates in nonconsumer material contracts" and "[t]he difference between the nonconsumer contract rate and the rate for consumer and employment contracts is highly statistically significant".[357] The findings of Eisenberg "support the inference that the companies" they sampled "view consumer arbitration as a way to save money by avoiding aggregate dispute resolution".[358] Eisenberg concludes that "[t]he growth of mandatory consumer arbitration clauses appears to be part of a broader initiative by corporations to preclude or limit aggregate litigation" and "completely preclude

355 According to Landes and Posner "arbitration is generally limited to disputes where the rules are perfectly clear and the only issue is their application to the facts;" Landes and Posner 1979, p. 249. It should be noted that Landes and Posner wrote this before the Supreme Court of the United States began to broadly apply the Federal Arbitration Act in the 1980s.

356 Aalderman 2003, p. 14.

357 Eisenberg et. al. 2007, p. 883.

358 Eisenberg et. al. 2007, pp. 894–895.

aggregation of small plaintiff claims into economically viable actions".[359] Since "consumer law is a newer body of law and is consequently evolving more rapidly than the law in other areas" the use of arbitration in consumer contracts can be seen as a "threat to" the "common law tradition".[360] This also amounts to a threat to the civil law. When questions of law concerning consumer rights, technology, and innovative practices are kept out of public courts, public goods arising from adjudication in these areas are underproduced. This underproduction is welfare reducing. Another paradoxical situation exists. The quality of a claim that is capable of creating a public good from adjudication is more likely to be present when the claim is novel, involves a new technology or a new practice, while a claim is also more likely to be subjected to arbitration when it has these characteristics.

6. CONCLUSION

The availability of arbitration for mass tort claims varies across jurisdictions. The arbitration of mass tort claims which could lead to the production of public goods from adjudication restricts the inflow of cases courts need to produce these public goods. The production of a public goods via adjudication depends on the quantity and quality of the cases being considered. Tort law has developed largely in response to developments in technologies by legal institutions. In common law jurisdictions, the preclusion of mass tort claims involving new technologies and practices from public adjudication holds the potential to frustrate the production of precedent and harm public welfare, while in the civil law jurisdiction the production of interpretation and gap filling may be frustrated.

The use of arbitration and preclusion of a collective action for a claim which has no possibility of leading to the production of these public goods may benefit the public welfare by lowering the cost of administering public courts. The weighing up of the social cost and private costs against the social benefits and private benefits of adjudicating mass tort claims can show how a combination of rules and procedures can be used to maximise public welfare. There is a continuing need to weigh these costs and benefits along with the creation of new technology and use of new practices which frustrate the existing standards of care.

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359 Eisenberg et. al. 2007, pp. 895–896.

360 Alderman 2003, p. 15.

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CHAPTER 4. EFFECTS OF AEROPLANE CRASHES ON U.S. AIR CARRIERS AND AEROPLANE MANUFACTURERS: AN EMPIRICAL INVESTIGATION

1. INTRODUCTION

In previous years, the general public directed as much attention to aeroplane crashes as it did follow the attacks on September 11, 2001. Two planes of Malaysia Airlines, a well-known and respected carrier, crashed within six months. The plane on flight 370 from Kuala Lumpur to Beijing is believed to have been hijacked and ended up in the Indian Ocean, but the wreckage has still not been found to this day. The second plane on flight 17 en route from Amsterdam to Kuala Lumpur was hit by what is now identified as a Russian-produced rocket over eastern Ukraine. In March 2015, the co-pilot of a Germanwings aeroplane crashed the craft along with 150 passengers and crewmembers into a mountain in the middle of the French Alps.

Aeroplane crashes also attract considerable attention from the global media. Barnett[361] analysed New York Times front-page stories and found that the attention given to aeroplane crashes dwarfs the attention paid to stories covering any other kind of loss of life. He compared air crashes to AIDS, homicide, automobile accidents and cancer on a per capita death basis; multipliers ranged from sixty to several thousand times. Singer and Endreny explain the discrepancy, arguing that a dramatic hazard – one that kills many people at once, suddenly or mysteriously – is more newsworthy than a long-familiar illness.[362] These characteristics feature in empirical studies of aeroplane crashes as a suitable vehicle for evaluating the efficiency of financial markets' information-processing and provide an insight into whether the changes in stock prices are due to rational decision-making or induced by short-term fear and anxiety.

The U.S. Department of Transportation estimates that air travel is 29 times safer than driving a car, but many passengers perceive flying as a high-risk and traumatic experience. According to Greist and Greist, approximately 20% of them suffer from severe flight anxiety.[363]

361 Barnet 1990.

362 Singer and Endreny 1987.

363 Greist and Greist 1981.

Are similar fears also part of ex post investors' reactions when these low-probability risks materialise, i.e. they receive information on aeroplane crashes? Research shows that they do. Kaplanski and Levy looked at the effect reports on aviation disasters have on investors.[364] They established that they increase investors' fear and anxiety, which negatively affects stock prices.

This chapter investigates the effects aeroplane crashes have had on stock prices in aviation industry. The research hypotheses can be summarised as follows:

› H1: Aeroplane crashes negatively affect the stock performance of airlines.
› H2: Aeroplane crashes negatively affect the stock performance of aircraft manufacturers.
› H3: Crashes with 50 fatalities or more result in higher absolute abnormal returns.
› H4: Competitors of a manufacturer whose aeroplane crashed due to mechanical failure exhibit positive abnormal stock returns.
› H5: Crashes with 50 fatalities or more result in higher absolute abnormal returns on airlines' stocks.

The chosen observation period covers U.S.-based aeroplane crashes over 30 years (1983–2013) that involved U.S. carriers and U.S. aeroplane manufacturers. Hypothesis testing is based on the event study methodology – a popular research method nowadays used in diverse fields such as corporate communications, security fraud litigation, M&A and investment analysis, and political economy research. Based on the semi-strong version of the efficient market hypothesis, the methodology allows us to extract the effect of the observed event from price movements that are deemed expected for a given security according to a chosen market model. The effect of the event is assessed based on how much the price of the subject security deviated from the known linear relationship with movement of the market index. The obtained abnormal returns are then tested for statistical significance.

The analysis performed suggests there is a negative influence of crashes up to 12 days after an accident with a statistical significance of 99% using a one-tailed test. The average first-day abnormal return is above 4% and the negative effect seems to continue to influence the stock performance up to Day 6 after an accident when the average cumulative abnormal return reaches -12.5%. The results are robust with regard to changes in the observation window and confirm previous findings,[365] but the magnitude of the observed effect is much stronger.

364 Kaplanski and Levy 2010.
365 Walker et al. 2005; Chance and Ferris 1987.

Moreover, the chapter finds the market reaction relating to aeroplane manufacturers' stock price is much less pronounced. The maximum cumulative abnormal return does not exceed 1.3% in the first 15 days of trading, but seems to persist to Day 30 and beyond.The t-statistic is not statistically significant, except on Days 1 and 2. Cumulative abnormal returns beyond Day 2 are not robust to changes in the estimation window. Further, the investigation confirms that crashes which resulted in more than 50 fatalities are associated with higher absolute abnormal returns than those that caused 20 to 50 fatalities (3.4% versus 2.3%). The results are statistically significant and robust to changes in the estimation window. In addition, the results show negative cumulative abnormal returns in the first days following a crash, but they are not statistically significant. The analysis also shows that crashes that led to more than 50 fatalities do not result in higher average absolute abnormal returns in comparison to crashes that had 20 to 50 fatalities (0.93% versus 0.98%). The observed difference is not statistically significant in any observed estimation window scenario.

However, several caveats should be stated. First, the event sample is very specifically defined: it involves only U.S.-based aeroplane crashes in which U.S. airlines or aeroplane manufacturers were involved. Reactions to aeroplane crashes in other countries or when other companies are involved may be different. Second, the extent of the market reaction to aeroplane crashes may depend on the cause of the crash; disasters due to terrorists or technical errors may spur stronger reactions among aeroplane passengers and investors than those caused by bad weather conditions. One cannot argue the events in the assessed sample are representative of the general population of aeroplane crashes in terms of the underlying causes. The fact the results were obtained from relatively limited event samples hinders their generalisability.

This chapter is organised as follows. The first part provides an overview of research work performed in the area of financial markets' efficiency and describes the relevant results in the case of aeroplane crashes. The second part describes the event study methodology, its characteristics, limits and applications. Part three presents the approach used in the empirical analysis while part four gives the data used in the subsequent analysis and the descriptive statistics. The fifth part discusses the results of the empirical analysis and robustness checks and provides likely explanations as to how financial markets react to aviation disasters. Part six concludes.

2. LITERATURE REVIEW

Aeroplane crashes are rare and unpredictable events that can easily trigger behaviour described as System 1. In the initial days after a crash, investors may mainly be exposed to media speculations since very little official information is released by the authorities. Kahneman refers to an example from Nassim Taleb's book "The Black Swan"[366] which shows how the media are prone to search uncritically for causality.[367]

Reacting to the news of an aeroplane crash without critically examining it may thus prove to be quite irrational. Kahneman also illustrates how the general public can react in an exaggerated way in response to rare events such as bombings.[368]

Kaplanski and Levy estimated that a major aeroplane crash lowers the market capitalisation of the NYSE Composite index by more than USD 60 billion, even where the direct economic cost does not exceed USD 1 billion.[369]

According to the discounted cash flow valuation method originally expressed by Fisher, the price of a company's stock represents investors' assessment of its future ability to generate profits and cash flows, and reflects investors' willingness to commit capital to the firm.[370] If the stock price reacts negatively to an event, this implies that investors expect riskier or lower cash flows in the future. The reaction of airline companies' stock to aeroplane crashes has been repeatedly confirmed. Indirect adverse effects that influence stock prices include changed competitive dynamics, the impact on regulation and overall effects on consumer demand.

Moreover, Ito and Lee looked at the effects of the September 11 terrorist attacks on airline demand around the world.[371] They found a significant downward shift in demand for international air travel, ranging between -15% and -38% with the effect being most pronounced in Europe and Japan. Several U.S. carriers declared bankruptcy in the aftermath of the attacks, notably United Airlines and US Airways, two of the country's largest carriers. Globally, the attacks contributed to the bankruptcies of the Australian Ansett, the Belgian national carrier Sabena and Air Canada.[372]

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366 Taleb 2010.

367 Kahneman 2011, p. 75.

368 Kahneman 2011, p. 322.

369 Kaplanski and Levy, 2010.

370 Fischer 1930.

371 Ito and Lee 2004.

372 Ito and Lee 2004.

Wong and Yeh analysed the impact flight accidents had on passenger traffic volume in Taiwan.[373] After controlling for seasonal and cyclical factors, they estimated that air accidents lead to a 22.1% percent decline in monthly traffic for the involved airline and the effect carries on for about 2.5 months. Rivals, on the other hand, benefit from a switching effect, which is still offset by the general increase in the fear of flying. Cumulatively, air accidents result on average in a 5.6% drop in passenger volume for uninvolved airlines.

Bosch et al. examined stock market reactions to air crashes, focusing on estimating the effect of consumers responding to these disasters by switching to rivals and flying less.[374] They segmented the sample of competitive airlines based on how much their traffic routes overlap with those of the airline involved. They established a positive relationship between competitor stock price reactions and the degree of overlap, supporting a switching effect. They also found a negative effect on the stock prices of airlines with a minor overlap, confirming a negative spillover effect.

Walker et al. widened the analysis of how aeroplane crashes affect the air transport industry by also studying the effects on aeroplane manufacturers (besides airline companies).[375] They observed an average decline of 2.8% for the stocks of carriers and a milder but still significant effect on aeroplane manufacturers of 0.8%. They found that airlines' stock performance is negatively related to firm size and the number of fatalities and that declines are most significant when crashes are due to criminal activity. Manufacturers' stocks react similarly but are most affected in the event of mechanical failures.

3. METHODOLOGY

An event study is an empirical study performed on a security that has experienced a significant catalyst occurrence and whose value subsequently changed dramatically as a result of that catalyst.[376] The usefulness of such studies comes from the fact that, given the rationality of investors, the effects of an event will be immediately priced in. The economic impact of an event can thus be estimated over a relatively short time period whereas direct productivity related measures may require many months or even years of observation.[377]

373 Wong and Yeh 2003.
374 Bosch et al. 1998.
375 Walker et al. 2005.
376 Investopedia 2014.
377 MacKinlay 1997.

Every event study represents a joint test of the research hypothesis, the particular model of expected returns used and the underlying finance theory assumptions.[378] In order to estimate the effects of an event on a security price, we first need to employ techniques to separate event effects from any other stock movement dynamics that might come from a different source.

To estimate the stock price movement without the event happening, event study methodology usually employs a market model. In order to use such a model, this chapter employs two key assumptions;[379] the first (semi-strong) form of the efficient capital market hypothesis holds and, in the short term, the relationship between an individual stock and the market is relatively stable.[380] The semi-strong version of the EMH implies that the price of a publicly traded security reflects all public information on the present value of the future cash flow associated with ownership of the security.[381] Using the second assumption, we can estimate abnormal returns for a security based on how much its price deviated from the known linear relationship with movement of the market index. Together, these two ideas allow us to assess the effect of the observed event on the price of a chosen security.

In order to estimate the effects of an event on a security price, we initially use techniques to separate event effects from any other stock movement dynamics that might stem from a different source. To estimate the stock price movement without the event happening, event study methodology typically employs some sort of market model. In order to use such a model, we make two key assumptions;[382] first, the (semi-strong) form of the efficient capital market hypothesis holds and, in the short term, the relationship between an individual stock and the market is relatively stable.[383] The semi-strong version of the EMH implies that the price of a publicly traded security reflects all public information on the present value of the future cash flow associated with ownership of the security.[384] Under the second assumption, we can estimate abnormal returns for a security based on how much its price deviated from the known linear relationship with movement of the market index. Together, these two ideas allow us to assess the effect of the observed event on the price of a selected security.

378 Schimmer et al. 2014.

379 Klick and Sitkoff 2008.

380 MacKinlay 1997.

381 Malkiel 2003.

382 Klick and Sitkoff 2008.

383 MacKinlay 1997.

384 Malkiel 2003.

The chapter employs a standard event study methodology following the steps suggested by Klick and Sitkoff, namely: a) identify the event days and define the observation period; b) determine the relevant securities; c) measure the actual returns of the selected securities on the days of interest; d) estimate the securities' expected return on the selected dates using a market model; e) calculate any abnormal returns by subtracting the expected returns from the actual returns; and finally f) assess the statistical significance of the abnormal returns.[385]

Hence, the event day is the first trading day of the NYSE after an aeroplane crash. Abnormal returns are observed in periods of 60 days before and after a crash. Different specifications of the time window are included in the robustness tests. Securities used in the analysis are those of publicly traded companies related to the crash (airlines, manufacturers) and, in some cases, their historical predecessors or acquirers.

Actual returns are calculated by subtracting the price of the security at time *t-1* from the price at time *t*, divided by the price at time *t-1*. The price is adjusted by the cash value of dividends.

The expected value of the stock is obtained using the following regression model:

$$ER_{it} = \lambda_i + \phi_i \cdot E_{Mt}$$

ER_{it} = the expected return on security *I* at time *t*;
λ_i = a security specific constant;
Φ_i = a security specific coefficient;
E_{Mt} = the market index return over timeframe *t*.

The parameters of the market model shown above are measured for each company in the sample using a regression of security returns against the market portfolio as specified by the model. This regression for estimating model parameters λ_i and Φ_i uses 120 days from $t = -120$ to $t = 0$. The parameters obtained are then applied to the actual market return E_{Mt} for days $t = -60$ to $t = +60$ to obtain the expected returns for security *i*.

These expected returns are compared with the actual returns for each observed security for days – 60 to + 60. By subtracting the expected return of security *I* at time *t*, we obtain the desired abnormal return, AR_{it}.

385 Klick and Sitkoff 2008.

$$AR_{it} = R_{it} - \lambda_{it} - \phi_i$$

R_{it} represents the actual return on security i at time t, from which we subtract the previously defined expected return. The average abnormal return across securities, AR_t, is computed by summing AR_{it} across all i firms for the n number of firms in the sample for each relative event time.

$$\overline{AR_t} = \frac{1}{n}\sum_{i=0}^{n} AR_{it}$$

$\overline{AR_t}$ shows the market-adjusted abnormal return on a particular day relative to the event. If $\overline{AR_t}$ is significantly different from zero, we interpret it as if the investors had reacted to the news of the event. To examine how long the event affected security prices, we compute cumulative abnormal returns (*CARs*) for various time periods over intervals *Tj* to *Tk*. *Tj* and *Tk* can be any sequential set of dates during the abnormal return estimation period. CAR is defined as follows:

$$CAR_{T_j,T_k} = \sum_{t=T_j}^{T_k} \overline{AR_t}$$

In an efficient market, the security price will react immediately to an event that affects the intrinsic value of a security. Under these conditions, CAR should be random except upon receiving news of an event. Previous studies show that reactions to aviation disasters exhibit price reversal effects, which can be identified by examining the cumulative abnormal returns under different specifications.

To assess the statistical significance of the obtained results, a time series t-test is conducted to determine if $CAR_{Tj\ Tk}$ is significantly different from zero. The t-test is computed using the standard deviation of $\overline{AR_t}$ as an estimate for the standard error in the traditional t-test formula. The method assumes $\overline{AR_t}$ are independent and identically normally distibuted across the event time (Intriligator, 1978).

$$t_{T_jT_k} = \frac{CAR_{T_jT_k}}{SD_{AR}}$$

4. DATA

The NTSB aviation accident database serves as the information source for the aeroplane crash data. The database contains information about civil aviation accidents and incidents since 1962.[386] Our selected observation period is 30 years (1 January 1983–31 December 2013) and perfectly complements the observation period of Chance and Ferris (1987) in which the last analysed event took place on 9 July 1982. The data sample for the analysis of airlines' stock reaction was obtained using the following search parameters: a) country: United States of America; b) injury severity: Fatal; c) aircraft category: Aeroplane; d) amateur-built: No; and e) number of fatalities: More than 20.

A record of a plane crash at Sharjah airport (United Arab Emirates) was clearly misclassified and eliminated from the sample. Four records of September 11 crashes and a record of a 1987 crash of a Pacific Southwest Airlines craft were eliminated since they were caused by criminal activity (terrorist attacks and mass murder via passenger suicide). The record of a 12 December American Airlines plane crash at Belle Harbour was eliminated because the observation period spans over the September 11 attacks. Records of 12 crashes of aeroplanes by carriers whose information on the stock price for the period of interest was unavailable from the CRSP were not used in the analysis. The 6 September entry for a Midwest Express aeroplane was eliminated as the carrier's parent company was Kimberly Clark, a large personal care corporation. The final sample thus consists of 12 crashes between 1 February 1991 and 2 December 2009.

The data obtained through the NTSB database was complemented with information from the ASN Safety database[387] which contains descriptions of over 15,000 aviation safety occurrences since 1921 and is updated weekly. The additional items of information included the reasons for a crash and its exact timing.

In order to select the relevant event date, the chapter follows the standard Kaplanski and Levy approach.[388] The chapter also considers crash times as they happened in terms of Eastern Daylight Time (EDT), which corresponds with the NYSE's trading hours.

386 NTSB Aviation Accident Database & Synopses. Retrieved August 6th 2014, from http://www.ntsb.gov/aviationquery/index.aspx .

387 ASN Aviation Safety Database (2014). Retrieved August 6th 2014, from http://aviation-safety.net/database/

388 Kaplanski and Levy 2010.

For all cases, the incident occurred after 2:00 PM EDT (two hours before the closing bell). Like in Chance and Ferris,[389] this article employs the date of the next trading day as the event date.

Table 1: List of aeroplane crashes used in the analysis of airlines

Crash Date	Trading day	Location	Air Carrier	Total Fatal Injuries
1.2.1991	4.2.1991	Los Angeles, CA	SkyWest Airlines	34
1.2.1991	4.2.1991	Los Angeles, CA	US Airways	34
5.4.1991	8.4.1991	Brunswick, GA	Atlantic Southeast Airlines	23
22.3.1992	23.3.1992	Flushing, NY	US Airways	27
2.7.1994	5.7.1994	Charlotte, NC	US Airways	37
8.9.1994	9.9.1994	Aliquippa, PA	US Airways	132
31.10.1994	1.11.1994	Roselawn, IN	American Eagle Airlines	68
11.5.1996	13.5.1996	Miami, FL	ValuJet	110
17.7.1996	18.7.1996	East Moriches, NY	Trans World Airlines	230
9.1.1997	10.1.1997	Monroe, MI	Comair	29
31.1.2000	1.2.2000	Port Hueneme, CA	Alaska Airlines	88
12.2.2009	12.2.2009	Clarence Centre, NY	Colgan Air	50

Sources: NTSB, Aviation Accident Database and Synopses, 2014; ASN, Aviation Safety Database, 2014

The data sample for the analysis of aircraft manufacturers' stock reactions was obtained from the NTSB database using the following search parameters: a) country: United States of America; b) injury severity: Fatal; c) aircraft category: Aeroplane; d) produced by: Boeing, McDonnell Douglas or Lockheed; and e) number of fatalities: more than 20.

The sample of manufacturers includes air crashes in which the three largest U.S. aeroplane manufacturers were involved. Only Boeing, McDonnell Douglass and Lockheed were involved in two or more crashes in the selected time period in the NTSB database and were then publicly traded on the NYSE. The sample was complemented by two more records used in the airline sample for which the manufacturer was determined to be one of the three aforementioned companies.

389 Chance and Ferris 1987.

Table 2: List of aeroplane crashes used in analysis of aircraft manufacturers

Crash Date	Trading day	Location	Manufacturer	Fatal Injuries
21.1.1985	21.1.1985	Reno, NV	Lockheed	70
2.8.1985	5.8.1985	Fort Worth, TX	Lockheed	135
6.9.1985	9.9.1985	Milwaukee, WI	McDonnell Douglas	31
31.8.1986	2.9.1986	Cerritos, CA	McDonnell Douglas	82
16.8.1987	17.8.1987	Romulus, MI	McDonnell Douglas	156
15.11.1987	16.11.1987	Denver, CO	McDonnell Douglas	28
19.7.1989	19.7.1989	Sioux City, IA	McDonnell Douglas	111
25.1.1990	26.1.1990	Cove Neck, NY	Boeing	73
1.2.1991	4.2.1991	Los Angeles, CA	Boeing	34
3.3.1991	4.3.1991	Colorado Springs, CO	Boeing	25
8.9.1994	9.9.1994	Aliquippa, PA	Boeing	132
11.5.1996	13.5.1996	Miami, FL	McDonnell Douglas	110
17.7.1996	18.7.1996	East Moriches, NY	Boeing	230
6.8.1997	5.8.1997	Nimitz Hill, GU	Boeing	228

Sources: NTSB, Aviation Accident Database and Synopses, 2014; ASN, Aviation Safety Database, 2014

Stock price data was obtained from the CRSP (Centre for Research in Security Prices from the University of Chicago) through the Wharton Research Data Services interface (WRDS, 2014). The CRSP value-weighted market index is used as a market proxy. An adjustment for a stock split, which was not accounted for in the CRSP, was made for Alaska Airlines stock. Several entries with negative stock values and misclassified dividends were corrected.

Table 3: List of publicly traded companies included in the analysis

Company	Ticker	Note
SkyWest Airlines Inc.	SKYW	
US Airways	U	* Until 1996 operated as USAir
Atlantic Southeast Airlines Inc.	ASAI	
AMR Corporation Inc.	AMR	* Parent company of American Eagle Airlines
ValuJet Inc.	VJET	
Trans World Airlines Inc.	TWA	
Comair Inc.	COMR	
Alaska Airlines Inc.	ALK	
Pinnacle Airlines Corporation Inc.	PNCL	* Acquired Colgan Air in January 2007
Boeing Inc.	BA	
Lockheed Inc.	LK	
McDonnell Douglas Inc.	MD	

Sources: US Airways. US Airways chronology, 2014; American Airlines Group, American Airlines History; Colgan Air, History of Colgan Air, 2014

4.1 Descriptive statistics

Table 4: Aeroplane crashes in the sample of airlines, by cause and carrier

Air carrier	Air traffic control (ATC) error	Inadequate regulation	Mechanical failure	Pilot error	Weather	Total
ValuJet			1			1
SkyWest Airlines	1					1
US Airways	1	1	1	1		4
Atlantic Southeast Airlines			1			1
American Eagle Airlines					1	1
Trans World Airlines			1			1
Comair		1				1
Alaska Airlines			1			1
Colgan Air				1		1
Grand Total	**2**	**2**	**5**	**2**	**1**	**12**

Sources: NTSB, Aviation Accident Database and Synopses, 2014; ASN, Aviation Safety Database, 2014

The most common cause of aeroplane crashes in the sample was mechanical failure (over 40%). The planes were operated by nine different airlines, with US Airways being involved in 4 of the selected 12 accidents.

Table 5: Aeroplane crashes in manufacturers' sample, by cause and manufacturer

Manufacturer	ATC error	ATC technology limitations	Inadequate maintenance	Mechanical failure	Pilot error	Grand Total
Boeing	1			3	2	6
Lockheed					2	2
McDonnell Douglas		1	1	2	2	6
Grand Total	**1**	**1**	**1**	**5**	**6**	**14**

Sources: NTSB, Aviation Accident Database and Synopses, 2014; ASN, Aviation Safety Database, 2014

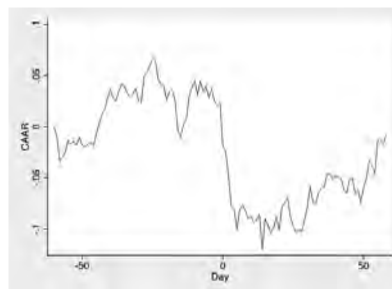
In the manufacturers' crash sample, the vast majority of crashes were attributed to mechanical failures or pilot errors. Two were related to errors or inadequate equipment at air traffic control, while one happened due to inadequate maintenance.

5. RESULTS

The results obtained, their limitations and additional tests to estimate their robustness are presented below.

H1: Aeroplane crashes negatively affect the stock performance of airlines.

Figure 1: Cumulative average abnormal returns 60 days before and after the crash (based on 12 crash events)



A visual representation of the results clearly shows that the aeroplane crashes significantly influenced the stock price of the related airlines. The average first-day abnormal return is above 4% and the negative effect seems to continue to influence the stock performance up to Day 6 after the accident when the average cumulative abnormal return reaches -12.5%. All results up to Day 15 are significant at the 1% level using a one-tailed test. The results are consistent with those obtained by other researchers[390], but the magnitude of the observed effect is much stronger.
The composition of the crash sample could provide an explanation of this phenomenon. It consists of crashes in US airspace in which US-based airlines were involved. If only direct economic loss was considered by investors, there should be no significant difference in reactions to crashes abroad or at home. But the publicity surrounding a crash may affects both potential passengers' willingness to travel and investor confidence in the future cash flows anticipated to be generated by the affected airline. According to Kaplanski and Levy[391], crashes where U.S. companies were involved received greater (longer) publicity, which might also explain the fact that negative abnormal returns persist for several days after the crash. Walker et al. found significantly larger first-week declines for crashes in US airspace (-4.6%) than for those that happened elsewhere (0.2%).[392]

390 Walker et al. 2005; Chance and Ferris 1987.

391 Kaplanski and Levy 2010.

392 Walker et al. 2005.

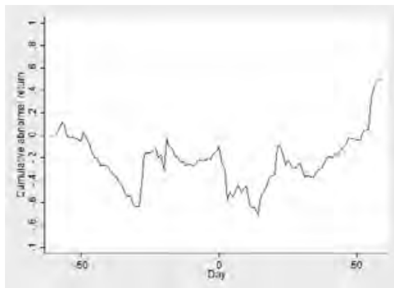
Table 6: Cumulative average abnormal returns for 15 days after the crash, with tests of statistical significance

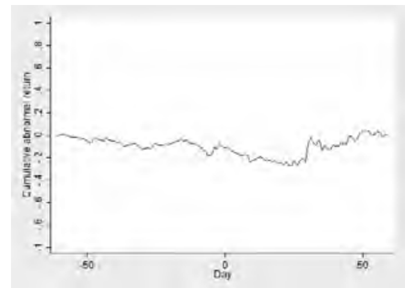
Interval of days after the crash	CAAR	T-statistic
0-1	-4.3%	-3.54***
0-2	-4.8%	-2.79***
0-3	-7.2%	-3.38***
0-4	-10.2%	-4.17***
0-5	-10.4%	-3.80***
0-6	-12.5%	-4.15***
0-7	-10.5%	-3.22***
0-8	-10.1%	-2.91***
0-9	-10.6%	-2.87***
0-10	-11.4%	-2.94***
0-11	-11.2%	-2.75***
0-12	-11.7%	-2.76***
0-13	-11.4%	-2.59**
0-14	-11.0%	-2.39**
0-15	-14.4%	-3.03***

**** denotes statistical significance at 1%, ** statistical significance at 5% and * statistical significance at 10% level*

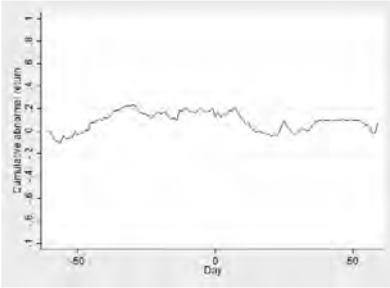
Interestingly, charts on the cumulative abnormal returns on individual stocks of the airlines involved (Figures 6 to 17) exhibit very little resemblance to each other, but overall still produce a distinct pattern of negative abnormal returns in the first days after the crash (Figure 5).

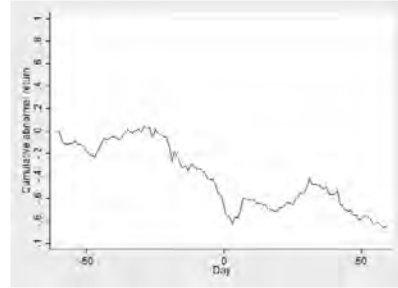
Figures 2 and 3: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. Colgan Air plane crash on 12.2.2009 (left) and Alaska Airlines plane crash on 31.1.2000 (right).



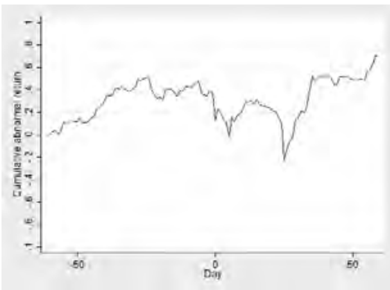


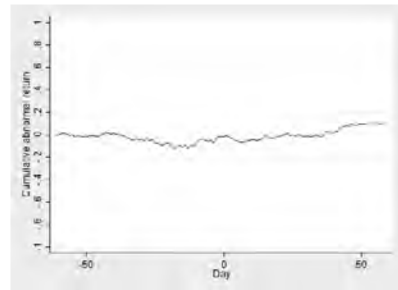
Figures 4 and 5: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. Comair plane crash on 9.1.1997 (left) and Trans World Airlines plane crash on 17.7.1996 (right).



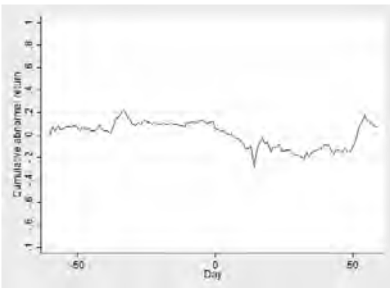


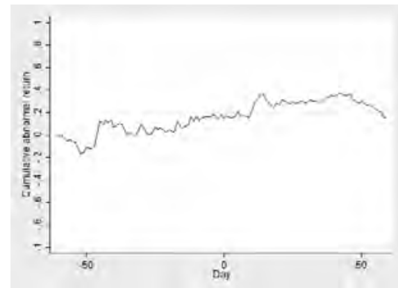
Figures 6 and 7: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. ValuJet plane crash on 11.5.1996 (left) and American Eagle Airlines plane crash on 31.10.1994 (right).



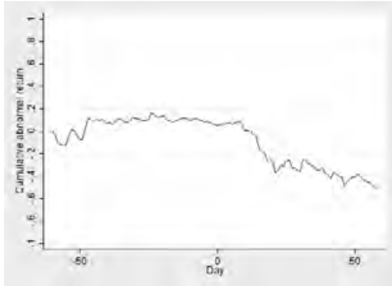


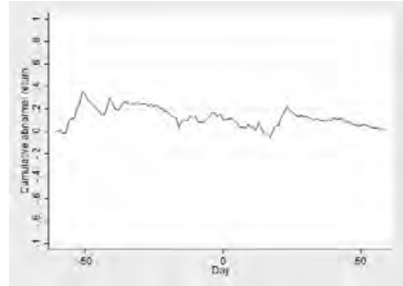
Figures 8 and 9: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. US Airways plane crash on 8.9.1994 (left) and US Airways plane crash on 8.9.1994 (right).



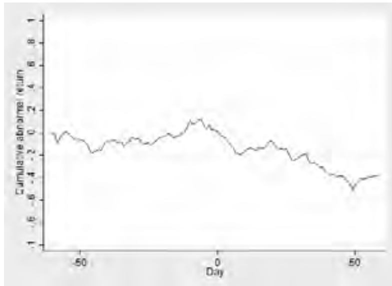


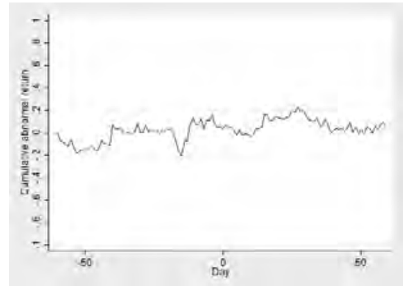
Figures 10 and 11: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. US Airways plane crash on 22.3.1992 (left) and Atlantic Southwest Airlines plane crash on 5.4.1991 (right).





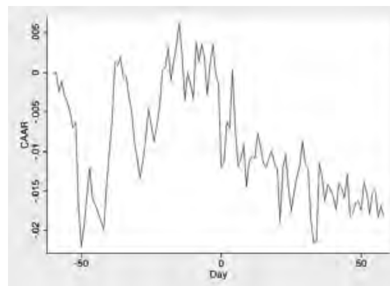
Figures 12 and 13: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. US Airways plane crash on 1.2.1991 (left) and SkyWest Airlines plane crash on 1.2.1991 (right).





H2: Aeroplane crashes affect the stock performance of aircraft manufacturers.

Figure 14: Cumulative average abnormal return 60 days before and after the crash (based on 14 crash events)



When it comes to aeroplane manufacturers' stock price reaction to aeroplane crashes, we immediately observe that the scale of the market response is several times lower than in the case of airlines. The cumulative abnormal return does not decline below -1.5% in the first 15 days of trading but seems to persist to Day 30 and beyond. The t-statistic also tells us that the results are not statistically significant except on Days 1 and 2.
These results are consistent with Chance and Ferris,[393] while Walker et al. observed statistically significant declines in intervals 1, 2 and 7 days after the crash.[394] A price-reversal effect, also reported by Davidson et al. (1987), is present on Day 3 and Day 5 (abnormal returns of 0.5% and 0.8%, respectively).

Table 7: Cumulative average abnormal returns for 15 days after the crash, with tests of statistical significance

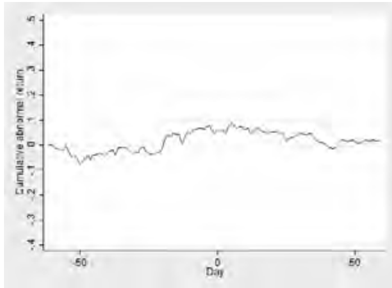
Interval of days after the crash	CAAR	T-statistic
0-1	-1.1%	-3.03***
0-2	-1.0%	-1.98 **
0-3	-0.5%	-0.77
0-4	-0.6%	-0.79
0-5	0.2%	0.25
0-6	-0.6%	-0.66
0-7	-1.0%	-1.11
0-8	-0.9%	-0.95
0-9	-0.8%	-0.73
0-10	-1.3%	-1.17
0-11	-1.0%	-0.83
0-12	-0.9%	-0.75
0-13	-0.9%	-0.74
0-14	-0.6%	-0.46
0-15	-0.8%	-0.58

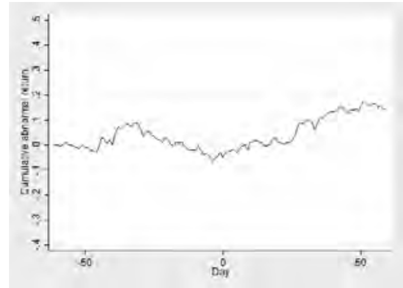
**** denotes statistical significance at 1%, ** statistical significance at 5% and * statistical significance at 10% level*

393 Chance and Ferris 1987.
394 Walker et al. 2005.

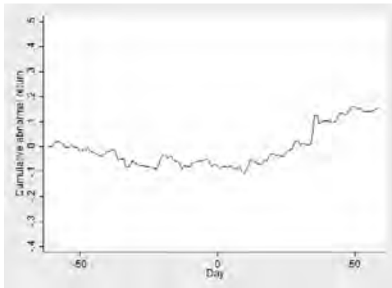
Like the data used to test Hypothesis 1, the charts on the cumulative abnormal returns on individual stocks of the manufacturers involved (Figures 15 to 28) exhibit very little resemblance to each other, while cumulatively still producing statistically significant negative abnormal returns shortly after the crash (Figure 14).

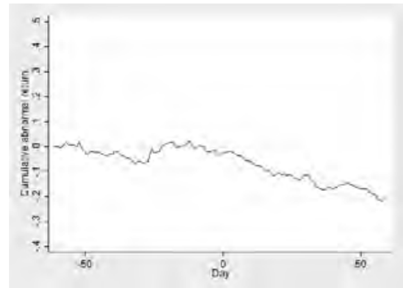
Figures 15 and 16: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. Boeing plane crash on 6.8.1997 (left) and Boeing plane crash on 17.7.1996 (right).



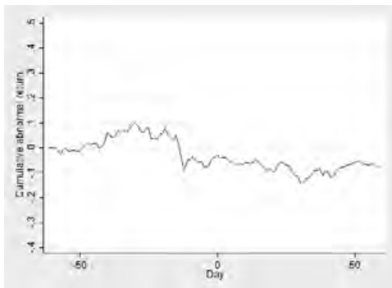


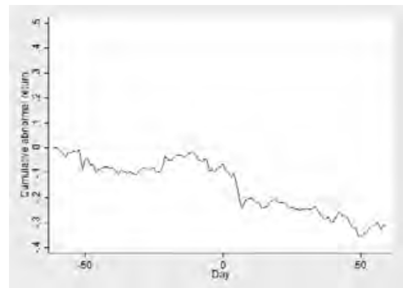
Figures 17 and 18: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. McDonnell Douglas plane crash on 11.5.1996 (left) and Boeing plane crash on 8.9.1994 (right).



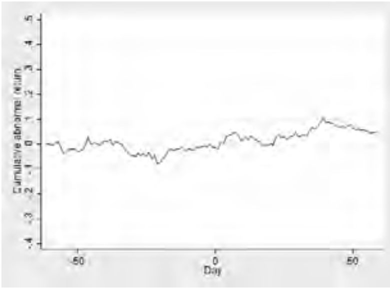


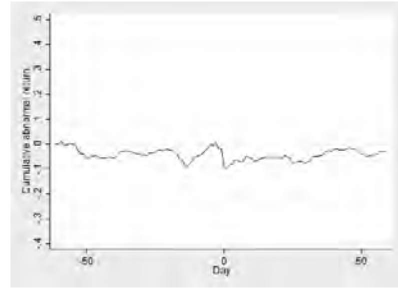
Figures 19 and 20: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. Boeing plane crash on 3.3.1991 (left) and Boeing plane crash on 1.2.1991 (right).



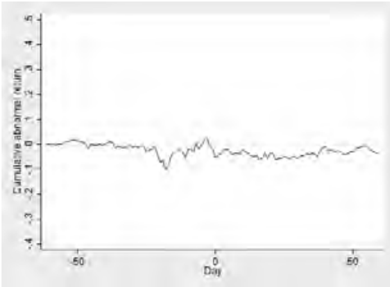


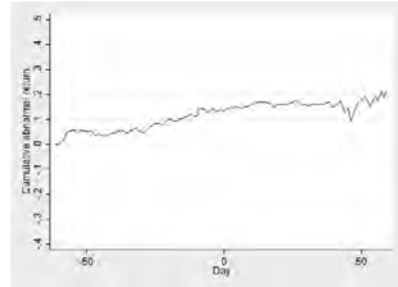
Figures 21 and 22: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. Boeing plane crash on 25.1.1990 (left) and McDonnell Douglas plane crash on 19.7.1989 (right).



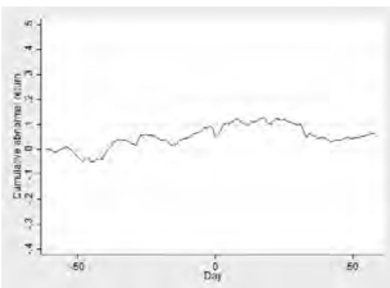


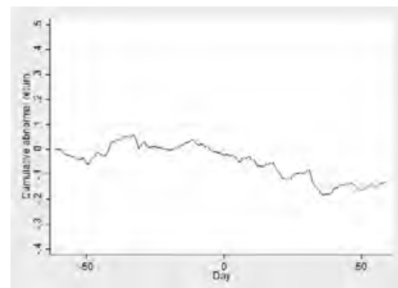
Figures 23 and 24: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. McDonnell Douglas plane crash on 15.11.1987 (left) and McDonnell Douglas plane crash on 16.8.1987 (right).



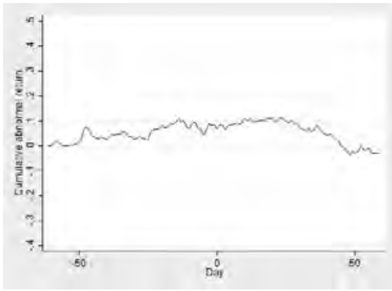


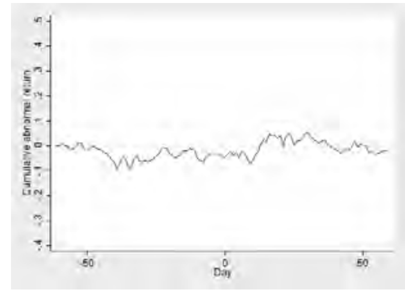
Figures 25 and 26: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. McDonnell Douglas plane crash on 31.8.1986 (left) and McDonnell Douglas plane crash on 6.9.1985 (right).





Figures 27 and 28: Cumulative average abnormal return on involved airline stock 60 days before and after the crash. Lockheed plane crash on 2.8.1985 (left) and Lockheed plane crash on 21.1.1985 (right).





H3: Crashes with 50 fatalities or more result in higher absolute abnormal returns on airlines' stocks.

The hypothesis is based on the reasoning that indirect effects due to a crash (mainly lower customer demand) are more pronounced when a higher number of victims is involved. More concretely, the chapter hypothesises that crashes with more fatalities result in higher absolute abnormal returns in the observation period. The chapter measures the effect in absolute terms as the stock price might exhibit the price-reversal phenomenon in the observation period and tests the hypothesis using a two-sample t-test on the average absolute abnormal returns of two groups of crash events, as described below.

Table 8: List of crashes with less than 50 fatalities

Crash Date	Trading day	Location	Air Carrier	Total Fatal Injuries
1.2.1991	4.2.1991	Los Angeles, CA	SkyWest Airlines	34
1.2.1991	4.2.1991	Los Angeles, CA	US Airways	34
5.4.1991	8.4.1991	Brunswick, GA	Atlantic Southeast Airlines	23
22.3.1992	23.3.1992	Flushing, NY	US Airways	27
2.7.1994	5.7.1994	Charlotte, NC	US Airways	37
9.1.1997	10.1.1997	Monroe, MI	Comair	29

Sources: NTSB, Aviation Accident Database and Synopses, 2014; ASN, Aviation Safety Database, 2014

Table 9: List of crashes with 50 fatalities or more

Crash Date	Trading day	Location	Air Carrier	Total Fatal Injuries
8.9.1994	9.9.1994	Aliquippa, PA	US Airways	132
31.10.1994	1.11.1994	Roselawn, IN	American Eagle Airlines	68
11.5.1996	13.5.1996	Miami, FL	ValuJet	110
17.7.1996	18.7.1996	East Moriches, NY	Trans World Airlines	230
31.1.2000	1.2.2000	Port Hueneme, CA	Alaska Airlines	88
12.2.2009	12.2.2009	Clarence Centre, NY	Colgan Air	50

Sources: NTSB, Aviation Accident Database and Synopses, 2014; ASN, Aviation Safety Database, 2014

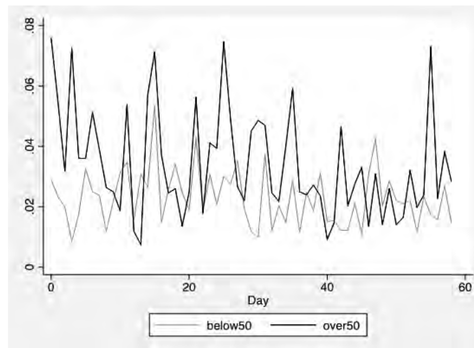
Table 10: Paired t-test results

Variable	Observations	Mean	Std. Err.	Std. Dev.	[95% confidence interval]	
below 50	60	0.0231	0.0012	0.0092	0.0207	0.0254
over 50	60	0.0338	0.0023	0.0178	0.0292	0.0384
diff	60	-0.0107	0.0023	0.0180	-0.0154	-0.0061

Paired t-test   Degrees of freedom = 59   t = -4.6056   Significant at $p < 0.001$

The test reveals statistically significant differences between the average absolute abnormal returns of the two selected groups. As expected, the amplitude of the abnormal returns is higher for the group of crashes that resulted in more than 50 fatalities (3.4% versus 2.3%).

Figure 29: Average absolute abnormal returns of crashes with greater fatalities (over 50) within 60 days of the event exceed those that had less than 50 fatalities



The result seems intuitive, but is in apparent contradiction with very interesting findings concerning another type of disaster, the infamous 1989 Exxon Valdes oil spill. Kahneman[395] cites a study conducted by Boyle which found that participants were not very sensitive to the number of deaths (in this case, of water birds) in terms of economic consequences.[396] Different groups of participants were asked how much they were willing to pay for protective nets to cover oil ponds in which migratory birds often drown. The number of birds these nets could save varied from 2,000 to 20,000 to 200,000 birds according to the experimental design. Yet the willingness to pay for the nets (and save the threatened birds) varied very little (average intended contributions were USD 80, USD 78, USD 88, respectively). The results imply that the number of birds makes almost no difference and that saving a (bird's) life does not represent an economic good in the eyes of the survey participant.
Kahneman also argues that the participants in all cases neglected the number of birds in danger but reacted to the mental image of a helpless bird drowning in thick oil.[397] In the case of aeroplane crashes, investors could only react to the mental image of a burning plane, scattered debris and mourning relatives of the victims. Interestingly, however, the effect of additional deaths on the stock price when aviation disasters are involved is significant, implying that investors were affected by the number of victims – either rationally by considering the economic consequences or irrationally by reacting to more dramatic media reports.

H4: Competitors of a manufacturer whose aeroplane crashed due to mechanical failure exhibit positive abnormal stock returns.

The hypothesis is based on the following logic: An aeroplane crash due to a mechanical failure negatively affects the level of trust in the plane's manufacturer. Due to the lower trust in the company, its customers will consider ordering aeroplanes from its competitors, which should result in lower expected cash flows for the manufacturer and higher ones for the competition. However, there might be alternative explanations of how a crash may affect aeroplane manufacturers. For example, the crash of an old aeroplane might encourage air carriers to replace older planes in their fleets with new ones, increasing the demand for new aircrafts, or a crash could eventually stir doubts in air passenger safety, decrease the overall demand for flying and consequently the demand for aeroplanes.
Bosch examined competitive effects on airlines and found that the stock returns of airlines that competed on overlapping routes with the affected carrier exhibited

395 Kahneman 2011, p. 93.

396 Boyle et al. 1994.

397 Kahneman 2011, p. 93.

positive abnormal returns.[398] The competitive effect on aeroplane manufacturers, which is of interest here, has yet to be studied.

Table 11: Crashes in the sample that were due to a mechanical failure

Date	Trading day	Location	Manufacturer	Total Fatal Injuries
6.9.1985	9.9.1985	Milwaukee, WI	McDonnell Douglas	31
3.3.1991	4.3.1991	Colorado Springs, CO	Boeing	25
8.9.1994	9.9.1994	Aliquippa, PA	Boeing	132
11.5.1996	13.5.1996	Miami, FL	McDonnell Douglas	110
17.7.1996	18.7.1996	East Moriches, NY	Boeing	230

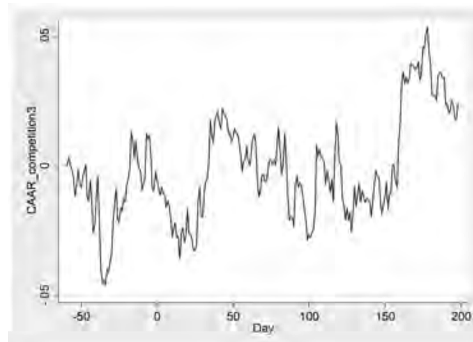
Sources: NTSB, Aviation Accident Database and Synopses, 2014; ASN, Aviation Safety Database, 2014

The crash sample consists of five crashes. The stocks of three different U.S. firms are studied to determine any competitive effects:

› the pair (Boeing, Lockheed) is used for the Milwaukee crash in 1985,
› the pair (McDonnell Douglas, Lockheed) is used for the Colorado Springs crash in 1991 and the Aliquippa crash in 1994,
› only Boeing stock is used for the Miami crash in 1996, and
› only McDonnell stock is used for the East Moriches crash in 1996.

The competitive effect of the last two crashes is observed on only two companies as Lockheed was no longer primarily an aeroplane manufacturer, but became a highly diversified corporation after the March 1995 merger with Martin Marietta, involved in various businesses such as defence, chemicals and electronics.

Figure 30: Competing manufacturers exhibit negative cumulative abnormal returns, but the negative trend starts before Day 0 and does not stand out in the generally volatile performance in the (-60, +200) period



398 Bosch et al., 1998

Table 12: Cumulative average abnormal returns for competitors, with tests of statistical significance

Interval of days after the crash	CAAR	T-statistic
0-1	-0.5%	-0.83
0-2	-0.9%	-0.95
0-3	-1.1%	-0.99
0-4	-0.8%	-0.63
0-5	-1.1%	-0.76
0-6	-1.1%	-0.67
0-7	-1.6%	-0.92
0-8	-1.3%	-0.71
0-9	-1.6%	-0.80
0-10	-2.0%	-0.95
0-11	-2.8%	-1.26
0-12	-2.4%	-1.05
0-13	-2.2%	-0.92
0-14	-2.8%	-1.12
0-15	-2.8%	-1.08
0-50	-0.9%	-0.20
0-100	-2.9%	-0.43
0-150	-1.5%	-0.18
0-200	1.9%	0.20

**** denotes statistical significance at 1%, ** statistical significance at 5% and * statistical significance at 10% level*

The results show negative cumulative abnormal returns in the first days following the crash, but they are not statistically significant. The decline starts before Day 0 and is smaller in size than changes in the abnormal return around Days -40 and +160. The statistically significant longer-term positive cumulative abnormal returns reported by Walker are also not present.[399] The absence of a statistically significant effect may be interpreted in several ways. First, the crash of a single aeroplane has an insufficient effect on the stock of such a large company such as Boeing, Lockheed or McDonnell Douglas. Second, the crash happened in a volatile period for the manufacturers and is relatively small compared to other important events in the observation period. Third, the manufacturer's stock only reacts strongly when there is proof of a mechanical

399 Walker, 2005.

error having caused the crash. The evidence of a mechanical error is usually not apparent immediately after the crash and might only be the result of a long-term investigation, thus obfuscating the effect. Fourth, Lockheed, Boeing and McDonnell Douglas are not competitors that would benefit in the event of plane crashes of one of these companies, but other firms might. This option is not investigated as there were no other major publicly traded aeroplane manufacturers in the USA at the time, and Airbus is a European corporation which is outside our sample.

H5: Crashes with 50 fatalities or more result in similar average absolute abnormal returns on aeroplane manufacturers' stocks than crashes with less than 50 fatalities.

This hypothesis is based on the reasoning that the number of aeroplane crash fatalities should have no significant effect on manufacturers' stock if investors only consider economic reasons. The most important consequence of a crash for a manufacturer should be the influence on future orders which is independent of the number of fatalities. If investors reacted emotionally to more dramatic media reports, neglecting economic fundamentals, then one could observe more pronounced absolute abnormal returns. The chapter tests this hypothesis using a two-sample t-test on the average absolute abnormal returns of two groups of crash events, as described below.

Table 13: List of crashes with less than 50 fatalities

Date	Trading day	Location	Manufacturer	Total Fatal Injuries
6.9.1985	9.9.1985	Milwaukee, WI	McDonnell Douglas	31
15.11.1987	16.11.1987	Denver, CO	McDonnell Douglas	28
1.2.1991	4.2.1991	Los Angeles, CA	Boeing	34
3.3.1991	4.3.1991	Colorado Springs, CO	Boeing	25

Sources: NTSB, Aviation Accident Database and Synopses, 2014; ASN, Aviation Safety Database, 2014

Table 14: List of crashes with 50 or more fatalities

Date	Trading day	Location	Manufacturer	Total Fatal Injuries
21.1.1985	21.1.1985	Reno, NV	Lockheed	70
2.8.1985	5.8.1985	Dallas/FT Worth, TX	Lockheed	135
31.8.1986	2.9.1986	Cerritos, CA	McDonnell Douglas	82
16.8.1987	17.8.1987	Romulus, MI	McDonnell Douglas	156
19.7.1989	19.7.1989	Sioux City, IA	McDonnell Douglas	111
25.1.1990	26.1.1990	Cove Neck, NY	Boeing	73
8.9.1994	5.7.1994	Aliquippa, PA	Boeing	132
11.5.1996	9.9.1994	Miami, FL	McDonnell Douglas	110
17.7.1996	13.5.1996	East Moriches, NY	Boeing	230
6.8.1997	18.7.1996	Nimitz Hill, GU	Boeing	228

Sources: NTSB, Aviation Accident Database and Synopses, 2014; ASN, Aviation Safety Database, 2014

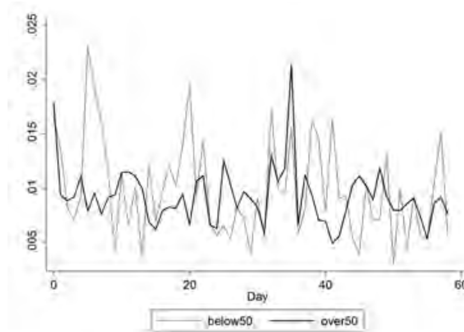
Table 15: Paired t-test results

Variable	Observations	Mean	Std. Err.	Std. Dev.	[95% confidence interval]	
below 50	60	0.0098	0.00058	0.00450	0.0086	0.0110
over 50	60	0.0092	0.00035	0.00270	0.0085	0.0099
diff	60	0.0006	0.00062	0.00482	-0.0007	-0.0018

Paired t-test Degrees of freedom = 59 t = 0.9280 Significant at $p < 0.3572$

The test reveals no statistically significant difference between the average absolute abnormal returns of the two selected groups. The amplitude of abnormal returns is even slightly higher for the group of crashes that resulted in less than 50 fatalities (0.98% versus 0.92%).

Figure 31: Average absolute abnormal returns of crashes with greater fatalities (over 50) within 60 days of the event are on average not significantly higher than those that had less than 50 fatalities



The results suggest that a higher number of fatalities does not significantly affect investment behaviour concerning the stock of the aeroplane manufacturer involved. This supports the explanation that these investors consider the fundamental economic factors and disregard the influence of factors such as the number of people who died which is relevant to the airline involved, but not the manufacturer.

5.3 Robustness checks for alternative estimation window specifications

In order to check whether the obtained results have been influenced by the specific setting of the chosen methodology, the chapter runs regressions using alternative specifications of the estimation window to compare the results to those obtained using the base case of 120 trading days. The parameters of the market model are measured using a regression of security returns against the market portfolio 60, 90, 150 and 180 trading days before the crash.

H1: Aeroplane crashes negatively affect the stock performance of airlines.

Figure 32: Alternative specifications of the estimation window produce a similarly significant change in the cumulative abnormal return for airlines around the days of the crash

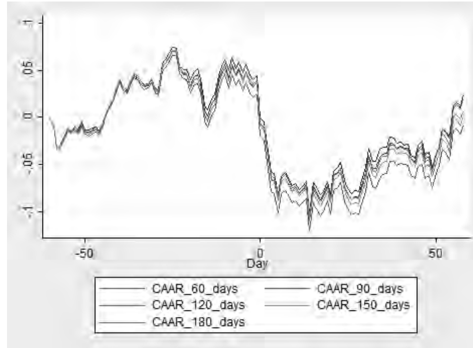


Table 16: Statistical significance of the cumulative abnormal return does not changed for different specifications of the estimation window

Interval of days after the crash	CAAR 60 days	T-statistic 120 days	CAAR 120 days	T-statistic 120 days	CAAR 180 days	T-statistic 180 days
0-1	-4.4%	-3.54***	-4.3%	-3.54***	-4.5%	-3.65***
0-2	-4.8%	-2.75***	-4.8%	-2.79***	-4.9%	-2.83***
0-3	-7.2%	-3.38***	-7.2%	-3.38***	-7.1%	-3.35***
0-4	-10.2%	-4.11***	-10.2%	-4.17***	-10.0%	-4.11***
0-5	-10.3%	-3.74***	-10.4%	-3.80***	-10.2%	-3.72***
0-6	-12.5%	-4.14***	-12.5%	-4.15***	-12.2%	-4.08***
0-7	-10.6%	-3.23***	-10.5%	-3.22***	-10.3%	-3.18***
0-8	-10.2%	-2.93***	-10.1%	-2.91***	-9.9%	-2.86***
0-9	-10.7%	-2.89***	-10.6%	-2.87***	-10.4%	-2.84***
0-10	-11.6%	-2.96***	-11.4%	-2.94***	-11.2%	-2.91***
0-11	-11.3%	-2.76***	-11.2%	-2.75***	-11.1%	-2.74***
0-12	-12.0%	-2.80***	-11.7%	-2.76***	-11.8%	-2.80***
0-13	-11.6%	-2.61 **	-11.4%	-2.59 **	-11.5%	-2.62 **
0-14	-11.1%	-2.41 **	-11.0%	-2.39 **	-11.0%	-2.41 **
0-15	-14.5%	-3.03***	-14.4%	-3.03***	-14.4%	-3.04***

**** denotes statistical significance at 1%, ** statistical significance at 5% and * statistical significance at 10% level*

Table 17: Airlines stocks' short-term beta coefficients vary according to alternative specifications of the estimation window

Crash date	Carrier	60-days Beta coefficient	90-days Beta coefficient	120-days Beta coefficient	150-days Beta coefficient	180-days Beta coefficient
1.2.1991	SkyWest Airlines	1.75	1.71	1.17	1.03	1.04
1.2.1991	US Airways	2.97	2.45	2.60	2.59	2.44
5.4.1991	Atlantic Southeast Airlines	1.63	1.67	1.33	1.07	1.41
22.3.1992	US Airways	2.01	2.05	2.66	2.55	2.32
2.7.1994	US Airways	1.77	1.06	0.89	0.91	0.82
8.9.1994	US Airways	1.16	1.12	1.25	0.90	0.90
31.10.1994	American Eagle Airlines	1.88	1.74	1.56	1.50	1.51
11.5.1996	ValuJet	0.31	0.45	1.27	1.43	1.30
17.7.1996	Trans World Airlines	0.59	0.15	0.09	0.60	0.93
9.1.1997	Comair	0.39	0.72	0.12	0.14	0.08
31.1.2000	Alaska Airlines	0.23	0.55	0.57	0.53	0.60
12.2.2009	Colgan Air	0.52	0.59	0.53	0.56	0.56

Despite different specifications of the estimation window resulting in varying beta coefficients, the significant negative abnormal returns in the days after an aeroplane crash remain statistically significant and are therefore robust to changes in the estimation window length. Hypothesis 1 is confirmed with a 99% confidence level at least up to Day 12 after a crash.

H2: Aeroplane crashes affect the stock performance of aircraft manufacturers.

Figure 33: Alternative specifications of the estimation window produce similar changes in the cumulative abnormal return for aeroplane manufacturers in the first days after a crash (a drop and reversal) but then the cumulative abnormal returns start to diverge

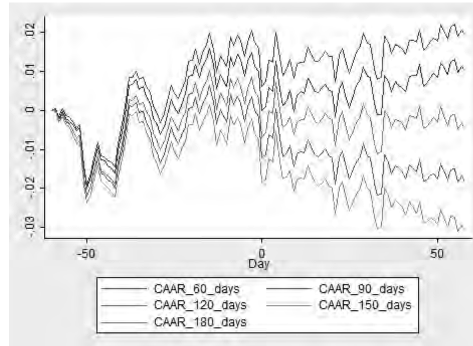


Table 18: Statistical significance of the cumulative abnormal return remains unchanged under different specifications of the estimation window

Interval of days after the crash	CAAR 60 days	T-statistic 120 days	CAAR 120 days	T-statistic 120 days	CAAR 180 days	T-statistic 180 days
0-1	-1.0%	-2.81***	-1.1%	-3.03***	-1.1%	-3.07***
0-2	-0.9%	-1.75*	-1.0%	-1.98**	-1.0%	-2.01**
0-3	-0.3%	-0.53	-0.5%	-0.77	-0.5%	-0.78
0-4	-0.4%	-0.55	-0.6%	-0.79	-0.5%	-0.78
0-5	0.4%	0.52	0.2%	0.25	0.2%	0.28
0-6	-0.3%	-0.32	-0.6%	-0.66	-0.5%	-0.63
0-7	-0.7%	-0.76	-1.0%	-1.11	-1.0%	-1.07
0-8	-0.5%	-0.53	-0.9%	-0.95	-0.9%	-0.95
0-9	-0.3%	-0.27	-0.8%	-0.73	-0.8%	-0.75
0-10	-0.8%	-0.70	-1.3%	-1.17	-1.3%	-1.18
0-11	-0.4%	-0.36	-1.0%	-0.83	-1.0%	-0.87
0-12	-0.4%	-0.30	-0.9%	-0.75	-1.0%	-0.80
0-13	-0.4%	-0.29	-0.9%	-0.74	-1.0%	-0.78
0-14	0.0%	0.00	-0.6%	-0.46	-0.7%	-0.51
0-15	-0.1%	-0.11	-0.8%	-0.58	-0.9%	-0.64

**** denotes statistical significance at 1%, ** statistical significance at 5% and * statistical significance at the 10% level*

Table 19: Aeroplane manufacturers stocks' short-term beta coefficients are quite stable in alternative specifications of the estimation window, with the exception of McDonnell Douglas stock around the crash in 1989

Crash date	Carrier	60-days Beta coefficient	90-days Beta coefficient	120-days Beta coefficient	150-days Beta coefficient	180-days Beta coefficient
21.1.1985	Lockheed	1.29	1.40	1.39	1.45	1.42
2.8.1985	Lockheed	1.52	1.46	1.38	1.57	1.51
6.9.1985	McDonnell Douglas	1.04	1.11	1.16	1.36	1.45
31.8.1986	McDonnell Douglas	0.79	0.86	0.70	0.69	0.75
16.8.1987	McDonnell Douglas	0.87	0.85	0.81	0.77	0.90
15.11.1987	McDonnell Douglas	0.72	0.73	0.73	0.73	0.73
19.7.1989	McDonnell Douglas	0.08	0.22	0.42	0.49	0.52
25.1.1990	Boeing	1.27	1.30	1.37	1.30	1.32
1.2.1991	Boeing	1.79	1.58	1.71	1.69	1.56
3.3.1991	Boeing	1.41	1.48	1.49	1.61	1.59
8.9.1994	Boeing	1.10	0.86	0.83	0.78	0.64
11.5.1996	McDonnell Douglas	0.97	0.89	0.81	0.66	0.76
17.7.1996	Boeing	1.52	1.32	1.32	1.27	1.37
6.8.1997	Boeing	1.10	1.26	1.21	1.22	1.20

Negative abnormal returns after a crash in the case of aeroplane manufacturers were in the base case (estimation window of 120 trading days) only statistically significant in the first two days after a crash, which also holds for alternative lengths of the estimation windows. By using alternative specifications of the estimation window, the chapter shows that the cumulative abnormal returns beyond Day 2 are not robust to changes in the estimation window. In some specifications, they exhibit a rising and in others a declining trend. Hypothesis 2 is confirmed only for Day 1 and Day 2 after a crash with a 99% and 90% confidence level, respectively. A reversal of the effect is observed on Day 3 and Day 5.

H3: Crashes with 50 or more fatalities result in higher absolute abnormal returns to airlines' stocks.

Figure 34: Alternative specifications of the estimation window result in almost identical differences between the absolute abnormal returns associated with the group of crashes with less than 50 fatalities compared to the absolute abnormal returns associated with the group of crashes with more than 50 fatalities

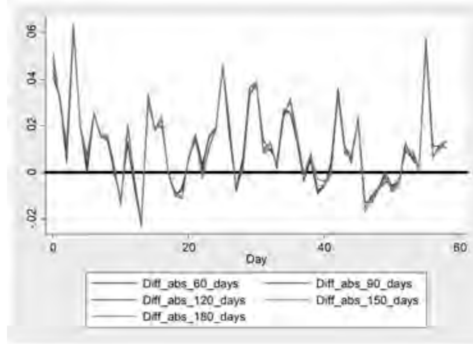


Table 20: Paired t-test results with a 60-day observation window

Variable	Observations	Mean	Std. Err.	Std. Dev.	[95% confidence interval]	
below 50	60	0.0235	0.0012	0.0096	0.0211	0.0260
over 50	60	0.0343	0.0023	0.0177	0.0298	0.0389
diff	60	-0.0108	0.0023	0.0176	-0.0153	-0.0062

Paired t-test Degrees of freedom = 59 $t = -4.7373$ Significant at $p < 0.001$

Table 21: Paired t-test results with a 120-day observation window

Variable	Observations	Mean	Std. Err.	Std. Dev.	[95% confidence interval]	
below 50	60	0.0231	0.0012	0.0092	0.0207	0.0254
over 50	60	0.0338	0.0023	0.0178	0.0292	0.0384
diff	60	-0.0107	0.0023	0.0180	-0.0154	-0.0061

Paired t-test Degrees of freedom = 59 $t = -4.6056$ Significant at $p < 0.001$

Table 22: Paired t-test results with a 180-day observation window

Variable	Observations	Mean	Std. Err.	Std. Dev.	[95% confidence interval]	
below 50	60	0.0226	0.0012	0.0090	0.0203	0.0249
over 50	60	0.0340	0.0023	0.0180	0.0294	0.0387
diff	60	-0.0114	0.0023	0.0181	-0.0154	-0.0067

Paired t-test Degrees of freedom = 59 t = -4.8767 Significant at $p < 0.001$

Despite different specifications of the estimation window, the absolute abnormal returns in the case of crashes with more than 50 fatalities are stable and significantly higher than those for crashes with less than 50 fatalities. Hypothesis 3 is confirmed at a 99.9% confidence level and is robust relative to the specification of the estimation window.

H4: Competitors of the manufacturer whose aeroplane crashed due to mechanical failure exhibit positive abnormal stock returns.

Figure 35: Alternative specifications of the estimation window produce varying changes in the cumulative abnormal return for competing aeroplane manufacturers (especially after Day 40), further confirming the competitive effects of aeroplane crashes in our study are not statistically significant

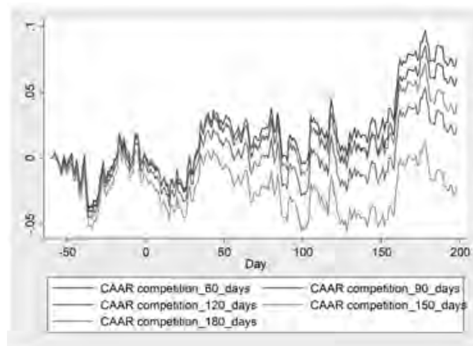


Table 23: The cumulative abnormal returns are also not statistically significant under different specifications of the estimation window

Interval of days after the crash	CAAR 60 days	T-statistic 120 days	CAAR 120 days	T-statistic 120 days	CAAR 180 days	T-statistic 180 days
0-1	0.0%	0.00	-0.5%	-0.83	0.2%	0.27
0-2	-0.4%	-0.46	-0.9%	-0.95	-0.1%	-0.13
0-3	-0.6%	-0.56	-1.1%	-0.99	-0.4%	-0.32
0-4	-0.3%	-0.24	-0.8%	-0.63	-0.1%	-0.06
0-5	-0.6%	-0.41	-1.1%	-0.76	-0.3%	-0.24
0-6	-0.6%	-0.34	-1.1%	-0.67	-0.3%	-0.20
0-7	-1.0%	-0.59	-1.6%	-0.92	-0.9%	-0.49
0-8	-0.8%	-0.41	-1.3%	-0.71	-0.6%	-0.31
0-9	-1.0%	-0.49	-1.6%	-0.80	-0.9%	-0.43
0-10	-1.4%	-0.65	-2.0%	-0.95	-1.2%	-0.59
0-11	-2.1%	-0.95	-2.8%	-1.26	-2.0%	-0.90
0-12	-1.7%	-0.73	-2.4%	-1.05	-1.6%	-0.71
0-13	-1.5%	-0.62	-2.2%	-0.92	-1.4%	-0.58
0-14	-2.0%	-0.82	-2.8%	-1.12	-1.9%	-0.79
0-15	-2.0%	-0.78	-2.8%	-1.08	-1.9%	-0.75
0-50	2.5%	0.54	-0.9%	-0.20	2.1%	0.45
0-100	0.5%	0.07	-2.9%	-0.43	1.3%	0.20
0-150	2.0%	0.25	-1.5%	-0.18	0.5%	0.06
0-200	7.0%	0.75	1.9%	0.20	-3.6%	0.38

Table 24: Competitor stocks' short-term beta coefficients in selected estimation windows. Some stocks were extremely volatile with betas above 5 (Lockheed 1991, 1994, McDonnell Douglas 1994).

Crash date	Carrier	60-days Beta coefficient	90-days Beta coefficient	120-days Beta coefficient	150-days Beta coefficient	180-days Beta coefficient
6.9.1985	Boeing	1.84	1.95	2.01	2.06	1.94
6.9.1985	Lockheed	1.47	1.42	1.40	1.42	1.51
3.3.1991	McDonnell Douglas	1.57	1.29	1.04	0.85	8.18
3.3.1991	Lockheed	5.22	6.03	6.39	5.79	6.02
8.9.1994	McDonnell Douglas	9.52	8.87	8.06	6.60	7.57
8.9.1994	Lockheed	9.02	1.05	9.23	8.04	7.69
11.5.1996	Boeing	1.52	1.33	0.13	1.28	1.37
17.7.1996	McDonnell Douglas	0.14	1.45	1.28	1.11	1.12

Negative abnormal returns after a crash in the case of aeroplane manufacturers' competitors were not statistically significant in the base case (estimation window of 120 trading days). By using alternative specifications of the estimation window, the chapter confirms they are not statistically significant and are not robust to changes in the estimation window. At a minimum, the crashes in 1991 and 1994 happened in a volatile period for the competitors' stock, thus possibly obfuscating the event effect. Based on these results, Hypothesis 4 is rejected.

H5: Crashes with 50 or more fatalities result in similar average absolute abnormal returns to aeroplane manufacturers' stocks as those crashes with fewer than 50 fatalities.

Figure 36: Alternative specifications of the estimation window result in almost identical differences between the absolute abnormal returns associated with the group of crashes with less than 50 fatalities compared to the absolute abnormal returns associated with the group of crashes with more than 50 fatalities.

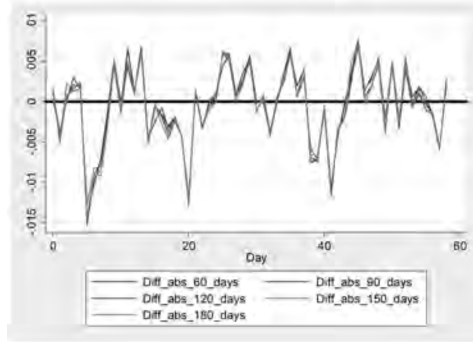


Table 25: Paired t-test results with a 60-day observation window

Variable	Observations	Mean	Std. Err.	Std. Dev.	[95% confidence interval]	
below 50	60	0.0098	0.00058	0.00449	0.0087	0.0110
over 50	60	0.0094	0.00035	0.00269	0.0087	0.0101
diff	60	0.0004	0.00062	0.00484	-0.0008	-0.0017

Paired t-test Degrees of freedom = 59 $t = 0.6750$ Significant at $p < 0.5023$

Table 26: Paired t-test results with a 120-day observation window

Variable	Observations	Mean	Std. Err.	Std. Dev.	[95% confidence interval]	
below 50	60	0.0098	0.00058	0.00450	0.0086	0.0110
over 50	60	0.0092	0.00035	0.00270	0.0085	0.0099
diff	60	0.0006	0.00062	0.00482	-0.0007	-0.0018

Paired t-test Degrees of freedom = 59 $t = 0.9280$ Significant at $p < 0.3572$

Table 27: Paired t-test results with a 180-day observation window

Variable	Observations	Mean	Std. Err.	Std. Dev.	[95% confidence interval]	
below 50	60	0.0098	0.00057	0.00441	0.0087	0.0109
over 50	60	0.0093	0.00037	0.00284	0.0086	0.0101
diff	60	0.0005	0.00061	0.00469	-0.0007	0.0017

Paired t-test Degrees of freedom = 59 t = 0.7693 Significant at $p < 0.4448$

Despite different specifications of the estimation window, the average absolute abnormal return in the case of crashes with more than 50 fatalities is stable in the range 0.92%–0.94% and is not significantly different from the average absolute abnormal return for crashes with less than 50 fatalities (0.92%–0.93%). Hypothesis 5 is confirmed; the difference in the means is at most 0.06% and not statistically significant in any scenario observed.

7. CONCLUSION

This chapter examines the effect aeroplane crashes and the related tort liability have on stocks of U.S. airlines and aeroplane manufacturers that were involved in crashes. The investigation performed shows the negative influence of crashes up to 12 days after an accident with a statistical significance of 99% using a one-tailed test. The average first-day abnormal return is above 4% and the negative effect seems to continue to influence the stock performance up to Day 6 after an accident when the average cumulative abnormal return reaches -12.5%. The results are also robust with regard to changes in the observation window.

Moreover, our investigation identifies the market reaction in the case of aeroplane manufacturers' stock price is much less pronounced. The maximum cumulative abnormal return does not exceed 1.3% in the first 15 days of trading but seems to persist to Day 30 and beyond. The t-statistic is not statistically significant, except on Days 1 and 2. Cumulative abnormal returns beyond Day 2 are not robust to changes in the estimation window. This chapter also shows that crashes which resulted in more than 50 fatalities are associated with higher absolute abnormal returns than those that caused between 20 and 50 fatalities (3.4% versus 2.3%). The results are statistically significant and robust to changes in the estimation window.

Further, the results show negative cumulative abnormal returns in the first days following a crash, but they are not statistically significant. Longer-term positive cumulative abnormal returns are not robust to changes in the length of the estimation window and are not statistically significant. The analysis performed also shows that crashes which resulted in more than 50 fatalities do not result in higher average absolute abnormal returns compared to those crashes that caused between 20 and 50 fatalities (0.93% versus 0.98%). The observed difference is not statistically significant in any estimation window scenario considered.

The results also suggest that in the first days after a crash the efficient market hypothesis is temporarily violated as investors act on the same information (by selling) for a longer period of time. A savvy investor could profit from buying the stock of the airline (or manufacturer) involved immediately upon receiving the news and selling it a few days later. The majority of investors seem to be influenced by cognitive biases triggered by rare negative events. These include a focus on the existing evidence (media reports) and ignoring the absent evidence (which is available after the official investigation), over-weighting the low probabilities (the crash could easily happen again) and the diminishing sensitivity to quantity. The findings suggest that if a regulator stopped trading in the stock involved for a few days to prevent decision-making under cognitive biases, the stock price would fall less dramatically and be more in line with the change in the economic fundamentals.

The results also suggest that investors (consciously or unconsciously) consider the number of fatalities as an important factor affecting their view on the appropriate price of the relevant airline stock. The chapter speculates the main reason for this is they expect a greater negative effect on customer demand (irrational on the customer side) or they themselves are subject to irrational decision-making. The performed control tests indicate that the number of fatalities does not affect the average absolute abnormal returns of a manufacturer's stock in the post-crash period. The different sensitivity to the number of fatalities in the case of airlines and aeroplane manufacturers can be rationally explained and does not provide additional evidence of investors' cognitive biases.

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APPENDIX

Table 28: Descriptive statistics of airlines' stock returns in the observation period

Percentiles		SKYW daily returns, 200 days before and after the crash on 1.2.1991	
1%	-0.087		
5%	-0.064		
10%	-0.048		
25%	-0.024	Observations	401
50%	0	Mean	0.0006085
75%	0.023	Std. Dev.	0.0422717
90%	0.052	Variance	0.0017869
95%	0.07	Skewness	0.5872797
99%	0.098	Kurtosis	4.553684

Percentiles		U daily returns, 200 days before and after the crash on 1.2.1991	
1%	-0.085		
5%	-0.048		
10%	-0.038		
25%	-0.022	Observations	401
50%	-0.004	Mean	-0.0021796
75%	0.013	Std. Dev.	0.0329725
90%	0.036	Variance	0.0010872
95%	0.064	Skewness	0.6652395
99%	0.096	Kurtosis	5.455606

Percentiles		ASAI daily returns, 200 days before and after the crash on 5.4.1991	
1%	-0.077		
5%	-0.042		
10%	-0.03		
25%	-0.014	Observations	401
50%	0	Mean	0.001995
75%	0.017	Std. Dev.	0.0343114
90%	0.031	Variance	0.0011773
95%	0.055	Skewness	-2.069509
99%	0.102	Kurtosis	28.73134

Percentiles		U daily returns, 200 days before and after the crash on 22.3.1992	
1%	-0.079		
5%	-0.045		
10%	-0.034		
25%	-0.019	Observations	401
50%	0	Mean	-0.0000449
75%	0.012	Std. Dev.	0.0329259
90%	0.04	Variance	0.0010841
95%	0.056	Skewness	0.8966012
99%	0.119	Kurtosis	6.39718

Percentiles		U daily returns, 200 days before and after the crash on 2.7.1994	
1%	-0.078		
5%	-0.053		
10%	-0.04		
25%	-0.02	Observations	401
50%	0	Mean	-0.0009102
75%	0.018	Std. Dev.	0.0385384
90%	0.04	Variance	0.0014852
95%	0.059	Skewness	1.121295
99%	0.121	Kurtosis	11.23937

Percentiles		U daily returns, 200 days before and after the crash on 8.9.1994	
1%	-0.079		
5%	-0.054		
10%	-0.041		
25%	-0.021	Observations	401
50%	0	Mean	0.0003167
75%	0.019	Std. Dev.	0.0405589
90%	0.043	Variance	0.001645
95%	0.065	Skewness	1.032872
99%	0.121	Kurtosis	9.564572

Percentiles		AMR daily returns, 200 days before and after the crash on 31.10.1994	
1%	-0.036		
5%	-0.027		
10%	-0.02		
25%	-0.01	Observations	401
50%	0	Mean	0.0002344
75%	0.011	Std. Dev.	0.0162562
90%	0.02	Variance	0.0002643
95%	0.029	Skewness	0.1546547
99%	0.042	Kurtosis	3.250229

Percentiles		VJET daily returns, 200 days before and after the crash on 11.5.1996	
1%	-0.143		
5%	-0.063		
10%	-0.046		
25%	-0.021	Observations	401
50%	0	Mean	-0.00302
75%	0.011	Std. Dev.	0.0536068
90%	0.046	Variance	0.0028737
95%	0.081	Skewness	-1.915479
99%	0.139	Kurtosis	23.22065

Percentiles		TWA daily returns, 200 days before and after the crash on 17.7.1996	
1%	-0.089		
5%	-0.064		
10%	-0.051		
25%	-0.026	Observations	401
50%	0	Mean	0.0011222
75%	0.023	Std. Dev.	0.0452741
90%	0.062	Variance	0.0020497
95%	0.079	Skewness	0.6638441
99%	0.138	Kurtosis	4.650207

Percentiles		COMR daily returns, 200 days before and after the crash on 9.1.1997	
1%	-0.073		
5%	-0.047		
10%	-0.035		
25%	-0.014	Observations	401
50%	0	Mean	0.000783
75%	0.017	Std. Dev.	0.033802
90%	0.033	Variance	0.0011426
95%	0.049	Skewness	-1.881096
99%	0.088	Kurtosis	23.75982

Percentiles		ALK daily returns, 200 days before and after the crash on 31.1.2000	
1%	-0.059		
5%	-0.041		
10%	-0.03		
25%	-0.017	Observations	401
50%	-0.004	Mean	-0.0011471
75%	0.013	Std. Dev.	0.0271291
90%	0.032	Variance	0.000736
95%	0.043	Skewness	0.4606572
99%	0.069	Kurtosis	7.639421

Percentiles		PNCL daily returns, 200 days before and after the crash on 12.2.2009	
1%	-0.148		
5%	-0.082		
10%	-0.056		
25%	-0.028	Observations	401
50%	-0.001	Mean	0.0012244
75%	0.023	Std. Dev.	0.0631691
90%	0.061	Variance	0.0039903
95%	0.091	Skewness	1.074251
99%	0.261	Kurtosis	10.84843

Table 29: Aircraft manufacturers' stock returns in the observation period

Percentiles		LK daily returns, 200 days before and after the crash on 21.1.1985	
1%	-0.042		
5%	-0.025		
10%	-0.02		
25%	-0.011	Observations	401
50%	0	Mean	0.001015
75%	0.011	Std. Dev.	0.0176282
90%	0.023	Variance	0.0003108
95%	0.03	Skewness	0.4709194
99%	0.042	Kurtosis	4.631806

Percentiles		LK daily returns, 200 days before and after the crash on 2.8.1985	
1%	-0.035		
5%	-0.025		
10%	-0.02		
25%	-0.01	Observations	401
50%	0	Mean	0.0005112
75%	0.011	Std. Dev.	0.0159355
90%	0.02	Variance	0.0002539
95%	0.029	Skewness	0.0982189
99%	0.04	Kurtosis	3.085038

Percentiles		MD daily returns, 200 days before and after the crash on 9.9.1985	
1%	-0.036		
5%	-0.023		
10%	-0.016		
25%	-0.008	Observations	401
50%	0.002	Mean	0.0004688
75%	0.009	Std. Dev.	0.0137406
90%	0.017	Variance	0.0001888
95%	0.02	Skewness	-0.089575
99%	0.037	Kurtosis	4.853631

Percentiles		MD daily returns, 200 days before and after the crash on 2.9.1986	
1%	-0.033		
5%	-0.022		
10%	-0.015		
25%	-0.008	Observations	401
50%	0	Mean	-0.00000748
75%	0.008	Std. Dev.	0.0125506
90%	0.015	Variance	0.0001575
95%	0.02	Skewness	-0.2375559
99%	0.032	Kurtosis	3.906294

Percentiles		MD daily returns, 200 days before and after the crash on 31.8.1986	
1%	-0.045		
5%	-0.022		
10%	-0.014		
25%	-0.007	Observations	401
50%	0	Mean	-0.0005761
75%	0.006	Std. Dev.	0.0156628
90%	0.015	Variance	0.0002453
95%	0.022	Skewness	-2.845814
99%	0.034	Kurtosis	30.50006

Percentiles		MD daily returns, 200 days before and after the crash on 16.8.1987	
1%	-0.045		
5%	-0.02		
10%	-0.014		
25%	-0.006	Observations	401
50%	0	Mean	-0.0004065
75%	0.007	Std. Dev.	0.0151193
90%	0.015	Variance	0.0002286
95%	0.02	Skewness	-3.24722
99%	0.029	Kurtosis	34.92783

Percentiles		MD daily returns, 200 days before and after the crash on 19.7.1989	
1%	-0.06		
5%	-0.02		
10%	-0.013		
25%	-0.006	Observations	401
50%	0	Mean	-0.0008653
75%	0.005	Std. Dev.	0.013323
90%	0.012	Variance	0.0001775
95%	0.019	Skewness	-1.613918
99%	0.027	Kurtosis	10.0716

Percentiles		BA daily returns, 200 days before and after the crash on 25.1.1991	
1%	-0.065		
5%	-0.031		
10%	-0.019		
25%	-0.01	Observations	401
50%	0	Mean	-0.0006259
75%	0.011	Std. Dev.	0.0284895
90%	0.024	Variance	0.0008116
95%	0.031	Skewness	-5.970098
99%	0.05	Kurtosis	65.57526

Percentiles		BA daily returns, 200 days before and after the crash on 1.2.1991	
1%	-0.065		
5%	-0.031		
10%	-0.022		
25%	-0.01	Observations	401
50%	0	Mean	-0.0007805
75%	0.01	Std. Dev.	0.0242755
90%	0.02	Variance	0.0005893
95%	0.031	Skewness	-4.390204
99%	0.052	Kurtosis	53.83752

Percentiles		BA daily returns, 200 days before and after the crash on 3.3.1991	
1%	-0.065		
5%	-0.031		
10%	-0.022		
25%	-0.01	Observations	401
50%	0	Mean	-0.0003267
75%	0.01	Std. Dev.	0.0196755
90%	0.02	Variance	0.0003871
95%	0.029	Skewness	-0.4147003
99%	0.052	Kurtosis	6.484269

Percentiles		BA daily returns, 200 days before and after the crash on 8.9.1994	
1%	-0.031		
5%	-0.019		
10%	-0.014		
25%	-0.008	Observations	401
50%	0	Mean	0.0008529
75%	0.008	Std. Dev.	0.0138606
90%	0.016	Variance	0.0001921
95%	0.023	Skewness	0.9914477
99%	0.045	Kurtosis	7.219172

Percentiles		MD daily returns, 200 days before and after the crash on 11.5.1996	
1%	-0.032		
5%	-0.019		
10%	-0.013		
25%	-0.005	Observations	401
50%	0.001	Mean	0.0021172
75%	0.009	Std. Dev.	0.0143527
90%	0.018	Variance	0.000206
95%	0.024	Skewness	1.55586
99%	0.034	Kurtosis	15.94198

Percentiles		BA daily returns, 200 days before and after the crash on 17.7.1996	
1%	-0.033		
5%	-0.022		
10%	-0.017		
25%	-0.009	Observations	401
50%	0	Mean	0.0012269
75%	0.009	Std. Dev.	0.0153682
90%	0.021	Variance	0.0002362
95%	0.028	Skewness	0.4815452
99%	0.039	Kurtosis	4.201527

Percentiles		BA daily returns, 200 days before and after the crash on 6.8.1997	
1%	-0.036		
5%	-0.024		
10%	-0.018		
25%	-0.009	Observations	401
50%	0	Mean	0.0011696
75%	0.01	Std. Dev.	0.0161405
90%	0.022	Variance	0.0002605
95%	0.028	Skewness	0.2291478
99%	0.041	Kurtosis	4.484016

PART III. CORPORATE LAW AND ECONOMICS: INSOLVENCY AND CLASS ACTIONS

Larisa Vrtačnik

CHAPTER 5. THE LAW AND ECONOMICS OF THE SIMPLIFIED COMPULSORY SETTLEMENT IN THE SLOVENIAN LEGAL SYSTEM

1. INTRODUCTION

The purpose of corporate insolvency law is to minimise the social cost of corporate failures and it must therefore aim to achieve ex-post efficiency by ensuring that the insolvency assets are allocated to their highest-valued use. Moreover, it must not create incentives for non-insolvent firms to engage in inefficient activities, namely ex-ante efficiency. Finally, it must accomplish those goals as efficiently as possible.[400] The mechanisms for accomplishing these goals, along with the question of whether other goals should also be pursued in insolvency procedures, are widely discussed in law and economics literature.

In times of financial crises, the need has increased for efficient insolvency procedures which would lead to the distressed companies' rapid recovery. The Slovenian legislator therefore introduced a special insolvency procedure – simplified compulsory settlement. In order to allow both the smallest and most numerous business entities[401] a more efficient and simpler financial restructuring, some requirements that protect creditors' interests in the process of regular compulsory settlement[402] are reduced in the simplified compulsory settlement process.

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400 Rasmussen, Skeel, 1995, p. 86.

401 In 2016, the share of micro companies amounted to 94.0%, see https://www.ajpes.si/doc/LP/Informacije/Informacija_LP_GD_zadruge_2016.pdf

402 At this point it is worth noting that 'regular compulsory settlement' in Slovenian law system does not exist since the legislator also introduced a special compulsory settlement procedure for small, medium and large companies, nonetheless for the purpose of this article the term will be used when referring to common rules for compulsory settlements regulated by Sections 4.1 to 4.6 of the Insolvency Act which are in different extents but not in full applicable in all compulsory settlement procedures.

It is intended for those insolvent debtors that have hitherto not opted to initiate a compulsory settlement due to either the high cost of the procedure or a lack of knowledge and experts for preparing the required documentation.[403]

It may well be that due to the prima facie simplicity of the procedure or its relatively recent implementation, not much attention has been given to the procedure by either general legal theorists or in the law and economics literature. Nonetheless, it is precisely due to the simplification and removal of many safeguards of creditors' interests that the provisions of simplified compulsory settlement and its consequences must be contemplated. The article therefore aims to draw attention to certain aspects of simplified compulsory settlement which demand closer consideration in light of the established law and economics theories and views; namely, whether such a procedure is even necessary and if the debtor-friendly regulation found in the Slovenian Insolvency Act is truly efficient. This is not a comprehensive review with regard to the regulation of simplified compulsory settlement as there are still many questions which deserve attention[404] or with respect to the review of the relevant law and economics literature. It is more limited to authors who offer a theoretical justification for the regulation of simplified compulsory settlement while shedding light on problematic possibilities permitted by the regulation.

In the first part, the characteristics of simplified compulsory settlement as regulated in the Slovenian legal system are briefly described. Next, the necessity and purpose of the procedure are discussed along with its special features which are required to ensure the efficient reorganisation of the smallest entities. The article also focuses on the absolute priority rule regarding simplified compulsory settlement and, finally, the uncertain position of creditors and their unequal treatment in the procedure are reviewed.

403 Plavšak, 2017, pp. 551–552.

404 For instance, the relation between the simplified compulsory settlement and the bankruptcy procedure which is relatively unclear and certainly important to review, but is also perhaps the most discussed aspect of simplified compulsory settlement and addressed in many other works, see Plavšak, 2014a, therefore it is not included in this article.

2. SIMPLIFIED COMPULSORY SETTLEMENT IN THE SLOVENIAN LEGAL SYSTEM

The simplified compulsory settlement procedure is regulated by the Financial Operations, Insolvency Proceedings and the Compulsory Winding-up Act (hereinafter the "Insolvency Act"). It was included in the Act by amendment E and is intended for companies which, under the Companies Act, are classified as micro companies as well as private entrepreneurs meeting the criteria for micro and small companies.[405]

In a simplified compulsory settlement, the main features of the regular compulsory settlement procedure are maintained. The rules of compulsory settlement used in the simplified compulsory settlement process are covered in Article 221.b of the Insolvency Act. The simplified procedure also applies to a debtor who is insolvent. A motion to initiate compulsory settlement proceedings is entitled to be submitted to the debtor or personally liable partner of the debtor. In addition to the report on the financial position and operations of the debtor and the financial restructuring plan, the motion includes a notarial record of the debtor's statement stating the report is a true and fair view of its financial position and operations. The main differences from other forms of financial reconstructions are that it is unnecessary for the auditor to review the debtor's financial position and operations report and also unnecessary for the financial restructuring plan to be reviewed by an authorised valuer in terms the company's value.

The motion also does not contain a subordinate request for a bankruptcy procedure to be initiated if the court rejects or dismisses the motion to commence the simplified compulsory settlement procedure. When a simplified compulsory settlement is rejected, the bankruptcy procedure is not automatically started against the debtor. When the commencement of the compulsory settlement procedure is announced, all enforcement procedures concerning the debtor shall cease.

The lodging of claims in a simplified compulsory settlement process is the debtor's responsibility. They are legally obliged to submit an updated list of receivables within one month of the procedure starting. Creditors do not lodge their claims and the claims placed on the list by debtor are not tested. In the event of an incorrect list of receivables, creditors cannot oppose the list of claims. Each claim must include identification data on the creditor, information on the claimed amount and the legal basis for its occurrence as well as an indication whether under Article 527 of the Companies Act the creditor is a related company or a closely related party of the insolvent debtor.

405 Plavšak, 2017, p. 551.

The Insolvency Act stipulates that a simplified compulsory settlement applies only to claims listed on the updated list of claims. A simplified compulsory settlement also does not affect secured claims, priority claims, exclusion rights or claims for the payment of taxes as defined by the act governing the tax procedure.

In a simplified compulsory settlement process, there is no official receiver or trustee and thus no official control over the debtor's business. The debtor's powers are somewhat limited but still to a smaller extent than with other compulsory settlement procedures. The debtor is not obliged by law to provide all the information necessary for the supervision nor to enable the inspection of its books and documentation or to regularly report on its business. It is therefore not required to submit monthly balance sheets, an income statement or cash flow statement. Further, in simplified compulsory settlements a creditors' committee is not formed and financial restructuring is not possible by converting debt to equity but merely by reducing and/or prolonging the maturity of claims.

Creditors vote to adopt the simplified compulsory settlement by entering into a settlement agreement with the debtor, which must be drawn up in the form of a notarial record. However, creditors may also give their approval in the form of a written declaration of consent to adopt the simplified compulsory settlement. The proportion of voting rights is calculated on the basis of the sum of amounts of all ordinary receivables included on the updated list of receivables. The simplified compulsory settlement is confirmed if a double majority is achieved: if supported by creditors whose total claims are at least 60% of the base amount and if more than half of all creditors whose claims are included on the list vote to support its confirmation. Creditors in the simplified compulsory settlement process have no possibility of objecting to the conduct of the procedure.

The motion to adopt the simplified compulsory settlement must be filed within four months of the announcement of the start of the procedure with an attached notary record on the vote outcome and relevant documents showing the creditors' consent. If the motion is filed by the deadline and attaches the necessary documents allowing the court to conclude the necessary majority was achieved, the court confirms the simplified compulsory settlement.

3. THE PURPOSE AND SPECIAL FEATURES OF A SIMPLIFIED COMPULSORY SETTLEMENT

When it comes to expediting goals in insolvency law, policymakers, judges and scholars disagree which of these should be furthered. The modern debate began in the 1980s on the question of whether the insolvency law is no more than a collective debt collection mechanism and thus its only aim is the maximisation of creditors' returns or whether other goals such as preserving jobs and protecting the interests of local communities do and should matter.[406] The literature tends to emphasise the conflict and the inability to find a compromise between the economic perspectives that focus on efforts to maximise the value paid to creditors in an insolvency, and the social perspectives that stress the social and rehabilitative aspects of the law. While contemporary economic analysis of bankruptcy law calls for contractual bankruptcy arrangements, social theories support a more interventionist approach to protect 'weak' parties from the losses brought by insolvency. Thus, while economic analysis challenges bankruptcy courts' coercive interference in contractual arrangements made prior to an insolvency, social theories support such court-enforced redistribution schemes.[407]

This article will not delve into the details of all the theories on the nature and purpose of insolvency law but will focus on those relevant to financial reorganisation, especially those that in one way or another apply to simplified compulsory settlement as regulated in the Slovenian legal system.

Reorganisation refers to the financial restructuring of a financially distressed firm in which claimants exchange their old claims against the company for new ones which, since the company has been unable to pay its debts, will necessarily be less than the face value of their own claims.[408] Incidentally, one encounters many different approaches and views on financial reorganisation when looking at the works of Douglas G. Baird over the years.

In 1984, Baird joined forces with Jackson and argued that there is no economic justification for reorganising companies since it is possible to realise the going-concern value by selling the business to a third party in liquidation. They claimed the relevant goal of bankruptcy is not for the company to stays in business but for its assets to be deployed in a way that advances the interests of those with rights in them. When there is no "going-concern surplus", a reorganisation would seem inappropriate because the

406 Armour, 2001, p. 8.

407 Haviv-Segal, 2005, pp. 357–358.

408 Armour, 2001, p. 4.

company's assets are worth more if sold and used by third-party purchasers than they are if kept together.[409] They also emphasise that reorganisations take time and involve a certain amount of uncertainty. It might be unclear whether a company is worth keeping intact and it may take time to decide whether liquidation piece by piece is the only course available. Whether the company's assets have value if kept together may turn on whether there is an as-yet undiscovered third party that needs such assets in their present form.[410] In light of the redistributive effect involved in reorganisation, Baird claimed that this form of proceeding must be avoided.

Later, Baird joined with Rasmussen and that advocated reorganisations and avoidance of the absolute priority rule. They claimed the value of reorganisation proceedings depends on the existence of special sources of value (known as "company-specific assets") owned by the insolvent company, and which cannot be transferred to a different entity without creating a loss. The traditional example of the reorganisation of insolvent companies with company-specific assets concerns the American railroad companies.[411] When selling the company's assets part by part, it is impossible to realise the special sources of value since these are unable to be transferred to any other entity. Similarly, in the case of selling a company's business as a "going concern", the company will have to hand over the entirety of its assets to the buyer who, in turn, will be unable to enjoy the company's special sources of value. Only in the case of reorganisation can the company continue to exploit its company-specific sources of value to the benefit of its creditors and shareholders.[412]

In the next article, The End of Bankruptcy, Baird and Rasmussen came to a different conclusion.[413] The authors emphasised that the railroads are no longer a guiding example since the circumstances of that case vary substantially from modern circumstances and in the vast majority of cases failed companies do not hold any special sources of value and hence they cannot be realised by selling the company's business to 'winning players'. They also claimed that in the modern world these proceedings are rarely used for the original purpose of "reviving failed businesses" and they actually serve the interests of company owners that wish to sell their businesses for more than they would have received had they sold the assets directly in the free market and that most reorganisation proceedings culminate in a 'going concern' sale to a third party.[414]

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409 Baird, Jackson, 1984, p. 118.

410 Ibid., p. 121.

411 Baird, Rasmussen, 2001, pp. 922–925.

412 Similarly, Baird, 1986, pp. 127–147.

413 Baird, Rasmussen, 2002, pp. 751–788.

414 Ibid., pp. 774–777.

The authors claimed that Chapter 11 (of the United States Bankruptcy Code which permits reorganisation under the bankruptcy laws of the USA) can only play its traditional role where specialised assets still exist so those assets must remain in a particular company where control rights are poorly allocated and where going-concern sales are impossible. In their opinion, large corporations no longer fit with this paradigm but argue that any companies containing the necessary ingredients for an old-fashioned 'successful' Chapter 11 treatment are likely to be small. Company-specific assets can exist in those environments, often in the form of the human capital of the owner/manager. The authors also suggested that since the initial justification of reorganisations no longer holds, bankruptcy law should instead enforce the pre-existing contracts.[415]

The article attracted much criticism from those specialising in economic analysis of the law. In particular, critics claimed Baird and Rasmussen developed their theoretical analysis based on a factual description that is completely unrealistic.[416] LoPucki showed that empirical research concludes that in most insolvency cases the legal system continues to enforce arrangements that coincide with the classic reorganisation model where existing shareholders and creditors are those that receive possession of the company after rehabilitation. Selling businesses to a third party occurs only in the minority of cases. LoPucki also argued that the going-concern value of a bankrupt company exists independently of its assets and does not depend on their nature, that "the company's assets" are not its main resource. Instead, the relationships between the company and its clients, between the company and its suppliers, between the company and its human resources constitute its primary source of value. Modern firms continue to generate those relationships and therefore continue to have a substantial going-concern value.[417] This is essentially the justification for preferring reorganisation over liquidation and what critics of The End of Bankruptcy point to when explaining why most courts are dissatisfied with simply enforcing the pre-existing contracts between the parties.[418]

LoPucki also offered his own view on this area in the article A Team Production Theory of Bankruptcy Reorganisation.[419] He argued that corporate reorganisation should not be viewed as a regulation imposed by government but as an implicit agreement under which the creditors and shareholders agree to subordinate their legal rights to preserve the company as a going concern. According to LoPucki, there is no common pool of

415 Ibid., p. 788.
416 Haviv-Segal, 2005, pp. 364–366.
417 LoPucki, 2003, pp. 1–5.
418 Haviv-Segal, 2005, pp. 363–366.
419 LoPucki, 2004.

assets against which the creditors have a pre-insolvency claim, but creditors expect to be paid from the anticipated stream of income produced by the ongoing enterprise. Therefore, the purpose of reorganisation, unlike liquidation, is to restructure a company's business operations so that it may continue to operate, provide its employees with jobs, pay its creditors, and produce a return for the shareholders. It is better to reorganise than to liquidate because reorganisation preserves jobs and assets. The team production theory sees preservation of the corporate entity as an independent value that partially accounts for this choice of reorganisation over liquidation.[420]

Bearing in mind the theoretical justifications for financial reorganisation, it is clear the Slovenian regulation also attributes a certain value to continued operations of the viable part of the debtors' undertaking since according to Article 136 that is an independent goal of the compulsory settlement procedure and the bankruptcy procedure is considered *ultima ratio* in Slovenian insolvency law.[421] Moreover, with all the simplifications regarding safeguarding creditors' interests in simplified compulsory settlement procedures as well as derogations from the absolute priority rule, both discussed below, the legislator has impaired the pursuit of the maximisation of returns for the creditors, which according to Jackson[422] and many others[423] is the main purpose of insolvency law. Instead, the simplified compulsory settlement procedure was adopted to enable an efficient and easier financial reorganisation which is very debtor-friendly in many respects and one may argue that it manifests LoPucki's theory that preservation of the company is in a way valuable and worth pursuing.

Apart from the obvious reasoning that such a simplified procedure is needed if one wants to ensure the survival of the smallest yet most numerous subjects, which have not the financial resources nor the knowledge or expertise to undergo a complicated financial reorganisation procedure, a separate question arises as to whether substantial adaptations are needed for micro or generally smaller companies. Are the characteristics of these companies of such a nature that they demand different not only simplified and cheaper procedures to ensure an efficient financial reorganisation?

In smaller companies, which are typically closely held, there is a special relationship between the managers and the shareholders since the latter usually conduct the day-to-day operations of the company. Therefore, there is less division between ownership and control which might have created incentives for those in control of the company to make sub-optimal decisions from the view of the company as a whole, thus imposing

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420 McCormack, 2008, pp. 30–31.

421 Cepec, 2016b, p. 52.

422 Jackson, 2001.

423 For example, Baird, Adler, Rasmussen, Bradley etc.

agency costs on the company.[424] In addition, in such companies the shareholders are not so diversified and their interests are more aligned.

The idea that it is necessary to distinguish closely and publicly held companies when regulating insolvency procedures is not new. Skeel argued that a special regime and rules are required in reorganisation proceedings due to the unique characteristics of small companies. He noted that despite the legal requirement in the USA for an unsecured creditors' committee comprising seven of the debtor's largest unsecured creditors to be appointed in every case, courts routinely fail to appoint such committees in bankruptcies involving closely held debtors, probably due the insufficient incentive for unsecured creditors to participate since their claims may be relatively small and most or all of any distribution usually goes to the company's secured creditor. The problem is that where recovery is or would be likely, unsecured creditors may lose out because they are not represented at the bargaining table. He therefore argued that a close corporation provision could authorise the court to appoint a single large unsecured creditor to act as representative for the class, which would also significantly lower the costs yet still ensure protection for unsecured creditors.[425] In addition, he suggested that since negotiations involving closely held companies are frequently less complex, shorter deadlines for certain actions could speed up the process.[426] Further, he called for adopting a variation of the new value exception to the absolute priority rule in such proceedings, which permits shareholders to retain an interest in the reorganised company, giving the right to participate in the new value context even if the creditors will not be paid in full.[427]

On the other hand, Baird and Morrison offer a unique view on the financial reorganisation of small companies. They argue the procedure should not focus on the particular business housed within the corporate entity in bankruptcy and whether it should be preserved since small companies usually possess few assets beyond the owner's or manager's human capital, and these rarely have more value inside the business than outside. Therefore, we should not concern ourselves with preserving the going-concern value as there are few, if any, specialised assets and the entrepreneur can (and often does) recreate the same business elsewhere at little or no cost.[428] The relevant unit of analysis when it comes to the insolvency of a small business is the owner and operator of the business, not the business itself. The owner/manager's human capital is not company-specific; it is worth as much inside the company as

424 Rasmussen, 1994, p. 1166.

425 Skeel, 1993, p. 511.

426 Ibid., p. 514.

427 Ibid., p. 516.

428 Baird, Morrison, 2005, pp. 2312– 2315.

it is outside it, which the authors say is precisely why most entrepreneurs are serial entrepreneurs. The owner's human capital is fully portable and can be used to start a string of businesses often in the same industry until a good match is found between the owner's human capital and a certain business model. The focus of assessments of insolvency acts should therefore be on how they affect this search and at what cost. The authors' analysis of Chapter 11 led to the conclusion that, while it may provide "breathing space" that facilitates the move to a new venture as the entrepreneur renegotiates his obligations with tax collectors and banks, the labour economics approach to Chapter 11 reveals an unappreciated cost. The chapter makes it easier for entrepreneurs to resolve their disputes with senior creditors and tax collectors if, but only if, they keep a particular corporate entity alive. Given that Chapter 11 makes its benefits conditional upon the entrepreneur remaining with the old business, it may unnecessarily delay his move to a new business that better matches his human capital, thus having what the authors refer to as a lock-in effect.[429] Although the costs of such effect are likely to be small, the authors claim that should not minimise the need to reform the legislation and alter the thrust of academic debates since current academic thinking about small-business bankruptcy is pushing in exactly the wrong direction by promoting the business, not the entrepreneur.[430]

4. 'CARROTS AND STICKS' AND THE SIMPLIFIED COMPULSORY SETTLEMENT

A review of the literature highlights the common conclusion that smaller companies are specific with respect to the manager–shareholder (agent–principal) relationship[431] and therefore require the incentives to be adapted for their optimal commencement to ensure an efficient procedure. One essential goal of bankruptcy law is ex-ante efficiency. The key element of ex-ante efficiency in insolvency law is an incentive mechanism that induces managers to promptly file a petition triggering formal proceedings and provide for ex-post efficiency, which is mainly concerned with maximising the debtor's total value to make it available for distribution among the creditors.[432] The incentives for prompt initiation are generally divided into 'carrots and sticks'. The institutes of insolvency law that may be universally classified as 'carrots' are: (a) the debtor in possession rule; (b) the deviations from the absolute priority rule; and (c) bonuses for managers for the early initiation of insolvency proceedings, while the institutes that may be classified as 'sticks' are: (a) civil damages (tort, civil liability); (b) professional disqualification; and (c) criminal liability

429 Ibid., pp. 2366–2367
430 Ibid., pp. 2318–2319.
431 Rasmussen, 1992, pp. 76–77; Aghion et al., 1994, p. 854.
432 Cepec, Kovač, 2016, pp. 80–81.

including misdemeanours. All three kinds of carrots are only available in financial reorganisation proceedings, whereas the sticks are typically used primarily or solely in liquidation proceedings. Even though the Slovenian insolvency system also uses sticks in financial reorganisation proceedings, in practice they are never used.[433]

Baird believes the sticks are inefficient when it comes to small and micro companies in which the managers are also commonly shareholders. To impose damages on the managers who have already lost their jobs and the assets they invested in the company is not a sanction which entails a sufficient or serious enough threat for the managers to bring about the early start of an insolvency procedure. In addition, such sanctions merely encourage even riskier behaviour before the insolvency procedure[434] commences since such actions are the most rational course of action from the points of view of the managers and shareholders given that they have much to gain from any behaviour that is successful while, should it be unsuccessful, additional risk even will result in practically no further losses.[435] Picker agrees with Baird that the poor financial standing of management members in practice makes the stick in the form of damages completely ineffective, especially for micro and small companies.[436]

Further, Baird and Bernstein argue that in micro and smaller companies where the managers are often also the shareholders, the latter also possess private information and knowledge, making them company-specific human capital, which is essential for ensuring the success and future value of the company during and after the financial reorganisation, and therefore it is in the creditors' interest to ensure their cooperation.[437]

The Slovenian insolvency law saw a shift from debtor-friendly regulation to creditor-friendly regulation. This was due to public pressure in times of financial crisis based on the belief that most insolvent debtors became insolvent due to fraud or the abuse of corporate law and hence do not deserve to play any active role in the insolvency procedure. Therefore, the legislator eliminated more or less all incentives for management and/or shareholders to start insolvency proceedings.[438] While that may be the case for other insolvency procedures, the regulation for simplified compulsory settlement is vastly different and significantly more in line with the theoretical

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433 Ibid., pp. 85–86.

434 Baird, 1991, p. 229 in Cepec, 2016a, p. 55.

435 Jackson, 2001, pp. 205–206.

436 Picker, 1992, p. 540.

437 Baird, Bernstein, 2006, pp. 1937–1938. Similarly, Baird, Rasmussen, 2002, p. 788 and Rasmussen, 1992, pp. 76–77.

438 Cepec, Kovač, 2016, pp. 90–92.

conclusions stated above. After filing for financial reorganisation proceedings, the automatic stay is activated and managers keep their positions, making it a debtor-in-possession system of financial reorganisation proceedings. There is no official receiver or trustee and consequently no official control over the debtor's business. While the manager's powers are somewhat limited, that is still to a lesser extent than with other compulsory settlement procedures, making this regulation an obvious carrot for the managers who will be more motivated to initiate the proceedings if their position remains largely the same. In addition, only managers and personally liable partners can file for the financial reorganisation proceedings and managers have exclusive power to propose the reorganisation plan that is then not reviewed by any auditor or official appraiser. Further, perhaps the strongest carrot is the derogation from the absolute priority rule discussed in detail below. A debt-to-equity transformation cannot occur within the simplified compulsory settlement process and certainly not without the consent of the debtor's shareholders. According to the Insolvency Act, liability for damages is limited only to situations where a bankruptcy procedure has commenced. To sum up, neither the shareholders nor the managers lose anything in the proceedings. The first continue to be shareholders in the reorganised company while the latter keep their jobs.

5. THE ABSOLUTE PRIORITY RULE AND THE SIMPLIFIED COMPULSORY SETTLEMENT

The absolute priority rule describes the basic order of payment in a corporate bankruptcy: secured creditors are paid first, unsecured creditors are paid next, and only then are the shareholders paid, if at all.[439] In other words, according to the absolute priority rule, the claim with the highest priority is fully repaid first, followed by repayment of the claim with the next highest priority, and so on so long as there are enough assets to be distributed. If the absolute priority rule is strictly followed, claimants with the lowest priority, such as shareholders (and sometimes junior creditors) are often completely wiped out.[440] The principle is crucial in the financial reorganisation process where strict adherence to this rule prevents the adoption of a financial reorganisation plan that would allow lower-class creditors and/or existing shareholders to be partially repaid before higher-class creditors are fully repaid. This rule has been discussed extensively in law and economics literature from all possible viewpoints. The main focus has been on the question of whether strict observance of the principle is really effective and whether it might not be better to depart from this principle in certain cases, in particular with the agreement of the creditors.

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439 Lubben, 2015, p. 581.

440 Marinč, Vlahu, 2012, p. 11.

This issue is most frequently raised in relation to existing shareholders and the question of whether they can retain part of the equity in the reorganised company.[441]

In the past, the advocates of economic analysis identified with the procedural classification of bankruptcy law, which stated that bankruptcy laws must avoid 'redistributing' the layout of the essential rights since it is merely a procedural mechanism and therefore vehemently opposed the company's reorganisation arrangement because every reorganisation plan involves a certain degree of violation of prior entitlements as well of the priority rules that govern distribution of the company's assets in liquidation proceedings. Today, advocates of the economic approach distance themselves from the procedural classification of bankruptcy law.[442] In particular, Baird and Rasmussen show how the absolute priority rule, which dominates the priority orders in liquidation, is expected to produce inefficient results in a reorganisation. They believe it is essential that the old shareholders receive part of the rehabilitated company in order to ensure they will be motivated to act towards effectively rehabilitating the company. Further, they claim that a necessary condition for reorganisation is injecting new credit into a failed business. The company shareholders are the best candidates for investing more money in the failed business since they, in contrast to other investors, are aware of the company's potential value and do not fear the reappearance of the past failures and therefore are willing to provide the financial sources needed to rehabilitate the company. In order to motivate the shareholders to do so, they must be entitled to the increase in the company's value generated by the reorganisation.[443] In addition, they note, that in smaller companies the shareholders and manager have a close relationship and thus the value of such a company depends on the company-specific human capital of its manager[444] Therefore, as mentioned above as well as in other works,[445] it is in the creditors' interest to ensure the cooperation of the managers and shareholders. In essence, there must be a deviation from the absolute priority that places higher creditors than shareholders.

On the other hand, many authors believe many reasons make preservation of absolute priority one of the main goals of insolvency proceedings. Aghion et al. argue this is desirable since it corresponds to what the parties contracted for outside of bankruptcy; that is, the order of payments if the company were sold outside bankruptcy and there was not enough cash to pay the creditors off. If contracts are not upheld within bankruptcy, meaning the absolute priority rule is not respected, creditors may be less

441 Cepec, 2016a, p. 180.

442 Haviv-Segal, 2005, p. 368.

443 Ibid., p. 368.

444 Baird, Rasmussen, 2001, p. 944.

445 Baird, Bernstein, 2006, pp. 1937–1938.

willing to lend to the company in the first place.[446] Similarly, Hart claims the rule helps to ensure that creditors receive a reasonable return in the insolvency procedure, encouraging them to lend and that the contractual obligations entered into outside bankruptcy are respected to the full extent possible during the bankruptcy. In addition, Hart believes it is also a simple way to penalise shareholders in bankruptcy. However, as he and other many scholars have pointed out,[447] if shareholders receive nothing in bankruptcy the management acting on their behalf will do anything to avoid bankruptcy, including undertaking highly risky investment projects and delaying the start of bankruptcy. For this reason, Hart believes a good bankruptcy procedure should preserve the absolute priority of claims, except that some portion of the value should possibly be reserved for shareholders.[448] Yet Aghion et al. are not completely convinced by this argument. They believe the assumption that the managers act on behalf of shareholders might only be plausible for small owner-managed companies and, even with them, it is far from clear that departures from absolute priority are the best way to soften the blow of bankruptcy. The authors believe a better method might be to give managers and/or owners a 'golden parachute' in the form of senior debt.[449]

The absolute priority rule is regulated by Article 136 of Slovenian Insolvency Act, which is entitled the purpose of the compulsory settlement procedure. The article states the procedure is conducted in order to carry out the financial restructuring of the debtor's undertaking and ensuring that among two other goals the debtor's current shareholders may only retain such a share in the debtor's share capital that corresponds to the value of the remaining assets of the debtor that would have been received had a bankruptcy procedure been initiating against the debtor. This article was part of a reform made in 2013 by amendment F that shifted the Slovenian insolvency law from being debtor-friendly to creditor-friendly by introducing, among other instruments, the absolute priority rule without any exceptions. Consistent application of this rule in practice would mean that if the liquidation value of the debtor's assets is less than all of the debtor's liabilities, the previous share capital should be reduced to zero. However, since the equity of a debtor is divided into shares, the number and extent of those should also be reduced to zero. Therefore, old shareholders lose their corporate rights by having their shares cancelled. At the same time, an increase in the share capital must be made with an in-kind contribution, the subject of which is a claim on

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446 Aghion et al., 1994, p. 853.

447 For example, White, 1989, p. 149.: "As long as streamlining the bankruptcy procedure involves compensating creditors according to the APR, then managers will have an incentive to gamble with creditors' assets as they try desperately to avoid bankruptcy's draconian treatment of equity under the APR."

448 Hart, 1999, pp. 106–107.

449 Aghion et al., 1994, p. 854.

the company, or a new monetary contribution. New shareholders can then become the debtor's creditors or third parties who, in the process of increasing the capital, invest new shares.[450] Article 144 of the Insolvency Act obliges the debtor in certain situations to submit an alternative proposal for the conversion of claims into shares in the compulsory settlement procedure. Further, the creditors are also able to make a forced debt-to-equity swap, transforming part or all of the debt into equity without the consent of the debtor's shareholders.

Despite the relative clarity of the provisions, there is currently no agreement on whether it is merely a principle that can be circumvented or not by observing the procedural rules of the financial reorganisation process.[451] The situation is even more unclear in the case of a simplified compulsory settlement. Article 221.b of the Insolvency Act, which deals with application of the rules of regular compulsory settlement in a simplified compulsory settlement procedure, demands the application of Article 136. Consequently, the absolute priority rule should also be respected in a simplified compulsory settlement procedure, yet at the same time does not provide for the application of Article 144 nor of subsection 4.4.4, which adapts specific rules for the simplified change in share capital in order to conduct the financial restructuring.

This unclear regulation was addressed by the Higher Court in Ljubljana.[452] The court noted that the instruments allowing the absolute priority rule to be enforced are regulated in provisions of the Insolvency Act which are not to be applied as appropriate in simplified compulsory settlement procedures. They also argued that, in relation to reconstructing measures, only the reduction and/or prolongation of the maturity of claims can be achieved in the simplified compulsory settlement process, not a debt-to-equity swap. Therefore, the court concluded, in stark contrast with the provisions of the Insolvency Act, that the absolute priority rule provided in Article 136 does not apply to a simplified compulsory settlement.

An extensive review of simplified compulsory settlement procedures also showed that, in practice, the rule is not respected since procedures end up with old shareholders retaining their shares. As discussed above, regardless of the legislative provisions, the result achieved in practice might be efficient. Since a characteristic of micro companies is the close proximity of the shareholders and manager, derogation from the rule might prove to be an effective carrot for managers to promptly initiate the procedure. In addition, the value of such company depends on the company-specific human capital of its manager and/or shareholders. This is especially important in

450 Plavšak, 2014b, pp. 31–32.

451 Cepec, 2016b, p. 91.

452 VSL sklep Cst 442/2016, dated 12.07.2016.

the light of another problem regarding adaptation of the absolute priority rule in the Slovenian regulation described by Cepec.[453] The legislator had assumed that financial reorganisation is, at least in terms of accounting elements, equivalent to a bankruptcy and therefore determined the value of the debtor's assets should be calculated based on their liquidation value. In this way, the legislator disregarded the fact that even though the company has more liabilities than assets, it is still possible that, before the commencement of bankruptcy, the debtor and creditors may agree on a financial reorganisation and a compulsory settlement can be successfully completed. In such a case, the company's economic value is greater than zero, and the shareholders' corporate rights are therefore also greater than zero. The fundamental difference lies in the fact that, in the event of bankruptcy, the creditors are repaid from the redeemed debtor's assets in the process itself and, in the case of a financial reorganisation, they are paid from the company's future returns. It is very likely the financial reorganisation of an economically efficient company will enable the debtor's assets to generate additional future returns that exceed the debtors' current and future debts, meaning the shares at the start of the compulsory settlement process are worth more than zero and that a forced reduction of the share capital to zero would in fact be an unconstitutional expropriation.[454] This argument on its own is reason enough to consider the absolute priority rule problematic in the compulsory settlement context. What is more, the difference between the value of the debtor's assets today and the future returns from these assets is precisely that additional value which the debtor and creditors could negotiate on. Creditors will only be interested in a financial reorganisation if they believe they will thereby be better off, with that belief being based on the prospects of the company's future success. The latter, however, may depend strongly on the company-specific human capital in micro companies since it is often the unique knowledge, abilities or relationships of that managers/shareholders that comprise the company's source of value. If this is the case, a legal regime whereby the managers/shareholders lose their interests in the company by losing their jobs and/or shares results in further inefficiency.

Baird and Rasmussen argued that after such a reorganisation takes place the creditors still need to find someone to run the company and, with their company-specific capital, the previous managers are the best people for that. Moreover, to ensure their incentives are correctly aligned, they need to be given equity just like anyone else who might be brought in to run the company. The authors also claim that although respecting the absolute priority rule in reorganisation proceedings means the creditors are given the right to continue the company as a going concern without the essential personnel, the right is meaningless since the creditors can only preserve the

453 Cepec, 2016b, pp. 82 – 90.

454 Ibid., p. 89.

going-concern value if they allow the managers to retain or rather obtain an interest sufficient to induce them to return. In order to achieve this, the new owners must negotiate with the previous management to agree on new contracts, which may be both time-consuming and costly, thus further delaying and aggravating the company's success after the reorganisation. Therefore, Baird and Rasmussen conclude that, as long as the managers are not responsible for the events that gave rise to the reorganisation, the reorganisation should leave the value of their compensation unaffected.[455]

6. THE (UN)EQUAL TREATMENT OF CREDITORS AND THE UNCERTAINTIES THEY FACE

According to Jackson, insolvency law exists in response to the common-pool problem faced by creditors. The court-sanctioned individual debt collection mechanisms follow the 'first come, first served' principle, which can provoke an inefficient race to collect. He pointed out that a mandatory insolvency procedure can help avoid the widely discussed prisoner's dilemma[456] for creditors by transforming creditors' rights from individual to collective, thereby removing creditors' incentive to engage in wasteful behaviour such as an inefficient race to collect that dismembers the debtor's business.[457] In other words, in the case of insolvency, the ordinary collection laws create a situation in which every single creditor acts in a fashion that is detrimental to the common, collective interests of all creditors. Bankruptcy law attempts to solve this dilemma by pooling all creditors together and subjecting them to collective proceedings.[458] Without bankruptcy law in place, coordination problems between creditors might prematurely trigger bankruptcy since even upon a slight perceived problem with a corporation each creditor may try to be on the safe side and sue the corporation first in order to be repaid before other creditors. This would force the premature liquidation of a corporation that may be worth more as a going concern.[459] Bankruptcy law aims to mitigate this coordination problem. A common mechanism in most bankruptcy laws is to impose an automatic stay which prohibits creditors from collecting on individual debts the moment a debtor files for insolvency. The law forces creditors into a pro rata system of distribution. It does not permit creditors to side-step insolvency procedures to obtain a greater proportion of the bankruptcy assets than they would otherwise receive in liquidation or under a plan.[460] This mitigates the race to collect debts, gives a corporation close to insolvency more breathing space, and can prevent

455 Baird, Rasmussen, 2001, pp. 950 – 953.

456 Picker, 1994, pp. 3–6. Baird, Gertner, Picker, 1994, pp. 188 – 190.

457 Armour, 2001, pp. 17–19.

458 Jackson, 2001, pp. 1–19 in Haviv-Segal, 2005, pp. 359–360.

459 Marinč, Vlahu, 2012, pp. 5–6.

460 Gotberg, 2014, pp. 61–62.

its premature liquidation. In accordance with the *pari passu* principle, creditors with equal debt contracts are given equal standing in bankruptcy, particularly with regard to their payment.[461] The *pari passu* principle in insolvency law is not uniformly used in the literature. Some authors state that all arrangements in which the creditors are divided into different classes and thus in the procedure are repaid according to the nature of their claim are problematic. Those arguing for the wider concept of the *pari passu* principle therefore believe the violation of the principle occurs by the division of claims into secured, priority, ordinary and subordinate claims, and the different treatment of each class. On the other hand, the narrower concept, which is increasingly supported in modern literature, states the principle should only be applied within a particular class of claims, thus resulting in equal treatment and proportionate payment according to the value of a creditor's claim.[462]

In simplified compulsory settlement proceedings, there is an automatic stay in the form of a moratorium on enforcement after the procedure starts. The *pari passu* principle is adopted in Article 46 of the Insolvency Act which states that in insolvency proceedings all creditors who are in the same position relative to the insolvent debtor must be treated equally. While the broader concept of the *pari passu* principle is clearly violated since the legislation demands special treatment for secured claims, priority claims, exclusion rights and claims for the payment of taxes[463] because the simplified compulsory settlement does not affect them, the remaining claims, often referred to as ordinary claims, are to be treated equally according to Article 46, thus respecting the narrower concept of the principle. Moreover, the narrower concept is enforced for compulsory settlement in Article 143 of the Insolvency Act which states in the second paragraph that the debtor must offer all creditors the same proportion of payment of their ordinary claims, the same time limits for payment and interest at the same rate from the start of the compulsory settlement procedure until the expiry of the deadline for their payment.

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461 Hotchkiss et al., 2008, pp. 4–5.

462 Cepec, 2016a, pp. 187.

463 Although by excluding the tax obligations from the effects of simplified compulsory settlement even the narrower concept pari passu rule is violated. In relation to the debtor, the State is in no special position than all other ordinary creditors. The question is why other creditors would agree to a subordinate position and confirm such a restructuring process, especially given that in case of bankruptcy procedure they would be equivalent to the State as a creditor. Incidentally, the reason for provisions excluding tax obligations was that Financial Administration of the Republic of Slovenia (FURS) concluded that simplified compulsory settlement is used by debtors primarily to avoid payment of obligations, including taxation, and not for effective restructuring. See Svenšek: "Furs ugotavlja načrtne zlorabe »prisilk«, zato bo zakonodaja spremenjena", Dnevnik, dated 25.3.2016.

There is room for confusion with regard to the provision that states the financial reorganisation plan adopted in the simplified compulsory settlement process only affects the claims included on the updated list of receivables submitted by the debtor. The latter is thus the one who by placing a creditor on a list makes him a party to the proceedings with the right to vote on adopting of the plan. While the provision might allow an interpretation that the debtor is therefore free to decide who he shall put on the list, the article must be read in conjunction with provisions demanding the equal treatment of creditors and, in addition, when submitting the updated list of claims the debtor must also file its statement in the form of a notarial record that the updated list of claims gives a true and fair view of the state of the creditors' ordinary claims at the time the compulsory settlement procedure starts. Therefore, the legislation does not allow a debtor to treat its creditors unequally. The situation in practice is nonetheless vastly different. Seljak notes that debtors have many options available to misuse the procedure, resulting in creditors being discriminated. The most obvious way is by simply not including all creditors on the updated list of claims. The reasons for such actions vary, the debtor might want to privilege certain creditors by not listing them and therefore not subjecting their claims to the reorganisation. He would be inclined to act in such manner only where he already has a sufficient majority to adopt the simplified compulsory settlement. Further, the debtor might be aware that some creditors would oppose the reorganisation plan and, by not listing them, the debtor would ensure a sufficient majority of votes. Another possible fraudulent practice is creating fictitious obligations and/or inflating the existing obligations of those creditors which are inclined to vote in favour of the simplified compulsory settlement.[464] Given that there is no official receiver, no one officially checks the list and there is thus no guarantee the list is true and honest, as the debtor claims. From the point of view of the principle of equal treatment and equal payment of the creditors, this option is highly problematic as the debtor is de facto able to establish two classes of ordinary creditors – those appearing on the updated list which consequently have voting rights with their claim being reorganised in the simplified compulsory settlement process, and those the debtor leaves out, resulting in their inability to become a party in the proceedings and who, even if the reorganisation plan is adopted, keep their claims intact[465] and are therefore privileged even though in relation to the debtor they are in the same position as the other creditors. The updated list of claims does not enable creditors to determine whether all ordinary receivables are included on the list. There is certainly doubt among the creditors appearing on the list as to whether

464 Seljak, 2017, p. 127.

465 "On claims that the debtor did not indicate in the updated list of claims, if they prove to be justified, the confirmed simplified compulsory settlement will not be effective and the debtor will have to pay them in full together with the interest, and not in a reduced amount, as is the case for claims, which were listed on the list". VSL sklep Cst 502/2017 dated 26.9.2017.

some creditors have been omitted and, in this way, the debtor has selected them to be repaid to a greater extent than the remaining creditors on the list. The asymmetry of information and great transaction costs associated with revealing the true state of the debtor's claims certainly aggravate the creditors' decision whether to vote in favour of a simplified compulsory settlement. Moreover, even if it is determined that one creditor is missing from the list, neither the remaining creditors nor the creditor left out has a chance to oppose the conduct of the simplified compulsory settlement. Due to the simplification of the proceedings, the creditors do not have the same safeguards available as in other insolvency procedures. The provisions on objections against the conduct of the procedure available in the regular compulsory settlement procedure are therefore not used in the simplified compulsory settlement process. Within the procedure, the only option available to creditors is to not vote in favour of the reorganisation and, even if that is the case, because the vote does not need to be unanimous the plan can still be adopted and their claims can be reorganised. Only after the simplified compulsory settlement has been confirmed can the creditors challenge it with *mutatis mutandis* applications of Articles 219 to 211 of the Insolvency Act, according to which each creditor may request the court to annul the simplified compulsory settlement if it was adopted in a fraudulent manner. A typical claim that the simplified compulsory settlement was adopted fraudulently will arise when the debtor does not include all the claims that actually exist on the list of ordinary claims.[466] In addition, in the Higher Court's view[467], the reasons for annulment also include those that would constitute possible reasons for objecting to the conduct of the compulsory settlement since objection is not allowed in the simplified compulsory settlement procedure.

Such an action certainly represents additional costs and further uncertainty for the creditor who bears the burden of proof in the proceedings. On top of that, the creditors' claims are usually relatively small considering the subjects against whom the commencement of the simplified compulsory settlement is allowed. Therefore, the additional costs associated with pursuing the payment of the claim might be disproportionate and many creditors might decide against filing the action.

Many other factors add to the uncertainty of creditors deciding to vote on the adoption of a simplified compulsory settlement. No auditor reviews the debtor's financial position and operations report, nor is it necessary for the financial restructuring plan to be reviewed by an authorised assessor of the company's value. Therefore, the creditors must decide whether they trust the debtor and the information provided is true, while being aware the debtor might be inclined to present the current situation

466 Plavšak, 2013a, pp. 6–9.

467 VSL sklep Cst 502/2017 dated 26.9.2017.

and especially the company's position in the event of a bankruptcy procedure as being worse than reality would dictate, while emphasising the circumstances ensuring the company's success if the simplified compulsory settlement is approved. There is no official receiver or trustee and no creditors' committee is formed. To ensure a minimum level of credibility, the debtor must submit a statement that its report presents a fair and true view of its financial position and operations in the form of a notarial record. When deciding to commence the procedure, the court merely conducts a formal test[468] like when, after the filing of a motion for the confirmation of a simplified compulsory settlement, the court's role is limited solely to examining whether the motion is accompanied by the necessary documents, whether the request was filed by the prescribed deadline, and if the majority needed to adopt the simplified compulsory settlement was achieved, and that the proposed compulsory settlement is in accordance with the law. The appeal test is also limited to assessing whether the conditions for confirming the simplified compulsory settlement were met and whether the procedural legal provisions were observed. Additional uncertainty arises from Amendment F to the Insolvency Act. While Article 136 of the Insolvency Act states that another goal of a compulsory settlement is that the creditors are provided with more favourable conditions for the payment of their claims than if a debtor's bankruptcy were initiated, taking into account the order and other rules for the repayment of priority, ordinary and subordinated claims and secured receivables in bankruptcy proceedings, as well as Article 137 that obliges the debtor to provide the information the creditors need to determine whether by approving the compulsory settlement proposed by the debtor they will obtain more favourable conditions for the payment of their claims than in bankruptcy proceedings of the debtor, the amendment eliminated the debtor's obligation to provide the creditors with an estimate of the share of payment of their unsecured claims and the deadlines for their payment if a bankruptcy procedure were to be initiated against the debtor, therefore exacerbating the creditors' uncertainty when deciding to vote for the settlement, especially in terms of discovering how many creditors the debtor truly has since they are able to determine the liquidation value of the debtor's assets but not what percentage of ordinary claims that would cover.

As a result, within the setting of the simplified compulsory settlement procedure, the provisions of the Insolvency Act, the limited role of the courts and the lack of control by official trustees in fact allow for the formation of partial priorities or secret liens. A secret lien is a lien which does not appear on the record or in any other manner and may therefore come as a surprise to other creditors.[469] In his article, The Empty Idea of 'Equality of Creditors', Skeel claims that a reorganisation plan which offers one class

468 Plavšak, 2013b, p. 59.

469 Skeel, 2018, p. 702.

of general creditors considerably more than another gives a partial priority or partial lien to one group of creditors. He refers to situations allowed by American bankruptcy laws when the debtor is able to classify creditors with equal priority in different classes and thereby offer them different payments. While partial priorities are a familiar feature of insolvency laws, the key difference is that such partial priorities are explicit whereas the implicit lien created by differential pay-outs is a secret lien whose contours are unknown when the debtor proposes the reorganisation plan,[470] and one could argue that this is also the case of creditors who are not included on the updated list of claims who therefore receive a different payment than those listed, especially given the ignorance of those on the list about the true position of their claim relative to other creditors. The author also notes that a true secret lien imposes several potentially serious costs. The most obvious is the cost of uncertainty. A creditor who does not know what its status will be in the event of insolvency must assume that its recovery may be subordinated to that of other creditors. The latter may also take costly measures that will make them seem more essential to the debtor and thus more likely to receive favoured treatment in bankruptcy. In each instance, creditors may adjust the terms of the credit they extend, passing the costs on to debtors and increasing the debtor's cost of credit.[471] Skeel claims there is nothing inherently problematic about giving one creditor more favourable treatment than another in the case of insolvency if the special treatment is fully disclosed in advance. As long as creditors know where they stand and can adjust the terms of the credit they extend, a disfavoured creditor will simply take the expected insolvency treatment into account when making their initial loan to the debtor. From an ex-ante perspective, the disfavoured creditor is no worse off than the favoured creditor.[472] What is problematic is the uncertainty facing creditors about where they stand in relation to the other creditors. The disclosure of other privileged creditors can in practice occur even years after the compulsory settlement was adopted and, even if it happens earlier, the only options available to the creditor are to not vote in favour and to file a motion with the court to annul the settlement after being confirmed, while bearing the burden of proof and additional uncertainty.

470 Ibid., p. 735.
471 Ibid., p. 731.
472 Ibid., p. 723.

7. CONCLUSION

This chapter seeks to draw attention to certain aspects of the institution of the simplified compulsory settlement in the Slovenian legal system. According to Article 136 of the Insolvency Act, which is to be applied as appropriate in simplified compulsory settlement procedures, there are three objectives of the procedure. First, the article demands that the absolute priority rule be adhered to by providing that the debtor's current shareholders may only retain such a share in the debtor's share capital that corresponds to the value of the debtor's remaining assets that would have been received had a bankruptcy procedure been initiated against the debtor. Second, the procedure is conducted in order to ensure that creditors are provided with more favourable payment terms for their claims than the payment they would receive if bankruptcy proceedings were to be initiated against the debtor. Finally, the procedure seeks to ensure that the debtor's business or a viable part of it continues.

The analysis performed in this article emphasises the problems and challenges of each of these objectives. Namely, it is evident that the legislator has impaired the pursuit of the first two in order to promote the latter. In the simplified compulsory settlement process, a delicate balance of the creditors' and the debtor's interests must be ensured. While the former desire the maximisation of their returns, in the financial reorganisation process the latter seeks its survival while the debtor's managers and shareholders hope to maintain their jobs and shares in the reorganised company. A review of the law and economics literature offers many arguments supporting the need to implement a special procedure for the smallest companies since their characteristics, specifically the relationship between managers and shareholders and their company-specific assets, call for special mechanisms to be adopted in order to guarantee a successful reorganisation.
In the interest of making the simplified compulsory settlement procedure more attractive to debtors, the legislator offered many 'carrots' to ensure the optimal commencement of the procedure, including a derogation from the absolute priority rule, which is in line with the theoretical conclusions stated above. In addition, the regulation aims to make the procedure simpler, more affordable and faster and, to achieve that, sacrifices many of the instruments put in place in the regular compulsory settlement procedure to ensure the creditors' interests are protected and that the possibility of debtors misusing the procedure is kept to a minimum. While the removal of an individual safeguard and its consequences may be justified by the efficiency targeted in the simplified compulsory settlement process, the question is whether that is still the case if one reviews the final result of such numerous simplifications since, as the analysis of the law and economics literature shows, in practice such a debtor-friendly system can prove to be inefficient. Further, one might wonder if the implementation of at least one safeguard of creditors' interests, be that

the appointment of the debtor's largest creditor to represent the creditors and exercise control over the debtor in their name, allowing the creditors to object to the settlement's conduct at least for certain reasons, or ensuring control by either auditors, official trustees or the court, would truly disproportionally raise the costs and the complexity of the procedure and thereby make it inefficient. It was not the purpose of this article to answer these questions nor to (primarily) criticise the regulation or point out its inefficiency but to highlight the possibly problematic provisions and practices that are involved. Moreover, the chapter seeks to offer a theoretical foundation for further research, especially of an empirical nature, which might be seen as essential to ascertain whether in practice the simplified compulsory settlement in its current form achieves the goals it seeks to obtain.

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CHAPTER 6. UNUS PRO OMNIBUS, OMNES PRO UNO – THE NEW SLOVENIAN CLASS ACTIONS ACT

1. INTRODUCTION

> *Men journey together with a view to particular advantage, and by way of providing some particular thing needed for the purposes of life, and similarly the political association seems to have come together originally, and to continue in existence, for the sake of the general advantages it brings.*[473]

Using the above words, in Ethics Aristotle already established the human need for integration, unification and introduced the glorious thesis that man is a social human being. However, the masses of people have always been united in order to achieve a common goal or purpose. For example, trade unions have striven for higher wages and better working conditions, cartels have striven for higher prices for the participating companies etc. In seeking the same objective, whichever the applicants, they need to commence a collective action.

Collective action is one way to solve legal disputes affecting a group. On the other hand, countries use many other approaches, including: public and administrative programmes that permit the rapid processing of individual claims according to a well-specified protocol; group litigation procedures; and ad hoc management strategies that identify certain aspects of claims which can be resolved on a group-wide basis.[474]

Recently (namely, on 26 September 2017), the Slovenian National Assembly unanimously enacted the long-awaited Class Actions Act (hereinafter: the Act; Slovenian abbreviation: ZKolT). The statue is already in force since 21 April 2018. This chapter is one of the first descriptive assessment of the Act and offers a detailed discussion of the reasons given by Slovenian legislators for adopting it.

This chapter seeks to examine the Act's potential effectiveness. It attempts to assess the economic effectiveness of preventing (deterring) companies' behaviour and/or the occurrence of damage. The research question raised by this chapter is whether economic subjects might prefer to continue violating regulations and then, if necessary, make a payment of compensation or whether the Act increases the precautionary

473 Ethics viii.9.1160a. in *The Logic of Collective Action.*

474 *The global landscape of collective litigation*, in Class Actions in context, p. 5.

measures taken by economic operators. The chapter also identifies a potential source of inefficiency that may stem from the fact the Act does not contain the minimum or, in the case of collective redress, the maximum compensation a court may impose. In addition, this contribution shows the procedure of a class action for damages by way of compensation may have unintended consequences and represent a source of uncertainty, inefficiency and thereby create unnecessary administrative and procedural transaction costs.

This chapter is structured as follows. Part one provides a historical overview of class action legislation. The second part provides the first descriptive assessment of the new Slovenian Class Action Act, discusses the Act's overall effectiveness and identifies several potential sources of inefficiency. Part three concludes.

2. HISTORICAL OVERVIEW OF CLASS ACTION

As stated above, the ongoing need to connect with others is part of human nature. Not only is this due to benevolence, but individuals are usually more powerful when a group gathers together and works towards the same aim. This was expressed by MacIver when saying that "every organisation presupposes an interest which its members all share". The same thoughts were revealed by Arthur Bentley, the founder of the group theory in his work The Process of Government.[475]

2.1. Reasons for Introducing the Class Action Act

The question of protecting collective victims and the (ineffectiveness) of civil procedure institutes has appeared in practice in Slovenia for a long time. The institutes available in the Civil Procedure Code (Slovenian abbreviation: ZPP)[476] include the "model procedure" (in Slovenian: *vzorčni postopek*) provided by Article 297b of ZPP that has not actually been used in practice. It covers situations when persons find themselves in substantially the same legal and factual situation. They can only be considered together when they individually bring actions and thus the risk of skyrocketing costs of the claim remains the same. Second, a similarly unuseful institute is "co-plaintiffs" (in Slovenian: *sosporništvo*) which allows the joint treatment of several claims and consolidation of the judgements which is possible when several actions are commenced against the same person(s) in the same court. In other words, several actions in which the same person is the opponent of various plaintiffs or various defendants; thereby speeding up the procedure and reducing the costs of the process. On the other hand, the Consumer Protection Act

475 »There is no group without its interest.«

476 Zakon o pravdnem postopku (Uradni list RS, št. 73/07 – with amendments).

(Slovenian abbreviation: ZVPot)[477] provides for an injunction to allow organisations to request the cessation of an infringement. A disadvantage of this regulation is that the judgement only has a future effect (*ex nunc*) and does not allow compensation for consumers who have already suffered harm. This provision is to expire but will continue to apply six months after ZKolT comes into force.

Therefore, it was essential to introduce class actions in Slovenia with the main reasons for adoption the Act being: improving access to justice and the enforcement of rights in cases of mass harm; deterring potential infringers from unlawful practices; reducing court backlogs; and providing for the uniform regulation of collective lawsuits.

Similarly, the reasons for adopting a system of collective protection are not only procedural but also refer to industrial and economic (and thus consumer protection) development. Injuries to several parties mainly occur in the fields of consumer rights, investor rights, financial services, competition law, environmental protection and violations of workers' rights. For the latter, it is necessary to distinguish so-called collective labour disputes regulated by the Labour and Social Courts Act (Slovenian abbreviation: ZDSS-1)[478] – these are intended solely for assessing the way collective agreements are implemented, the participation of workers in management, and the representativeness of trade unions.

2.2. Legal Rationale for Enacting the Class Action Act

The primary reason for introducing the Act was the "Commission Recommendation of 11 June 2013 on common principles for injunctive and compensatory collective redress mechanisms in the Member States concerning violations of rights granted under Union Law" (hereinafter: the Recommendation).[479]

One may argue the Recommendation's content also encompasses areas that might be interpreted as potentially limiting the autonomy of national legislators. However, whether the Recommendations actually restrict legislators' autonomy is beyond the scope of this chapter.

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477 Zakon o varstvu potrošnikov (Uradni list RS, št. 98/04 – with amendments).

478 Zakon o delovnih in socialnih sodiščih (Uradni list RS, št. 2/04, with amendments).

479 Commission Recommendation of 11 June 2013 on common principles for injunctive and compensatory collective redress mechanisms in the Member States concerning violations of rights granted under Union Law; available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013H0396 (1. 6. 2018).

The Recommendation's main provisions are as follows:

› mechanisms shall be used in the fields of consumer protection, competition, the environment, data protection, finance etc., which is a wide set of areas;

› as a rule, it establishes an *opt-in* approach and exceptionally allows an opt-out, as suitable for the legal system of a certain country;

› ll EU member states provide the same rule for the standing to commence action, which is clearly a consequence of the fact the Recommendation establishes the rule that entitled entities should be named before or especially for the purpose of representing a group, such as non-governmental organisations or other organisations established *ad hoc*;

› the Recommendation also anticipates a 'phase of certification/verification of a claim' in which courts examine a motion to commence and is discussed in the provisions of the relevant article;

› another aspect worth mentioning is that external funding of a claim is permitted;

› importantly, paragraphs 35–37 require a public register of collective actions to be established;

› punitive damages are prohibited; and

› the rule that the unsuccessful party pays the costs of the successful (the loser pays principle) is also carefully prescribed.

The Recommendation was published in June 2013 with the European Commission exercising control over its implementation in the member states up until July 2017, whereas Slovenia intervened in the area in January 2018.

2.3. Comparative Overview of Regulating Class Action

Most continental legal systems were unfamiliar with class actions until a few years ago. They are better known in common law countries, but are much less evident in Canada, Mexico and the USA. However, a more detailed and up-to-date analysis reveals a trend of changes and the wider protection of collective victims. The following countries provide a specific form of legal claims for a class action procedure: in Central and South America (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Panama, Peru, Uruguay, Venezuela); in Europe and the Middle East

(Belgium, Bulgaria, Denmark, England, Finland, France, Israel, Italy, Lithuania, Netherlands, Norway, Poland, Portugal, Spain, Sweden and Slovenia); in Africa (South Africa); and in Asia and Australasia (Australia, China, Indonesia, Japan, South Korea, Taiwan, Thailand).[480]

Class action is not available in Austria, although Austria seems to want to introduce the institute and a draft act on it has already been discussed. The latter was rejected for being incompatible with the Austrian Civil Code. Belgium adopted the "Collective Redress Actions Act" in 2014, which is intended solely for collective redress in the field of commercial law. In its enforcement, great efforts are made to avoid the formation of a class action as known in the USA, and to protect potential victims and companies and their reputation. The Czech Republic's act on the justification of proceedings specifically does not regulate class action, but *de facto* enables the commencement of a collective lawsuit in courts with certain instruments, in the same way as Slovenia did before in the areas of competition and consumer protection law. Since 2008, Denmark has had a system of lawsuits that complement the previous rules found in its Administration of Justice Act. It should be noted that in order to commence a class action several conditions need to be fulfilled to prevent abuse or over-investing compensation claims.

England and Wales use class action as governed by the general rule, the Group Litigation Order – GLO which was enacted to more effectively deal with existing cases in the courts and group legal proceedings in the field of competition law (anti-trust). Germany introduced a class action act in May 2018. Its legislation here, however, was a direct result of the Volkswagen emission scandal and initially serves as a compensation mechanism for the harm caused to the buyers of Volkswagen cars (addressed at the end of the act).[481]

2.4. The Slovenian Class Actions Act in a Comparative Perspective

First, it is necessary to distinguish class and collective actions. The difference stems from the USA where both types are already well established. It is noted that in fact Slovenia has adopted a collective action act and not a class action act. The main distinctions of the two terms explains why. They are both actions filed by a group of individuals who find themselves in similar situations or circumstances and both entail a common legal representative and the sharing of the procedural costs. The difference arises in the legislation of the USA where a class action can be filed for limited claims that are mostly linked to the Fair Labour Standards Acts (FLSA), while class actions

480 *The global landscape of collective litigation*, in Class Actions in context, p. 5.
481 Bill of the ZKolT; available at: https://www.rtvslo.si/files/Slovenija/kolektivnih.pdf (3. 6. 2018).

can also be filed on behalf of employees. In the USA, the types of action also vary with respect to the opt-in and opt-out approach.[482]

Second, the essential division is as follows: Organisation class action is a lawsuit that can be filed by a private law organisation that protects the interests of a particular group of persons (e.g. a consumer organisation). Public action (*parens patriae* action) is a lawsuit filed by a public authority (e.g. a consumer ombudsman, a regulator, a public prosecutor) for the benefit of individual affected persons. A class action is a lawsuit filed without the prior consent of other members of the class by an individual member on behalf of a whole group of people who find themselves in a similar legal and factual position, with the *res judicata* able to be extended to all members of the group.[483]

The vast majority of cases of compensation class actions end with a settlement. Defendants (which are primarily companies) tend to pay damages to those affected. The court may determine aggregate compensation, that is, the total amount payable by the responsible entity, indicating, as precisely as possible, the categorisation of individual claims and the way in which individual injured parties show entitlement to the payment, or the amount or otherwise of the recoverable amount or other reimbursements each member of the group will be given, or will apply for, and prove they meet the conditions set out in the judgement, and the court also assesses the expected total amount of the obligation the defendant must pay.

Slovenia has adopted the following classification:

Article 3 of ZkolT defines the types of individual lawsuits and settlements, respectively:

› a collective action for damages seeking compensation (in Slovenian: *kolektivna odškodninska tožba*) is an action whereby a person entitled to a benefit, in favour of all persons who have been injured in the event of a massive harm, requests compensation for the loss regardless of the claim's legal qualification, by way of compensation, enrichment or gap-filling, in which the persons concerned are not parties to the proceedings;

482 Introduction to class actions and collective actions; available at https://www.americanbar.org/content/dam/aba/administrative/labor_law/meetings/2008/ac2008/119.authcheckdam.pdf (2. 6. 2018).
483 Bill of the ZkolT; available at: https://www.rtvslo.si/files/Slovenija/kolektivnih.pdf (3. 6. 2018).

- a collective action for an injunction (in Slovenian: *kolektivna opustitvena tožba*) is an action whereby an entitled person requests the suspension of an unlawful act; there are general, consumer and protection from discrimination kinds of a collective action for an injunction;

- a further collective action (in Slovenian: *nadaljnja kolektivna tožba*) is a collective action brought after the completion of all proceedings before the competent authority; and

- a collective settlement (in Slovenian: *kolektivna poravnava*) is a written agreement for the reimbursement of collective damage caused in the event of massive harm caused by the beneficiary or a number of beneficiaries in favour of the injured parties and one or more persons who commit themselves to payment and request the court for confirmation of that, which becomes effective once confirmed by the court.

3. THE SLOVENIAN CLASS ACTIONS ACT – DESCRIPTIVE ASSESSMENT

3.1. General Principles

Many aggrieved individuals seek compensation through a collective damage action. Those persons are not individual parties to the procedure, even though the claim is filed to protect their interests. Therefore, it is crucial who is entitled to lodge the claim. In the American model of class actions, an individual cannot file a claim in the name of all aggrieved individuals.

In jurisdictions of a common law world with class action procedures, any class member is entitled to represent a class. In many civil-law jurisdictions, standing is limited to one or a few associations that have been declared eligible to represent a class. It is impressive that in all EU member states standing is permitted for defined public and private entities.

The only legitimate subject for filing a suit is an entity founded for the pure purpose of representing the interests concerned. The time this entity is established is not decisive; whether it existed already before the harmful event or was established *ad hoc*. Besides the entity (e.g. an association), a public body ("senior state attorney") may file a lawsuit. The underlying *ratio legis* includes the intention to protect the public interest.

A collective action for an injunction may be commenced by those mentioned in Article 4 of ZKolT and, where a specialised authority exists in a certain field, also by that public body. Unlike the consumer protection regulation, the entitled plaintiff can only be an entity, not an individual consumer.

Another important aspect regarding capacity *ad processum* of ZKolT is seen in paragraph 2 of Article 5:

> *"In determining representativeness, the Court assesses whether the beneficiary is the appropriate representative of the group, which will act fairly and appropriately and in the best interest of its members, taking into account, in particular, the existence of financial resources, human resources and legal knowledge to represent the group, the beneficiary has already used them in connection with the preparation of a collective settlement or collective action, as well as the organisation of victims and communication with them, the number of victims who supported its activities in relation to a concrete case of mass harm, its media presence and presence, and the dissemination of information on the claimed violation of rights and their intention, etc."*

This assessment also reveals another principle – the active role of the court, as explained in the following lines.

Principle of limiting the subject matter of the proceedings and the principle of contradiction

The right to be heard is a cornerstone of the civil procedure as well, hence constitutional guarantees should be observed and ensured in the present law. In this regard, note should be taken of the effect of the result of the collective action itself, especially where a collective action might be unsuccessful, it must be regulated so that the decision (whether positive or negative) does not bind each individual, allowing the right to apply to courts with an individual civil lawsuit to remain.

The opt-in and opt-out principle

There are a few different approaches to the forming of a group of individuals who intend to lodge a claim. The best known are opt-in and opt-out principles. The former means that members of the class must affirmatively sign a document that states they wish to be part of the lawsuit. An advantage of this method is a person can independently choose to exercise the right to apply to the court or not. There is also a manageable and explicit list of applicants.

In contrast, the latter means individuals who wish to exclude themselves from the binding judgement must express this. Interestingly, experience from abroad speaks in favour of this approach. While it enables many more individuals to be included in the collective action, practice shows that it is more efficient, especially in the defendant's eyes since the defendant can predict the final amount of damages.

This chapter argues that the European Commission's Recommendation suggests a system of inclusion, even though opting-out is admissible. The majority of European member states have adopted the opt-out approach. Yet, it is believed that Article 30 of the Slovenian Class Action Act has 'invented' a very pragmatic approach. Namely, under the Act the court may decide which one fits the circumstances of a particular case better. Article 30 of the Act also provides that *"if at least one of the claims in a collective action for damages concerns the payment of compensation for non-pecuniary damage or if, according to the assessment contained in the application, at least 10% of the members of the group claim payment of more than EUR 2,000, only the system of inclusion can be used"*. There is another which states that for persons without a permanent residence (for natural persons) or a registered seat (for legal persons) in Slovenia at the time of issuing a decision to allow the commencement of a collective action for damages the system of inclusion shall be used.

Principle of the peaceful resolution of conflicts

This principle is also encouraged in the Act. It is seen in Articles 13 to 25 where settlements are regulated. A settlement must be approved by the court to ensure its fairness and reasonableness. What may be new or different in the Slovenian legislation is the court's active role in the resolution of disputes. Ordinarily, mediators or conciliators are called in to help parties find an acceptable compromise, but not in this case. Here a judge can advise them what should be negotiated and in which ways.

Principle of certification

The national legislator truly wanted to be sure that only entitled and legitimate subjects can file a collective action. In my opinion, one of the core constitutional freedoms was considered here – free economic initiative (Article 74 of the Slovenian Constitution).[484] Although Article 4 of ZKolT precisely regulates who may file a claim, certification is added. In accordance with Article 27, the court must also decide whether a lawsuit is admissible and complete.

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484 Constitution of the Republic of Slovenia, Uradni list RS, št. 33/91-I z dne 28. 12. 1991; accessible at: http://www.us-rs.si/en/about-the-court/legal-basis/constitution/ (26. 5. 2018).

It should be noted that this is not merely a matter of assessing whether the procedural requirements have been met, but also entails a substantive assessment of the suitability of the action.

Certification is a crucial phase and must be fast if it is to benefit both parties. The court makes a decision in this respect against which an appeal is allowed and potentially also a revision in line with ZPP.

Principle of the court's active role court and principle of the flexibility of proceedings and judicial discretion

The procedure of a collective action may become complicated while resolving factual issues, hence it is extremely important for the court to play an active role. In instances where individuals in a group of applicants are not direct parties to the dispute, the court must ensure that the interests of the aggrieved party are well represented.

The legislator's interest was to have a collective action dispute judged specifically from the perspective of a particular case and its own specifics. The size of the compensation claim can slightly vary, and the number of the applicants, factual and legal questions can also vary – therefore the legal assessment and sanctions may have to be established case by case. This reflects the possibility of an opt-in and opt-out choice, the choice of way of informing clients personally or publicly, the method of assessing and dividing compensation etc.

Publicity and registry

Although *prima facie* it does not seem to be true, transparency is a characteristic that helps implement the principle of peaceful dispute resolution. This is provided in Article 15 of the Act which regulates notification of not only the plaintiffs, but also the public in general. The argument speaking in favour of this is that there is significant potential the defendants will act properly in participating the dispute knowing the media is involved.

A noteworthy institute that will contribute to the effectiveness of the law itself is a public registry. Upon establishment, everyone will be aware a particular company, group or another entity is involved in court proceedings for an alleged infringement of rights. It has already been established and is unified for the entire Republic of Slovenia.

It includes data on all types of collective action and available online.[485] It is accessible to everyone and for the above purpose, the Supreme Court is authorised.

The 'loser pays' principle

In accordance with the European Commission's Recommendation, ZKolT provides a general rule that the unsuccessful party must pay the costs of the successful party.

Through this principle, the legislator introduced a safeguard for defendants – especially companies, which are protected from costs for matters that have no grounds and for which they may thus not be responsible in the first place. It should be emphasised that costs do not flow proportionally to individuals. A responsible legitimate person (organisation) may finance a claim. Moreover, under the Slovenian Attorneys (Bar) Law, it is impossible to make a lawyer's payment a percentage share of the disputed claim.

In relation to preventing abuse of the right, it is noted that the Act provides such a safeguard in a provision against stirring up litigation that requires an applicant must disclose the planned funding of the litigation in the event the lawsuit is admissible.

The principle of the appropriate redistribution of damages

Pursuant to the law of torts, the principles of total compensation (for property damage) or fair compensation (for non-pecuniary damage) are in force. This chapter argues the Act's main intention might be to reward damages and simultaneously not to impose inefficient punitive damages on companies that could result in excessive precaution costs, inefficient risk-taking and suboptimal reliance. Moreover, the market inspectorate and related potential sanctions might induce the optimal deterrence and efficient decision-making.

485 Available at http://www.sodisce.si/sodni_postopki/javne_obravnave/kolektivne_tozbe/ (3. 6. 2018).

3.2. The Scope of ZKolT

The scope is described in Article 2 of ZKolT. It lists the areas in which compensation may be claimed:

1. consumer and consumer claims arising from contractual relations with undertakings as governed by consumer protection regulations;

2. claims for the violation of other consumer rights provided by the law on consumer protection;

3. claims for the violation of the provisions prohibiting restrictive practices in Articles 6 and 9 of the Prevention of Restriction of Competition Act (prohibition on cartels and a follow-up collective claim);

4. claims relating to the violation of the rules of trading in regulated markets and prohibited conduct of market abuse according to the law on the financial instruments market;

5. claims by workers who are indicted by an independent lawsuit in an individual labour law dispute, as defined by the law on the procedure before the labour courts; and

6. claims on liability for damages caused by an environmental accident, as stipulated in the law on environmental protection.

Notwithstanding the above, the legislator predicted the extension of the scope to all civil law areas in the future.

3.3. Applicability

Several questions arose during the legislative procedure of the Act. Commentators believed the Act should only be used for unobstructed cases, mass damages, which have not happened yet. On the contrary, the National Assembly wished to establish a system in which applications based on previous damages could be invoked. The latter position prevailed and, as stated in Article 65 the Act also applies to situations that occurred before the law entered into force.

It is a compelling reason that this issue in Slovenia was not an isolated case. The same issue arose in the English case of *Gibson*, where on behalf of the National Pensioners Convention the applicant Dorothy Gibson issued an application for collective damages

seeking for damages from Pride Mobility Products Limited on an opt-out basis.[486] The claim was followed by a claim relying on a decision of the UK competition authority. The claim estimated the class as comprising 27,000 to 32,000 people and the damages as ranging between GBP 2.7 and GBP 3.2 million.[487] The damage occurred just at the time a new system of collective protection had been introduced. The defendant alleged a lack of legal certainty and interference with his expected rights. Even though the new CAT established wider access to the collective protection, Gibson claimed this did not reflect the rule of law in England. The court decided in this case the new regulation did in no way interfere with the claim, and the application of the new rules to the collective procedure neither infringed the European Convention on Human Rights nor EU law.[488]

3.4. Procedural Aspects

The procedure of a collective action for damages seeking compensation entails the following phases:

1. examination of the procedural conditions and completeness of the collective action;
2. certification/approval phase;
3. stage of opt-in/opt-out;
4. the stage of substantive decision-making; and
5. stage of enforcement.

In contrast, the procedure of collective settlement has the following steps: a) a joint motion of the parties with the attached collective settlement; b) a consideration of the completeness and admissibility of the proposal; c) notification; d) written submissions; e) a hearing to consider a proposal to confirm the collective settlement; f) the court's decision to reject or confirm that settlement; g) publication in the registry of collective actions; h) notification; i) a deadline for inclusion or exclusion; j) the option of cancellation by the client according to the number of members of the group; and k) the payment of damages.

These procedures seem consistent with the principles provided in ZKolT. Notably, the procedure for a collective action for damages seeking compensation may seem short and artificial, yet this chapter argues that in practice such a provision might

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486 Dorothy Gibson v Pride Mobility Products Ltd [2017] CAT 9.

487 Ibid.

488 Next steps in the evolution of UK competition litigation: survival of the first competition class action; available at: https://www.herbertsmithfreehills.com/latest-thinking/next-steps-in-the-evolution-of-uk-competition-litigation-survival-of-the-first (4. 6. 2018).

have unintended consequences and might be a source of uncertainty, inefficiency and unnecessary administrative and procedural costs. Like in many other procedures (e.g. civil, criminal, commercial proceedings), the line of argument may become difficult and long-lasting (direct and indirect transaction costs) and hence one may expect the same consequences and inefficiencies in the respective procedures.

3.5. Impact of the Collective Action Act on Procedural Legislation

Procedural aspects of the Act are found in Article 7 of the Act which regulates situations in which a collective action may be filed. The consequence is that all other individual procedures are suspended and continue when the decision on collective action is made final – *res iudicata*. Where a person is included by a collective action, the individual procedure stops.

This chapter identifies another instrumental feature of Article 7 of the Act – one that suspends the limitation period for filing a claim for the duration of the procedure. The limitation period for the collective claim continues when the procedure is final without a substantive decision, or for which the collective redress settlement will not be effective when the deadline for inclusion or exclusion has expired, or when being rejected from being included on the list of victims.

3.6. Jurisdiction

In general, district courts are found where higher courts are in charge (in Ljubljana, Celje, Maribor, Koper). Where a single judge is assigned to solve a dispute, he/she is allowed to request the president of the court to delegate the case to a Senate made up of three judges if it entails legal and factual issues.

One exception concerns collective settlement cases for which the labour court is fully in charge. Those cases are resolved before the labour court with jurisdiction.[489]

3.7. Effectiveness of Regulation in Slovenia and Potential Sources of Inefficiency

This section examines several striking aspects of the Act that, due to their analytical significance, should be discussed more thoroughly.

The regulation's main advantage it brings is the Act's sole purpose and its adoption by the Slovenian legal system. The net amount of compensation is relatively low for an

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489 Article 6 of ZKolT.

individual once the costs of representation and court fees have been deducted. Where a number of victims are represented by a single authorised person, the costs are distributed and individuals gain more[490], affecting not only the judiciary's efficiency but also efficiency in an economic sense.

This chapter argues the biggest advantage of the Slovenian regulation is the wide range of possible applications, with one regulation covering the treatment of violations in the areas of consumer protection, investment, financial services, competition, environmental law and labour law.

Effective judicial protection is also certainly impacted by the scope of persons actively given standing. They are defined in Article 4 of ZKolT. The bill introduces (using the terminology of the European Commission's Recommendation) a representative collective action. In order to bring an action, legal entities with standing are private bodies that do not have a profit-making purpose but exist to protect the rights and interests of affected persons in a particular area. These organisations may be established in connection with a specific case of mass harm (*ad hoc*) or independently of it (e.g. a consumer organisation or, in the field of labour disputes, a trade union). Negative experience with the (non)use of collective lawsuits under ZVPot shows that it is unjustified to give consumer organisations a monopoly over the filing of collective actions. Since massive violations threaten the public interest, a senior state attorney is also given legal standing to file a collective action (formerly the State Attorney), which is another improvement brought by the Act.

Moreover, Article 43 of the Act provides for a "manager of collective compensation" (in Slovenian: *upravitelj kolektivne odškodnine*). Such a manager becomes involved when the court decides to award aggregate compensation or a compensation by way of a percentage. A manager must be a notary. Parties may suggest their preferences for notary should be chosen. They are entitled to be reimbursed for their work and it is noted that, parallel to ZkolT being introduced, the tariffs for notaries was also changed in February 2018.

Another beneficial provision introduced by the Act is the active role to be play by the court – in this way, the court will be more concerned and responsible for ensuring the victims' true interests are realised.

490 Even though study M. Brown's paper on *Do Class Actions Benefit Class Members? An Empirical Analysis of Class Actions*, suggests the opposite conclusion, 2013. Available at: http://www.instituteforlegalreform.com/uploads/sites/1/Class_Action_Study.pdf

A potential source of inefficiency of the Act's might be that it does not establish the minimum or, for collective redress, the maximum compensation the court may award. It may be argued that this thereby creates a more balanced situation between the 'weaker' party and the perpetrator. Article 74 of the Slovenian Constitution should also be considered – the freedom of entrepreneurship and economic initiative, thus encouraging economic operators to engage in business. However, it is reasonable to think carefully about the upper and lower limits of compensation. Establishing only the lower amount would add to fears that companies might prefer to violate the law than meet the legal standard of a bonus *pater familias* (good family father) (i.e. optimally from the point of view of society as a whole – minimising costs whereby marginal costs should equal marginal benefits).

Further, the court's emphasis on its jurisdiction for the conclusion of a collective settlement may be criticised for being incompatible with the court's impartiality. The opposite argument is borne out by the fact that the enhanced management of the substantive process makes sense for protecting members of a group who will, even though not acting as a party, influence the decision. To safeguard the level of professionalism, the Act provides that the court may appoint one or more experts when expert questions arise.

One must stress the importance of information and notification in the process of collective settlement, which occurs in two phases: upon receipt of the proposal, and after confirmation of the collective settlement, in order to provide for a fair procedure.

Another institute ensuring efficiency is the claim to set the compensation – it should be reasonable and appropriate, which does not mean it should be perfect. However, it is foreseen that an expert will be appointed *ex officio* to resolve these issues. In any case, there must be sufficient guarantees that there is enough leeway to compensate all injured parties.

The law, however, contains an excellent provision stating that the financing of an action by an entity which is a competitor of the defendant is prohibited; hence, the above-mentioned disclosure of the financing is decisive.

Finally, an institute which may hold importance for an individual is the so-called confirmation of (non)inclusion in a collective action, which may be issued on the demand of an individual and is enshrined in paragraph 4, Article 33 of ZkolT.

3.8. The Kemis Case

A Slovenian company called Kemis was entangled in a story that held dire consequences for the surrounding environment and nearby residents. On 15 May 2017, the company started to burn various substances in a fire. This was not too surprising for a company whose main economic activity is the management of hazardous waste. Yet, what was surprising was that among other substances being burned was a herbicide allegedly banned by a European directive for the previous 14 years. The nearby inhabitants were evacuated on the same day of the burning, but damage was still by the event and the question was whether they would be able to file a collective lawsuit. Lawyer Blaž Kovačič Mlinar told the new outlet Siol: »The damage is still being created and is not fully known. The consequences for human health are still not unknown, the limitation period for a lawsuit for compensation has not yet started. When the consequences are evaluated, the law is likely to apply and then the injured parties will be able to file a lawsuit under the new law«.

According to Article 2 of the Class Actions Act, which defines the scope of its application, collective actions can also be filed (under point 6, paragraph 1) also by victims against those responsible for causing an environmental accident, as stipulated in the law on environmental protection. It was simply a question of the possible retroactive application of the law, which would otherwise only begin to apply after 21 April 2018. For the reason the full impact of the damage had yet to be seen, the injured parties would be entitled to claim damages.

3.9. The Volkswagen Affair

Germany's well-known car manufacturer recently had to admit to fraud concerning more than 45,000 consumers who had bought a car in which a system had been installed that would come into action when measurements of a number of nitrogen oxides (NOx) were being conducted. Together with the brands Audi, Seat and Škoda, more than 11 million cars around the world were affected.

A few law firms from Germany, including one from Slovenia, joined forces and filed a collective lawsuit in the court of Braunschweig which holds jurisdiction over the headquarters of Volkswagen AG. Among Slovenian victims, officially represented by the Consumer Association of Slovenia, together with the main company Financialright GMBH, 6,200 buyers decided to work together. It is therefore important that regarding the proceedings in the German courts for Slovenian victims that Slovenian law is to be applied, thus putting the new ZKOLT under its first test.

4. CONCLUSIONS

One may confirm the effectiveness of the assessed legislation, albeit it is still not substantiated by case law. The legislation contains instruments that will help improve judicial protection: the very enforcement of the law, the publicity, the scope and the circle of actively legitimised beneficiaries. However, this chapter argues that apart from the potential inefficiencies of procedural provisions of the Act that were identified, any regulation is really only tested in practice, with ZKolT obviously being no exception. Hence, the new Slovenian Class Action Act awaits detailed empirical application and thus is some kind of natural experiment that will reveal its actual behavioural and economic implications in the near future. Certainly, one can expect changes that are crucial for development of the law via the case law and will be *conditio sine qua non* for the effective protection of legal subjects.

Some legal experts have complained the regulation provided by the ZKolT system is in clear contrast with the basic principles of the civil procedure, the equality of parties and impartiality of the court. It should also be emphasised that collective protection is indeed case-specific and should be adjusted according to its characteristics and the economic principles of wealth maximisation.

The chapter also notes the remarks of a District Court judge that the Act is written in such a way that merely filing a claim will require considerable "sweat and time" and, that for this reason, one may expect the procedures to be lengthy and extensive (prohibitive transaction costs?). Likewise, use of the new ZkolT is primarily a professional challenge for the judiciary. Indeed, the comment above on the prohibitive administrative and procedural transaction costs should be taken seriously. Moreover, it is emphasised that only economically well informed, good law (in terms of quality not quantity) and its related consistent use in practice can ensure progress in the Slovenian (rigid) legal system.

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PART IV. HEALTH AND PUBLIC LAW AND ECONOMICS

Anja Magdič

CHAPTER 7. PROPOSED DIRECTIVE ON THE QUALITY OF WATER INTENDED FOR HUMAN CONSUMPTION, AND THE SLOVENIAN LEGAL SYSTEM

1. INTRODUCTION

In July 2010, the United Nations General Assembly[491] established a key milestone by recognising access to water and sanitation as a human right. However, it is estimated that 4.5 billion people around the world still lack securely managed sanitation services and 2.1 billion people lack access to safe drinking water, with Sub-Saharan Africa being the most critical region.[492] In Slovenia, the situation is significantly better due to its abundant water resources and, although the water quality is considered one of the highest in Europe, there is still room for improvement.

Unfortunately, even across the European Union there are still people who are not connected to public water supply systems.[493] As a result, the "Right2Water" initiative was submitted to the European Commission at the end of 2013 with the aim to recognise water and sanitation as a public good and thus achieve the goal of making affordable access to water an essential human right in the European Union.

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491 United Nations General Assembly Resolution 64/292 of 28 July 2010 "The Human Right to Water".

492 World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) Joint Monitoring Programme update of 2017 "Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines", pp. 24–29.

493 According to the World Water Assessment Programme referred to in the European Parliament's Resolution, more than 1 million people still lack access to a safe and clean drinking water supply in European Union. (European Parliament Report of September 2017 2017/C 316/09 in the follow-up to the ECI 'Right2Water' 2014/2239(INI)).

According to EU legislation (the European Citizens' Initiative[494]) which permits 1 million European citizens who reside in at least one-quarter of the member states to invite the Commission to prepare a proposal for a law to implement the Treaties, the European Commission was obliged to act on this crucial issue. After analysis of the regulation and a public consultation, the proposed, revised Drinking Water Directive[495] (the Draft) is the corresponding step to improve drinking water quality in the European Union.

A vital obligation in the proposal is to improve access to safe drinking water for all European citizens, especially for vulnerable groups, while simultaneously ensuring the Sustainable Development Goals of improving transparency and benchmarking water quality are not overlooked. According to the Draft, member states will be urged to prepare national risk-assessment plans and guidelines with the cooperation of water suppliers and authorities responsible for environmental issues with the aim of preventing water contamination. For this, member states should identify concrete steps to achieve these goals.

It must stressed that water supply projects bring significant economic benefits and have a relatively long investment life so it is crucial that assessments are first made in order to maximise their potential. As the prime goal of economic analysis is to maximise the social wealth in income or consumption terms by promoting the more efficient use of resources, this chapter attempts to identify some challenges Slovenia may face in the process. In addition, this contribution offers a first descriptive analysis of the implementation procedures, challenges and obstacles presented by the new drinking water Directive for the Slovenian legal system. Nevertheless, it is important to point out that for water supply projects and particularly for associated sanitation components the benefits cannot always be reliably quantified and fully monetarised. Whether a comprehensive cost-benefit analysis is possible depends on the availability and reliability of empirical data for evaluating a project's benefits. Should the Draft be actually implemented, the Commission's Impact Assessment[496]

494 Legal basis for the ECI being article 11(4) of the Treaty on European Union (TEU), article 24(1) of the Treaty on the Functioning of the European Union (TFEU), Regulation (EU) No. 211/2011 of the European Parliament and of the Council 16 February 2011 on the citizens' initiative and Rules 211 and 218 of European Parliament's Rules of Procedure.

495 European Commission Proposal for a Directive of the European Parliament and of the Council on the quality of water intended for human consumption of 1 February 2018.

496 European Commission Impact Assessment of 1 February 2018 accompanying the Proposal for a Directive of the European Parliament and of the Council on the quality of water intended for human consumption, pp. 44–46.

estimates set-up costs of between €5.9 and €7.3 billion across the member states, adding in the process some 17,000 to 26,000 more full-time equivalent jobs throughout the European Union.

It goes without saying that the Directive, when finalised, will be important legislation for the European Union and have a significant impact on the economy as all the adjustments will affect the way the drinking water system works. Changes linked to general socio-economic developments, the uptake of innovative technologies and political situations will be crucial especially in countries with the lowest level of information, resources and political proactivity. This chapter considers the question of whether Slovenia might be one of these countries.

Moreover, this contribution argues that the absence of a procedure allowing scrutiny in the Slovenian Parliament regarding the Commission's Draft on water scarcity, whether in terms of quality or quantity, might adversely impact the country's socio-economic development. The chapter also argues that decisions on water allocation and management should be based on detailed economic considerations and Slovenia has failed in this regard. In addition, neglecting questions concerning the principles of subsidiarity and proportionality hold the potential for a future violation of state sovereignty. As the scrutiny procedure is an important instrument that enables national parliaments and their chambers to voice their concerns on any questions arising from a proposed law, it is argued that Slovenia should not be an exception in exercising this right, especially given the rich water resources held the country.

This chapter is structured as follows. Part one offers a descriptive analysis of the legal context of the Draft within the EU. The second part provides a descriptive overview of the EU's legal basis for making environmental policies. In the third part, the chapter outlines the main updates and compares them to the current Drinking Water Directive in Slovenia. Part four discusses health-related issues whereas part five addresses the current results of monitoring Slovenian drinking water. Part six concludes.

2. LEGAL CONTEXT OF THE DRAFT DIRECTIVE WITHIN THE EU

The Draft is a recast of Directive 98/83/EC[497] (the Drinking Water Directive) which already requires member states to regularly monitor the quality of drinking water supplied to citizens. While the Drinking Water Directive regulates the quality of water intended for human consumption at the consumer's tap,

497 Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption, OJ L 330, 5.12.1998, amended in 2003, 2009 and 2015.

Directive 2000/60/EC[498] (the Water Framework Directive) regulates the abstraction of drinking water and protection of water bodies intended for this purpose. Interdependence is seen in Article 7 of the Water Framework Directive, which requires that water bodies intended for the abstraction of drinking water be protected by providing an effective treatment regime.

According to the last Synthesis report[499] pursuant to Article 13(5)[500], the Directive has been relatively well implemented by most member states. However, an evaluation of the Directive by the Commission in line with the Regulatory Fitness and Performance Evaluation (REFIT)[501] did identify some deficiencies, the most evident being that water quality is monitored at the point of consumption by using parameters and parametric values based on World Health Organization Guidelines for drinking water[502] that were established over 20 years ago.

The revision of the Drinking Water Directive is consistent with other EU efforts in the area of environmental policy[503] as it is believed that such a step will help reduce greenhouse gas emissions, marine litter[504] and bottled water consumption[505] by improving people's confidence in tap water. At the same time, the Draft is a response

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498 Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).

499 European Commission Synthesis Report of 20 October 2016 on the Quality of Drinking Water in the Union examining Member States' reports for the 2011–2013 period.

500 Under Article 13 (5) of the Drinking Water Directive the Commission has an obligation to examine member states' reports and prepare a synthesis report examining the member states' reports which should be published each three years to inform the public on the state of water intended for human consumption.

501 European Commission Staff Working Document SWD (2016) 428 final of 1 December 2016 on REFIT evaluation of the Drinking Water Directive 98/83/EC.

502 The Guidelines were last amended in 2017 by the first addendum to the fourth edition.

503 European Parliament and Council Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1), Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment (OJ L 135, 30.5.1991, p. 40) and Council Directive 91/676/EEC of 12 December 1991 concerning the protection of water against pollution caused by nitrates from agricultural sources (OJ L 375, 31.12.1991, p. 1).

504 European Parliament and Council Directive 2008/56/EC of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (OJ L 164, 25.6.2008, p. 56).

505 Commission's Communication COM (2018) 28 of 16 January 2018 on European Strategy for Plastics in a Circular Economy.

European Commission Synthesis Report of 20 October 2016 on the Quality of Drinking Water in the Union examining Member States' reports for the 2011–2013 period.

to the EU's commitment to the United Nations' Sustainable Development Goals in Agenda 2030[506], in particular Goal 6.1 that calls for "universal and equitable access to safe and affordable drinking water for all".

3. LEGAL BASIS

The legal basis of environmental policy in the EU was substantially expanded upon the Single European Act and firmly established by the Maastricht Treaty of 1992. The Treaty of Lisbon marked a new stage in the process of ensuring sustainable development (Article 3 of TEU) by promoting measures to combat regional and global environmental issues. Accordingly, the Draft is based on Article 192(1) of TFEU (former Article 175 of TEC), which specifies an ordinary legislative procedure and does not fall within the exclusive competence of the EU.

Further, Article 4 of TFEU states that competences in the field of environmental policy are shared between the European Union and the member states, which implies that the EU can only adopt legislation to the extent allowed by the Treaties and must at all times observe the principles of necessity, subsidiarity and proportionality. In this connection, I believe the question of competence is a crucial topic in this matter and therefore all EU member states should have kept in mind the complexity created by the questions of subsidiarity and proportionality while overseeing the legislative process.

3.1. Questions Regarding the Principle of Subsidiarity

When discussing the principle of subsidiarity,[507] one should recall that all EU draft legislation proposals must contain a detailed statement regarding the question of subsidiarity. Therefore, through qualitative and, where possible quantitative, indicators its content should sustain the claim that legislation is better adopted at the European Union level. Yet it is common that the cost effectiveness of proposed laws is more elaborately described in the accompanying Impact Assessment. The assessment points out the most suitable and most cost-effective measures relating to the Commission's legislative proposal, providing detailed information on the potential economic, social and environmental consequences of the approach proposed.

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506 United Nations General Assembly Resolution A/RES/70/1 of 25 September 2015 "Transforming our world: the 2030 Agenda for Sustainable Development", pp. 18–19.

507 The principle can be applied only when meeting cumulative conditions under Article 5 (3) TEU, where it is defined as follows: "…in areas which do not fall within its exclusive competence, the Union shall act only if and in so far all the objectives of the proposed action cannot be sufficiently achieved by the member states, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level.

In the Impact Assessment's content, it is clear that the Commission's reference to the European Citizens' Initiative and Sustainable Development Goals might serve as a rationale but is definitely not an efficient explanation for ensuring compliance with subsidiarity. In addition, no compelling reason is given why the decision by one member state to improve universal access to drinking water would at the same time detrimentally affect neighbouring member states or the EU's internal market. Noting that many of the solutions proposed in the Draft are already being successfully applied in Slovenia in modified form, the Commission has in this regard failed to provide a detailed justification such as a cost/benefit analysis of the provisions on access to safe drinking water. In this context, other member states have claimed the Impact Assessments should at least include the cost of installing water fountains as required by Article 13(1)(b).[508]

3.2. Noncompliance with the Principle of Subsidiarity

The chapter argues that the proposal unnecessarily limits the scope of national decision-making. This thereby restricts the member states in choosing how to implement the Draft's objectives at the national level, and according to the already established systems.

First and foremost, it is crucial to emphasise that the Drinking Water Directive should at all times respect the principles laid down in the Treaties. Therefore, in case where no clarification of the need for or greater benefit of acting on the EU level is provided, it is essential that member states force the Commission to reconsider proposals they consider to be an infringement of subsidiarity. Article 5(3) and Article 12(b) of TEU indeed enable any national parliament or any of its chambers to present a reasoned opinion within eight weeks of the date of the forwarding of a draft law, stating the noncompliance with the subsidiarity principle pursuant to the procedure set out in Protocol 2.[509]

One should note that, despite member states being left with discretion on certain concrete actions, Slovenia did not protect its sovereign right. After all, reasoned

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508 UK House of Commons Reasoned Opinion of 7 March 2018 submitted to the Presidents of the European Parliament, the Council and the Commission, pursuant to Article 6 of Protocol (No. 2) on the Application of the Principles of Subsidiarity and Proportionality concerning a Proposal for a Directive of the European Parliament and of the Council on the quality of water intended for human consumption.

509 If reasoned opinions represent at least one-third (one vote per chamber for a bicameral parliamentary system and two votes for a unicameral system) of the votes allocated to the national parliaments, the draft must be reviewed ('yellow card' procedure).

opinions are an instrument of the EU's legislative procedure and an essential method of oversight for the member states. There is no information available of any parliamentary scrutiny procedures having occurred in Slovenia, in contrast with some other member states.[510] It is evident that both the National Assembly and the National Council did not even attempt to protect the Slovenian national interest. Reasoned opinions enable a state to voice its concerns on any question arising from a proposed law, as part of which national parliaments and their chambers are encouraged to participate by declaring any concerns they have. For this reason, it is argued that Slovenia should not be an exception, especially given the rich water resources of the country.

4. WHETHER, WHY AND HOW TO CHANGE THE CURRENT DRINKING WATER DIRECTIVE

As stated, the REFIT evaluation of the current Drinking Water Directive did discover certain deficiencies and concluded that improvements should be introduced in order to harmonise the quality of water across Europe. It is essential for the Draft to keep pace with the latest scientific progress, especially regarding on quality standards. Therefore, this part seeks to outline the main updates and compare them with the current situation in Slovenia.

4.1. Updating the List of Parameters in the Directive in Line with the Latest Scientific Findings

The current Drinking Water Directive provides a general framework and specifies minimum quality standards in the form of maximum parametric values that must be monitored systematically. However, the list of microbiological and chemical parameters and their values has not been revised since 1998. Since some differences between the WHO guidelines and the Drinking Water Directive parameters were already apparent when it was being adopted, it is clear that alterations have been urgently required to reflect scientific progress[511], consumers' changed behaviour and the current environmental challenges. At present, the Draft includes 18 new or revised

510 Austrian European Affairs Committee of the Federal Council Reasoned Opinion 24/SB-BR/2018 of 13 March 2018 pursuant to Article 23g (1) of the Austrian Constitution in conjunction with Article 6 of Protocol No. 2 on the application of the principles of subsidiarity and proportionality; Senate of the Parliament of the Czech Republic Resolution 366 of the 4 April 2011 on the Proposal for a Directive of the European Parliament and of the Council on the quality of water intended for human consumption,…

511 The World Health Organisation Guidelines for drinking water were last amended in the beginning of 2017 in the first addendum to the fourth edition.

microbiological and chemical parameters. Yet, it is noted that the Commission has not completely followed the World Health Organisation's recommendations, tending sometimes instead to a stricter approach.

Chlorate and chlorite are new parameters recommended for inclusion and might be a challenge in Slovenia as they are both predominantly disinfection by-products using hypochlorite. According to data from the Ministry of Health's Drinking Water Monitoring for 2016[512], 56% of Slovenian supply zones have continuous and 10% occasional or manual disinfection, making both a relevant risk factor for drinking water, especially given the tendency of the rising share of supply zones that have continuous water disinfection. The levels in the Draft of the justified presence of both are considerably lower than those proposed by the WHO, with values being 0.7 mg/L to 0.25 mg/L lower. Information on parametric values obtained in 2016 in Slovenia[513] (for N=19, $X_{AVERAGE,\ ClO3} = <0.05$ mg/L ClO_3, $X_{AVERAGE,\ ClO2} = <0.1$ mg/L ClO_2, $X_{MAXIMUM,\ ClO3-} = 0.008$ mg/L ClO_3, $X_{MAXIMUM,\ ClO2-} = 0.28$ mg/L ClO_2) show they did not exceed the WHO limits, but did exceed those proposed by the Commission.

Chromium and lead are other new parameters where the draft Directive proposes a lower value, except that here stricter values should be achieved after a 10-year transition period following the Directive's enforcement, with the possibility to set even stricter rules if there are scientific development grounds for that. As the report showed the maximum values for chromium did not even remotely approach the limits[514] proposed by the Commission, the presence of chromium is not expected to be a problem in Slovenia ($X_{MAXIMUM,\ CR}$= 5μ/L). Unfortunately, lead is a far more complicated issue as the samples indicate that even the limit of 10μ/L recommended by the WHO was considerably exceeded ($X_{MAXIMUM,\ PB}$= 29μ/L). As the Commission further reduced this parametric value to 5μ/L, Slovenia will face some challenges in the future if it is to achieve the goal proposed in the Draft.

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512 Austrian European Affairs Committee of the Federal Council Reasoned Opinion 24/SB-BR/2018 of 13 March 2018 pursuant to Article 23g (1) of the Austrian Constitution in conjunction with Article 6 of Protocol No. 2 on the application of the principles of subsidiarity and proportionality; Senate of the Parliament of the Czech Republic Resolution 366 of the 4 April 2011 on the Proposal for a Directive of the European Parliament and of the Council on the quality of water intended for human consumption,…

513 Tests for chlorate and chlorite were performed within the periodical audit monitoring only in supply zones where chlorine dioxide is used as a disinfectant.

514 Limit for chromium is in the proposal lowered from the parametric value of 50μ/L to 25μ/L after a transition period of 10 years after the entry into force of the Directive.

4.2. Introducing a Risk-based Approach for Large and Small Water Suppliers

The current Drinking Water Directive is based on the regular monitoring of water quality at the consumer's tap, independent of any level of risk. As the surveillance does not require any preventive safety planning and the risk-based elements are not considered sufficiently, the stakeholders argued that guidelines containing details of risk management should be developed, especially since microbiologically-related hazards (e.g. legionella, somatic coliphages...) are not included. In addition, this approach fails to promote cost-effective control measures, despite the prevention of water pollution at source generally having a very high cost-benefit ratio compared to water treatment. Therefore, the current approach leads to more treatment than needed, in turn creating higher costs for consumers.

The proposed alternative method of a risk-based approach is already being used in some member states. Slovenia is also steadily moving towards a more holistic approach by introducing hazard assessments from "source to tap". For this reason, few costs, if any, are likely to be incurred by introducing abstraction risk assessments.

4.3. Strengthening the Transparency Rules by Ensuring Up-to-date Information on Water

The Consultation Report shows that only 19% of respondents argued that the quality of tap water is acceptable at the European Union level, making it quite clear that confidence in tap water is critically low. This is a vital topic and much more attention needs to be paid to the question of how to make the information flow among consumers more transparent. The Impact Assessment used the purchase of bottled water as a simple indicator to estimate the level of non-confidence in order to assess the propositions addressing this issue. Overall, it is estimated that more than €600 million per year could be saved by EU households if the consumption of bottled water was reduced.

4.4. Preventive Measures for Materials Coming in Contact with Drinking Water Materials

Member states and stakeholders both agreed about the inefficiency of Article 10 of the current Drinking Water Directive, calling for the implementation of preventive measures as the lack of harmonisation is perceived as an obstacle within the internal market. Non-acceptance of national product approvals from other member states generates high administrative costs. According to the Impact Assessment, an international manufacturer spends between €1.8 and €3.6 million per year keeping

the approval process alive due to the cross-border non-recognition of existing test and certificates. Another survey[515] shows the majority of certificates after 7–12 months, even though the same products have normally already been subjected to a test and certification procedure in the exporting member state. The long periods between the initial test registration and product approval in the importing member state also mean a delay in entering markets.

As many of these materials are construction products, harmonisation according to internal market legislation is assumed, in particular the Construction Products Regulation, but so far all standardisation efforts have been unsuccessful.

4.5. Improving Access to Safe Drinking Water

In addition to the four critical areas in the current Drinking Water Directive, the 'Right2Water' initiative identified lack of access to drinking water as a distinct problem for a section of the EU population and, as the Directive has no provisions on this crucial issue, decisions on supply and access to water are under the jurisdiction of member states. For this reason, a new Article 13 was introduced.

In this regard, the Impact Assessment estimates that currently 4.5% of the overall EU population (23 million people in total[516]) is not connected to a public water supply system. As a result, some member states have already established regulations with specific measures to tackle this problem in favour of specific vulnerable and marginalised groups such as Roma, minorities, indigenous peoples, immigrants or homeless people and there is also a reason for concern with this issue in Slovenia.

At this point, it should be emphasised that although Slovenia is the first EU country to guarantee access to drinking water as a constitutional right[517], due attention must be

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515 German Association of Companies for Gas and Water Technologies survey on Effects of Article 10 of the EU Drinking Water Directive on test and certification costs for products in contact with drinking water, p. 17.

516 The Impact Assessment is based on data collected by Eurostat. However, there are different statistics available as according to the World Water Assessment Programme referred to in the European Parliament's Resolution, more than 1 million people in European Union lack access to a safe and clean drinking water supply. (European Parliament Report in the follow-up to the ECI 'Right2Water', Sept 2015, Resolution Nr 17 (2014/2239(INI)). The Resolution was a reply to the "Right2Water" initiative, where it is argued that there are "*still around 2 million people in Europe that do not have proper access to water or sanitation*".

517 With the aim to preserve national high-quality water from foreign countries and corporations, Article 70(a) defines water supplies not as a market commodity but as a public good managed by the state.

given to the provision of clean and safe drinking water to the Roma. After amending the Constitution, Amnesty International[518] drew attention to the fact that minimum levels of access to water and sanitation are being denied to this ethnic group, on top of their poor housing.

The European Council has already issued a recommendation[519] demanding: "Access to housing: (d) ensuring access to public utilities (such as water, electricity and gas) and infrastructure for housing in compliance with national legal requirements" for the Roma. For that reason, it is crucial Slovenia commits itself to this practice. It is extremely important to continue working in an equally positive spirit to provide Roma essential human rights as their whole existence is affected, with health being the most relevant indicator of their underprivileged status under the current regulation. Despite minor improvements, a more holistic approach is required as continuing discrimination against Roma condemns many of them to live in housing without basic public services. The case of Hudorovic v. Slovenia that is pending before the European Court of Human Rights is a clear sign of the current state.

5. HEALTH-RELATED ISSUES

The objective of the Directive, namely to protect human health from the detrimental effects of any contamination, is hard to statistically evaluate. In order to measure the correlation between the quality of drinking water and risks to human health, the Impact Assessment developed a Population Potentially at Health Risk indicator (PPHR) that estimates the share of the population that could suffer from health problems as a result of contamination.

According to this methodology, it is estimated that 22.7 million inhabitants (4% of the EU population) are at health risk due to the contamination[520] of water resources or drinking water, as it is assumed that 7% of tap water is affected by contamination.

Overall, implementation of the Draft would mean potential health risks related to drinking water are estimated to fall from about 4% to below 1%. The calculations were verified by available data on causal sickness cases attributed to Cryptosporidiosis,

518 Amnesty International reports publication Index EUR 68/005/2011 »Parallel lives: Roma denied rights to housing and water in Slovenia«.

519 Council Recommendation 2013/C 378/01 of 9 December 2013 on effective Roma integration measures in the member states, para. 1.6.

520 European Commission Impact Assessment of 1 February 2018 accompanying the Proposal for a Directive of the European Parliament and of the Council on the quality of water intended for human consumption, p. 77.

Campylobacteriosis, E. coli, Giardosis, Shigellasis and Legionella as these are typically present in unsafe drinking water. In Annex 4, this verification also shows the good correlation between the PPHR and the data available on diseases resulting from unsafe drinking water.

6. CURRENT RESULTS OF MONITORING SLOVENIAN DRINKING WATER

In Slovenia, the Ministry of Health provides detailed guidelines for monitoring drinking water in the Rules on Drinking Water[521] in order to maintain public health. The most recent annual report[522] for verifying the compliance of drinking water is based on a drinking water monitoring system that encompasses 869 water supply zones. For supply zones with more than 500 inhabitants, 3,067 check monitoring tests and 486 audit monitoring tests were carried out as part of the 2016 Drinking Water Monitoring Programme of the Ministry of Health.

For zones supplying 50–500 inhabitants, two annual tests were performed, supplemented with tests for enterococci in the framework of check monitoring. Here, it is important to mention that bacteriological monitoring is especially important as positive results in analyses for these microorganisms indicate the environmental or faecal contamination of treated water. As the prescribed values for these parameters are 0 cells per 100 mL, the obtained microbiological values are a cause for concern.

The report shows that on average 10.27% of the samples were non-compliant due to the presence of coliform bacteria, bearing in mind that with 276 non-compliant zones that makes 31.72% of water supply zones in Slovenia. The percentage reached its high point of 22.23% in supply zones with a population of 50–500 inhabitants and was the lowest in zones supplying more than 5,000 inhabitants, making it clear that providing microbiological safety poses a hazard especially for the managers of smaller public drinking water supply systems. Further, 2.98% of the samples were not compliant due to the presence of Escherichia coli (E. coli) and 6.78% due to enterococci.

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521 Official Gazette of the RS, Nos. 19/2004, 35/2004, 26/2006, 92/2006, 25/2009 and 74/2015.

522 Ministry of Health Annual Report Summary on Drinking Water Monitoring Programme for year 2016 of July 2017, pp. 11–14.

7. CONCLUSION

The Commission's proposed new Drinking Water Directive is a legislative response to the challenges of the technological presence. Updating the parameters and their values in line with the latest scientific research, ensuring a more holistic approach to drinking-water-related hazards, increasing transparency and reducing the unnecessary bureaucracy are all essential for ensuring high quality water for European Union citizens in the future. For that reason, amendments to the outdated Directive 98/83/EC in numerous segments are imperative to provide consumers with adequate water quality in accordance with the recent WHO Guidelines. Detailed research in this area conducted by the Commission and the resulting proposals for improvement are therefore long overdue.

In any case, despite the improvements included in the Draft, the principles laid down in the Treaties should always be respected and this chapter argues that precise oversight of EU legislation by national parliaments is a vital component of the procedure. In order to secure proportionate and not just de jure but, more importantly, de facto effective results, it is crucial that member states meticulously observe the legislative procedures at the European level, especially since some issues require immediate attention. Accordingly, this contribution laments the absence of a scrutiny procedure in the Slovenian parliament regarding the Commission's proposal as water scarcity, whether in terms of quality or quantity, afflicts the country's socio-economic development. Decisions on water allocation and management should be based on detailed economic considerations and Slovenia has failed in this regard. In addition, overlooking questions regarding the principles of subsidiarity and proportionality could enable a violation of state sovereignty. As the scrutiny procedure is an important instrument that allows national parliaments and their chambers to state their concerns on any questions arising from the Draft, it is argued that Slovenia should not be an exception in exercising this right, especially given the country's rich water resources.

At the same time, access to drinking water for Roma people should be an important national priority as consistent discrimination against this ethnic group is leading to a situation where the water quality level does not even satisfy the basic requirements. However, Slovenia is overall ranked among those countries with the highest quality standards.

In any event, national reports reveal some deficiencies and that the focus in future should be on smaller public drinking water supply systems as they are the biggest hazard in the water system, where the presence of lead and coliform bacteria are the greatest concerns.

It is also argued that the process of raising awareness on the importance of water should not end with ensuring access to water as a constitutional right. In European and international law, it should also be a basis for legislative bodies to make sure safe drinking water for human consumption is available to all citizens. Although compared to other similar countries Slovenia has a very progressive policy with respect to the Draft, especially those regarding parameters and their values, there is still room for improvement. Therefore, a call is made to finally start fulfilling the role of the watchdog of European Union legislation with due diligence.

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CHAPTER 8. DRINKING WATER – A LAW AND ECONOMICS PERSPECTIVE

1. INTRODUCTION

Water is an essential natural resource for human survival. Access to safe drinking water and sanitation was declared a "human right" by the United Nations in 2010. However, not everybody shares this opinion and the question arises of whether one should be able to profit from the sale of water. Is it immoral to profit from selling water? Or is it good that the market and corporations manage water as an efficient way of dealing with this scarce resource? Opinions can be found speaking in favour of both positions: water as a public or a private good.

In order for society to develop its vision for how to deal with the question of water, it helps to reflect on history. For example, in Ancient Rome water was a public good for ordinary citizens and a marketable asset for wealthy citizens who funded the water supply network through taxes. These days, water sector legislation and laws on the privatisation of water differ from country to country, among others, due to historical developments. Slovenia is the first EU country to include the right to water in its Constitution (Article 70(a), November 2016). There are other countries where the right to water is enshrined in their legal framework, for example in Slovakia and the Netherlands.

Economists also draw attention to issues related to water. Elinor Olstrom was awarded the Nobel Prize for her analysis of how individuals behave and act regarding a matter of common interest. She observed that neither the state nor the market is uniformly successful in enabling individuals to sustain the long-term, productive use of natural resources. The case of Nestle Corporation, which is in control of considerable water resources, is one of the worst examples of water privatisation with the company having deprived local users of their right to water, causing significant damage to groundwaters and over-exploiting natural resources.

The aim of this chapter is to describe the issues of privatising water as a global commodity by exploring some practices from a historical perspective, practices embodied in current legislation in some countries, and studying what contemporary economists and researchers have contributed to this topic.

The structure of the chapter is as follows. After the Introduction, the second part, a distinction between public and private goods is introduced, providing an overview of economic arguments forming an analytical framework. The third part gives an overview of historical reasons for the privatisation of drinking water, whereas part four surveys the current EU legislation. The fifth part introduces certain law and economics concepts and insights on an optimal water regulation developed by Olstrom, while part six discusses the notorious Nestle case. Part seven concludes.

2. A PRIVATE OR A PUBLIC GOOD?

Is water a public[523] or a private[524] good? It may be understood as a public good as no one should be deprived of it and at the same time as a private good that must be purchased to be consumed (it cannot arrive in someone's glass without cost). Both definitions can be applied to water, sometimes depending on the interest of the person making the statement.

According to Smets, three theories apply to how water is viewed:
1. "Drinking water should be charged for like any other commodity;
2. Drinking water should be provided free to everyone;
3. Drinking water should be provided free only to those who cannot afford to pay for it".[525]

In this chapter, it is argued that water is a basic need, we all need it to live, and therefore it should be seen as a public good for everyone. On the other hand, this still does not imply that governments are obliged to provide water for free (such cost-free provision would induce moral hazard and free-riding behaviour on the demand side of the market). Several different water-management regimes are possible for ensuring reliable water supply systems, one in which water is managed/provided by the state or another where this is done by private companies (also called Private Sector Participation).

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523 A public good is a product that one individual can consume without reducing its availability to another individual, and from which no one is excluded (Investopedia). https://www.investopedia.com/terms/p/public-good.asp#ixzz59ox6dABH.

524 A private good is a product that must be purchased to be consumed, and its consumption by one individual prevents another individual from consuming it. Economists refer to private goods as rivalrous and excludable. A good is considered to be a private good if there is competition between individuals to obtain the good and if consuming the good prevents someone else from consuming it. https://www.investopedia.com/terms/p/private-good.asp#ixzz59oxpulTI.

525 H. Smets. Charging the Poor for Drinking Water. Webpage: http://www.publicpolicy.ie/wp-content/uploads/Water-for-Poor-People-Lessons-from-France-Belgium.pdf.

Prasad suggests the proponents of Private Sector Participation argue that, since governments have failed in delivering quality water to all, the private sector can solve this problem by applying market principles. In other words, the private sector can improve efficiency, extend the coverage of services, bring in more investment, and relieve governments from budget deficits.[526] On the other side of the spectrum are those who consider that water is a common good and should not be in the private sector's hands. They argue that, because water is unlike any other resource and water is the essence of life itself, it should not be treated like another commodity and subjected to standard market principles. In other words, the private sector cannot apply just criteria for this basic need. In this context, access to water for everyone becomes a human right and it is the state's obligation to provide this vital resource to all people. Certain countries like Sweden have in this respect banned water companies from making a profit. Others, like the Netherlands and Uruguay, have prohibited the privatisation of their systems. And then there is another group which sits between these two extreme positions. This group contends that solutions can be found by considering water as an economic good and a human right at the same time.[527]

The human right to safe and clean water and sanitary systems as well as the fact that clean drinking water is essential for the full enjoyment of life and human rights was agreed by the UN General Assembly on 28 July 2010 under Resolution 64/292 (after a debate lasting for 15 years). This resolution, which is a political declaration, still does not provide a solution to the question of how to make water actually accessible to anyone who needs it. Implementation is thus a matter for required in the legislation of individual countries or legal practice, as well as its actual realisation to the maximum extent possible. Problems of the realisation of such human rights are not only acute in underdeveloped countries (especially Africa and Asia), but also across the developed world. According to the World Health Organization, in 2011 some 19 million people in Europe did not have access to adequate drinking water. Differences in this access not only exist between individual countries, but also within countries.[528]

> *Water resources are not infinite and in many areas water is becoming increasingly scarce. In a market economy the allocation of scarce natural resources (such as coal, oil, fish, crops, and timber) is typically determined by trade in markets. However, water resources have a number of unique characteristics which mean that traditional market mechanisms can lead to inefficient and inequitable allocations.*

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526 N. Prasad. Privatisation of Water: A Historical Perspective. Web page: http://www.lead-journal.org/content/07217.pdf.

527 Ibid.

528 European Commission. Web page: http://ec.europa.eu/environment/water/water-drink/legislation_en.html.

> *This creates questions over whether water should be considered a public or a private good. What makes water unique is that it exists both as a private, marketable good and a basic human right. Access to safe drinking water and sanitation was declared a "human right" by the UN in 2010. As a human right, water cannot be treated the same way as other marketable goods. However, after basic water needs have been satisfied, additional water use is no longer a basic human right. Households, for example, may use water to fill a swimming pool, water their lawns, or take long showers. As such, when water use exceeds around 50–100 litres per person per day, it becomes a private good and so is best allocated, like other private goods, through markets.*[529]

People who have access to drinking water, mostly in developed countries, take water for granted and use it excessively (free-riding problem). The problem of the allocative inefficiency of water could be solved by charging for excess use, but the problem revolves around how to determine what is excessive. It seems that if water is considered a public good, people take the water supply for granted and waste it – use it irrationally. This shows that a fundamental assumption of economics (that people think rationally) is sometimes, or mostly, not true. This is an example that may in some way justify the statement that water is a private and marketable good. Some experts think "there is a need to think through how this scare resource is managed and suggest that there is much the water sector (mostly managed by public companies) could learn from the largely privatized energy sector".[530] Is there scope for a solution in this small word "learning"? Can there be some improvement in the way the state runs public companies (those dealing with water)? Management principles are finding their way into public companies (mainly in developed countries). As individuals, we should also try to think about natural resources not only as who owns them and to whom they belong, but in a more enlightened manner – that natural resources belong to everyone and they are not unlimited.

3. HISTORICAL PERSPECTIVE ON WATER PRIVATISATION

In Ancient Rome, water was treated as a public good for all citizens as they had free access to it in the public wells. These were water collectors called a "*lacus*" (lake). People themselves or with their own workers transported the water to their homes. But there was also a very advanced drinking water supply network which allowed rich citizens

529 C. White, AECOM, UK. *Understanding water markets: Public vs. private goods*. Web page: http://www.globalwaterforum.org/2015/04/27/understanding-water-markets-public-vs-private-goods/.

530 The Guardian. *Live Q&A: Water, public good or private commodity?* Web page: https://www.theguardian.com/global-development-professionals-network/2014/sep/01/water-access-inequality-private-commodity

to have water at home. Wealthy citizens therefore paid taxes that depended on the size of a plumb line. This meant that water was also a prestigious asset for them. In this way, water in Ancient Rome was a public good for ordinary citizens and a marketable asset for wealthy citizens who funded the entire water supply network through taxes.

Under old Jewish law, water was usually a common good and not a free good to which completely free access would apply. Water from wells that were the product of human labour was the property of a particular community, but they did not deny others the right to drink it. Access to drinking water was recognised as a right in both of these old civilisations, a right to the free provision of drinking water to those who need it. Such "compassion" was derived from the philosophical principle of "to love thy neighbour".[531]

The industrialised countries were concerned with expanding water and sanitation systems and improvements here were directly linked to water sector legislation. Due to the spread of urbanisation in 19th century Europe, the traditional reliance on water from wells, water vendors or other sources was replaced by a centralised water supply system. New York is an example of a city that turned to the private sector to provide clean drinking water. At the beginning, the city was reluctant to make the initial investment and therefore called on private-sector investors. It was argued that the municipality could not raise enough capital through loans and taxes to finance the works. Hence, the Manhattan Company (which later became the Chase Manhattan Bank) was formed to supply water in the city. Private initiatives were instrumental in establishing modern water supply systems, which led to privately owned or operated systems (source Nared Prasad).

4. THE RIGHT TO DRINKING WATER IN THE EU

Because all EU member states are also member states of the UN General Assembly, the political declaration about the right to water is also their obligation. This obligation is to provide water, but how they actually do that is their decision. The EU Drinking Water Directive concerns the quality of water intended for human consumption. Its main objective is to protect human health from adverse effects of any contamination of water intended for human consumption by ensuring it is wholesome and clean.[532]

531 Drinking Water: A History. Web page: http://www.washingtonindependentreviewofbooks.com/index.php/bookreview/drinking-water-a-history

532 Zobavnik, 2015, p. 9.

The laws concerning the ways water supply (via a private or public company) and water privatisation differ from EU country to EU country. Water can be provided by a private supplier or the state, but in most countries drinking water is supplied by both. Where the supplier is private, legal safeguards against the privatisation of water exist.[533]

The Netherlands passed a law in 2004 which prohibits private water supply companies from providing water. This reflects the importance of water for the country (a big part of the national territory lies in a depression). The developed agriculture and dense population settlements mean great water consumption. Therefore, dealing with drinking water needs to be very careful and correct as it actually forms part of the question of national safety.

Slovakia deals with the water issue in its Constitution, making it the only one to do so in the EU (apart from Slovenia). The price of drinking water is defined according to a mandatory methodology. The Constitution stipulates that groundwater is owned by the state, that the state is obliged to protect and care for natural resources (including water) on behalf of both the today's citizens as well as future generations. There is a ban on exporting water from the country, including via the water supply network (the exception being bottled water for personal use and water for humanitarian intentions).[534] The EU Commission supported Slovakia following the citizens' initiative "Water and sanitation are a human right" during which citizens also stated that "Water is a public good, not a commodity".

Slovenia is the first EU country to include the right to water in its Constitution (Article 70(a), November 2016. The right to drinking water is described in Article 70(a) of the Constitution (Ustavni Zakon o dopolnitvi III. Poglavja Ustave Republike Slovenije, UZ70a, Uradni list RS, št. 75/16) as follows:

> *"Everyone has the right to drinking water.*
> *Water resources are a public good managed by the state.*
> *As a priority and in a sustainable manner, water resources shall be used to supply the population with drinking water and water for household use and, in this respect, shall not be a market commodity.*
> *The supply of the population with drinking water and water for household use shall be ensured by the state directly through self-governing local communities and on a not-for-profit basis".*

533 Zobavnik 2015, p. 25.

534 Ibid.

5. ELINOR OLSTROM – GOVERNING THE COMMONS

The problem of collectively managing shared resources, where water is one example, is an issue discussed by Olstrom. Olstrom analysed in depth how individuals behave and act with respect to a matter of common interest (as she calls them, "common-pool resources"[535]). The commons dilemma is a model for a wider range of resource problems in society today.

Olstrom describes three models most often put forward to provide the foundation for recommending either state or market solutions to the managing of shared resources. All models encompass the difficulty of getting individuals to pursue their collective welfare, in contrast to their individual welfare.[536]

The free-rider phenomenon first needs to be understood. "At the heart of each of these models is the free-rider problem. Whenever one person cannot be excluded from the benefits that others provide, each person is motivated not to contribute to the joint effort, but to free-ride on the efforts of others. If all participants choose to free-ride, the collective benefit will not be produced".

These models can serve as a conceptual framework and a basis for further thinking. They can be used by politicians, companies or others to justify their point of view. They can be applied to considerations about the question of water and whether it should be managed by the government (state) or privatised (managed by private companies).

The tragedy of the commons

The "tragedy of commons" terminologically symbolises the degradation of the environment to be expected whenever many individuals use a scarce resource in common (an example is the free use of a pasture for cows that ends up being destroyed by an excessive number of cows). Assets that are free for all are valued by no one. This model may be understood as supporting the view that the state shall control natural resources to prevent their destruction. Water is too valuable a resource to be left to the possibility of the tragedy of the commons model.

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535 The commons" includes any natural resources that are not owned by an individual or corporation. Rather, these resources are available for public use. This might include public pasture land, lumber, oil, the oceans, the atmosphere, wildlife and fish, and many other common resources (https://www.learning-theories.com/the-tragedy-of-the-commons.html.).

536 E. Olstrom, 2017.

The prisoner's dilemma

“The paradox that individually rational strategies lead to collectively irrational outcomes seems to challenge a fundamental faith that rational human beings can achieve rational results”. According to this model, if water is left in the hands of individuals, there is a risk they will not manage it in a rational way. Can individuals or private companies that act in the interests of individuals (owners or shareholders) be trusted to deal with water in such a way that the outcome is good for all, not just for higher profits? The state might be a better strategy-maker in this case.

The logic of collective action

Olstrom argues that, unless the number of individuals is quite small, or there is coercion or some other special device to make individuals act in their common interest, rational, self-interested individuals will not act to achieve their common or group interests. It is an unsettled question whether intermediate-size groups will or will not voluntarily pursue collective benefits. 10 According to this model, individuals act more according to their personal needs than to the common needs of society. Who then should oversee collective resources such as water? In this model, the state is seen as the better one to oversee and govern collective resources.

Olstrom also discusses many cases of so-called common-pool resources (“CPRs”, for example, land, fisheries, forests etc.), whereby she “attempts to contribute to an understanding of the factors that can enhance or detract from the capabilities of individuals to organize collective action related to providing local public goods. All efforts to organize collective action, whether by an external ruler, an entrepreneur, or a set of principals who wish to gain collective benefits, must address a common set of problems. These have to do with coping with free-riding, solving commitment problems, arranging for the supply of new institutions, and monitoring individual compliance with sets of rules among others”.

Olstrom concludes: “What one can observe in the world is that neither the state nor the market is uniformly successful in enabling individuals to sustain long-term, productive use of natural resource systems”.[537] Her work shows that it is possible to successfully manage common resources.

To avoid the tragedy of the commons, neither the solution stating that central governments must control natural resources nor that privatisation is the sole way forward are the only solutions. Olstrom argues that, instead of there being a single

537 Ibid.

solution to a single problem, many solutions exist to cope with many different problems.[538]

Instead of presuming that the individuals sharing a commons inevitably become caught in a trap from which they cannot escape, she argues the capacity of individuals to extricate themselves from various types of dilemmas *varies* from situation to situation.

Moreover, institutions are rarely either just private or just public – "the market" or "the state." Many successful CPR institutions are complicated hybrids of "private-like" and "public-like" institutions.[539] Successful are those institutions that enable individuals to achieve productive outcomes in situations where the temptation to free-ride and shirk is ever present.

According to Olstrom, various instruments provide many alternative solutions to the commons dilemma. To explain the idea, she applied game theory, to the so-called fifth game as an example: in a common grazing area, the herders make a binding contract among themselves to commit to a cooperative strategy they will work out. The herders must negotiate prior to placing animals in the meadow. During the negotiations, they discuss various strategies for sharing the meadow's carrying capacity and the costs of enforcing their agreement. Contracts are not, however, enforceable unless agreed to unanimously by the herders. Any proposal made by one herder not involving equal sharing of the carrying capacity and of enforcement costs would be vetoed by another herder in their negotiations. Consequently, they reach a feasible agreement – and equally share the meadow's sustainable yield levels and the costs of enforcing their agreement.

Complex social schemes are often invented by the users to maintain the optimum efficiency. A set of rules, negotiations, contracts, monitoring and sanctions is needed. Olstrom describes examples of small communities (villages in Japan and Switzerland) that have found efficient ways to use common resources.[540] The case of the management of water resources in California (West Basin) is an in-depth analysis of issues related to water. The successful and sustainable use of natural resources along with the question of whether water is a right for all or a privilege for some should be on the agenda of policymakers around the world. Many risks are involved. The case of the Nestle water privatisation demonstrates how water privatisation can go wrong.

538 Ibid.

539 Ibid.

540 Ibid.

6. NESTLE'S PRIVATISATION OF WATER

Controversy may arise if water is used as an asset for making a profit. The problem grows bigger when privatised water is overexploited and brings negative externalities. As long as corporations use water sources within the relevant limits and have all the necessary permits, this may not be an issue. But the moment their actions affect people's right to water a serious problem and potential inefficiency can emerge.

A well-known example is the Nestle Corporation case. The CEO of Nestle stated that access to water should not be a public right. Nestle owns about 54 brands of bottled water and owns or leases 50 spring sites throughout America. Nestlé controls one-third of the bottled water market in the USA. The company is notorious for unlawfully extracting spring water.[541] It uses natural springs and underground aquifers, with some cases of draining local water reserves to provide inputs for its water brands, then charging unaffordable prices to the local population whose clean water supply was taken from them.

An example of a typical example involving Nestlé is Colorado where 80% of the citizens of Aurora were opposed to the company's presence, well aware of its terrible reputation for damaging communities and natural environments. Yet, the city council voted in favour to let a devastating process begin and over the next decade Nestlé extracted 650 million gallons of precious Arkansas River valley water, all going into its Arrowhead Springs bottled water brand. For years, Aurora's embattled residents fought to rid the company predator from destroying their valuable aquifers. In addition, the plastic non-biodegradable bottles it uses are major pollutants that stay toxically intact for a full millennium.[542]

A recent drought in California is said to be the worst in the past 1,200 years. Sourcing water from that area, Nestle did not adapt and reduce its water usage. Instead, CEO Tim Brown simply stated that he did not care and would even expand the water bottling operations if possible. The amount of water used by Nestle is unknown because there is no legal basis to force the company to reveal the relevant figures. The state can estimate the number, it is believed to relatively high. In addition, one report claimed the company had an illegal source for its water, without a permit in the San Bernardino National Forest, for which it paid just USD 524 annually. This is a scenario in which while the state imposes strict restrictions on all, while simultaneously a company from the private sector is grossly exploiting water sources.

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541 Globalresearch.ca.

542 Ibid.

In another example, Nestle uses an aquifer as a water source in an area near the small community of Bhati Dilwan. The company's intensive commercial uses decreased the water levels considerably, creating the threat of the aquifer becoming dry. The people of Bhati Dilwan use this very same water source and Nestle's exploitation of it made the water filthy. People became ill, especially children. Poor people were forced to drink bottled water after their own water had been absorbed by Nestle.[543]

This kind of privatisation might be inefficient since it creates negative externalities and monopoly power. The corporation involved is abusing its monopoly position (inefficient allocation of resources and deadweight losses) and, from an economics perspective, such a (non-restrained) monopoly should never have been allowed. It is an example of an ill-prepared and poorly performed privatisation of a scarce natural resource (arguably a natural monopoly that will always entail market inefficiencies). It is also an example showing that, no matter how inefficient and unproductive public water companies might be, they must not be permitted to create widescale negative externalities and damage natural resources.

7. CONCLUSION

This chapter overviewed law and economics studies concerning water and saw that water is a scarce natural common resource. Much controversy surrounds water as a common resource. Issues include fears of price rises, public health concerns, environmental implications and the use of water as a resource by a profit-making organisation.

Throughout history, civilisations and cities have dealt with the challenge of managing water. The highly developed water systems in Ancient Rome provided water to all, but a tax was imposed on excess use. Today, water remains a very important issue in both developed but even more so in less developed countries. Water is mostly understood as a human right in the developed world and UN member states. EU countries provide drinking water to all, but every country decides who will distribute it. Water suppliers can be private, public or the task can be undertaken by a mix of both.

Opinions vary on who is the best manager of this common resource. It is difficult to operate a water service profitably and also provide affordable services to all customers. The state's management of water infrastructure may be lacking funds, innovation, be inefficient or entail a risk of corruption. The private sector may bring in innovation,

543 Global Research. Privatization of Water as an Owned Commodity Rather Than a Universal Human Right. Web page: http://www.globalresearch.ca/privatization-of-water-as-an-owned-commodity-rather-than-a-universal-human-right/5378483.

efficiency and necessary investment funds. But, for example, the UN argues that privatisation may not be suitable in every situation and that ownership is not linked to efficiency. It proposes that private sector involvement should depend on a particular country's political, institutional, social and cultural settings.[544]

Water sector legislation and privatisation laws differ from country to country. Slovenia is the first EU country to include the right to water in its Constitution (Article 70 (a), as of November 2016). In other countries, the right to water is enshrined in the legal framework, for example in Slovakia and the Netherlands.

Water as a private or public good is a topical issue of late, especially in light of some very controversial privatisation cases (Nestle). Opinions on the privatisation of water are divided, some are opposed to it, saying water is a human right and a public good that cannot be treated in the same way as other commodities. Conversely, if water is a public good people take the supply of water for granted and use it irrationally (free-riding problem, moral hazard and opportunism). This adds support to the view that water should be a marketable good.

The economist Elinor Ostrom developed three models to describe the problem of collectively managed shared resources. These models are often used to provide the foundation for recommending either a state or market solution.

The theory of the tragedy of the commons states people use public resources selfishly, nobody thinks of others and following generations. In the Prisoner's dilemma game-theory model, individuals are unable to achieve rational collective outcomes. They can be rational only within their own strategies According to collective action model logic, people do not see sufficient incentive to work towards a common goal. In this model, individuals act more according to their personal needs than the common needs of society.

Avoiding the tragedy of the commons does not just rely on the idea that central governments must control natural resources or that privatisation is the only way. Olstrom argues that, instead of one single solution to a single problem, many solutions exist for many different problems. Ostrom's work shows that common resources can successfully be managed. Therefore, the risk of leaving valuable, unrenewable natural resources in private hands seems much too high. The state's role to provide a regulation must also be based upon economics insights. The successful and sustainable use of natural resources (public goods) and the question of whether water is a right of all or a privilege for some should top the agenda of policymakers across the world.

544 United Nations World Water Report 2006).

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Aira Ramos

CHAPTER 9. A LAW AND ECONOMICS ANALYSIS OF SELECTED FIRST-LINE ANTIHYPERTENSIVE DRUGS IN SLOVENIA

1. INTRODUCTION

The rapid rise in heath expenditure costs has been a problem for the Slovenian government, with finding the right solution for the problem being an ongoing challenge. The goal of the study is to compare the cost of commonly used anti-hypertensive drugs between the innovator, original version and the generic version to help analyse current pricing differences of these two types in the Slovenian market. The data should be of use to patients, medical practitioners and the health department as part of efforts to cut the cost of pharmaceutical items, while also giving a background understanding of any mandatory generic substitution policy that might be introduced to lower the burden on healthcare expenditure. Anti-hypertensive drugs are taken on a massive scale in almost every country. In Slovenia, cardiovascular disease is a leading cause of mortality, accounting for 40% of all deaths according to the Statistical Office of the Republic of Slovenia in 2016.[545] Of the 17 million prescriptions given in 2015, the most heavily prescribed drugs include those for cardiovascular disease, mainly distributed to patients aged 60 or above.1 A study by the Institute of Macroeconomic Analysis and Development (2016) showed that life expectancy in Slovenia has increased, namely between 1990 and 2015 the share of the population of citizens above 65 years had risen from 10.7% to 17.9%, and will continue growing.[546] With the rise in population ageing, overall health expenditure is also expected to increase, especially pharmaceutical spending. In 2014, the Health Insurance Institute of Slovenia (HIIS) spent €278,342,609 on drugs alone, just 1.7% more than in 2007.[547]

The slow growth pharmaceutical expenditure rate is partly due to a Slovenian government intervention to increase the coinsurance of medicines on the 'positive' list (from 25% to 30%) and the 'intermediate' list (from 85% to 90%), meaning that only 10% of items on the intermediate list were paid for by the HIIS compared to 70% of those on the positive list, with exemptions for pregnant women, children, selected chronic diseases that are fully covered by the HIIS. In addition, the share of drugs on

545 Republic of Slovenia Statistical Office 2016.

546 Institute of Macroeconomic Analysis and Development 2016.

547 Cylus 2015.

the positive list has also declined, from 79.7% in 2004 to only 65.6% in 2014, while the introduction of a new therapeutic drug group system has also lowered expenditure. In this system, the prices depend on the lowest-price medicine based on a group of therapeutically comparable medicines instead of on medicines that have the same active ingredients.[548] This approach is effective for cutting the HIIS' costs, but is shifting more of the burden onto patients.

In contrast, some European countries like Sweden made mandatory generic substitution compulsory already in October 2002 in response to growing pharmaceutical spending, bringing an immediate turnaround in costs for both patients and society, and also a rise in the share of state subsidies.[549] Aside from Sweden, generic substitution is also compulsory for pharmacists in Finland, France, Germany, Norway and Spain.[550] Further, it is required that prescriptions be given in international non-proprietary names (INN) in France, Portugal and Spain, with the aim to increase the generic market share.[551] In 2014, more than 70% of the volume of pharmaceuticals sold in the UK, Germany, the Netherlands and the Slovak Republic was for generic medicines.[552]

In Slovenia, generic substitution is not mandatory but encouraged. A study conducted by Kersnik and Peklar (2006) revealed that 38.3% of general practitioners do not consider price when prescribing, and that 50% of the demand from patients and hospital consultants is for branded medicines and the majority of physicians meet these demands, even though 88.9% of them regarded generic equivalents as being just as effective as branded or innovator drugs.[553]

Data from the US Department of Commerce's International Trade Administration (2017) show that in 2016 Slovenia spent €425 million on pharmaceuticals, approximately €160 million on generic and the rest on branded drugs. An increase in biologicals, targeted (smart drug) and 'more expensive' prescription drugs is also noticeable, accounting for 27% of all drugs sold in 2016.[554]

A major factor to be considered with generic substitution is the price difference since in countries like Germany the average difference between generic and innovator medicines is 30%, the Netherlands has on average a 20% difference, much smaller

548 Ibid., p. 43.
549 Andersson, et. al 2006.
550 Birg 2015.
551 Ibid.
552 OECD/EU, 2016.
553 Kersnik and Peklar, 2006.
554 US ITA, 2017.

than in the UK with its 80% difference.[555] This is thus a key criterion for measuring the possible impact of generic substitution policies on reducing pharmaceutical spending.

Hence, the study conducted focuses exclusively the cost difference between innovator and generic medicines of selected first-line antihypertensive drugs, with data being collected from the community pharmacy in Ljubljana (*Lekarna Ljubljana*) and being limited to current market prices at the time of the study. The study also assumes the drugs under comparison conform to the regulation on bioequivalence. It also excludes the patient's preference for any additional therapeutic effects among the selected samples.

2. LITERATURE REVIEW

2.1. Theoretical Framework

The study involves the principle of pharmacoeconomics, a new branch of health economics that aids in organising different and competing healthcare interventions with a fixed resource. Pharmacoeconomics serves as decision-making guidelines for the use of medicines.[556] In current healthcare practice, the pharmacoeconomic value must be demonstrated, entailing a balance of economic, humanistic and clinical outcomes. In this approach, a drug is seen as the entirety of its clinical, economic and humanistic attributes. Therefore, safety and efficacy are not the only consideration for a drug; the impact of total health resource utilisation, cost, and quality of life is also included in the evaluation.[557] There are two evaluation methods: economic and humanistic evaluation techniques.[558]

The main focus of economic evaluation is to identify, measure, value and compare the costs and consequences of the alternatives being considered, entailing partial and full economic evaluation. Moreover, humanistic evaluation is measured by assessing the impact of disease and treatment of disease on patients' health-related quality of life, patient preferences and patient satisfaction, and normally uses questionnaires to delve into this aspect.[559]

555 King and Kanavos, 2002.
556 Purkiss 2006.
557 Reeder, 1995.
558 Trask 2011.
559 Ibid.

Simple descriptive tabulations of outcomes or resources consumed are needed for a partial economic evaluation. One example is a cost-outcome or cost-consequence analysis, which only describes the costs and consequences of an alternative but does not compare the treatment options.[560]

Meanwhile, the following four full economic evaluations techniques are used in pharmacoeconomics for identifying, measuring, valuing and comparing the costs and consequences of alternatives:[561]

1. Cost minimisation analysis (CMA), this method compares the costs of two or more alternative treatments that have undergone a test for been qualified to hold safety and efficacy equivalence. When this condition is met, a drug under study is compared with known therapeutic equivalents. The US FDA (2017) defines therapeutic equivalents as drugs with the same clinical effect and safety profile when administered to patients as specified on the labelling, and for a drug to be considered a therapeutic equivalent it must meet the following criteria: (1) approved for its safety and effectiveness; (2) they must entail pharmaceutical equivalents, which means drugs that: (a) have identical active ingredients in the same dosage form and route of administration; and (b) meet the compendial or other standards for testing the purity, strength, quality and identity; (3) it must be bioequivalent and that (a) it does not present any known or potential bioequivalence problem, and meets the acceptable in vitro standard; or (b) if they do present such a known or potential problem, it should state that it meets the bioequivalence standard; (4) it is properly labelled or has followed the labelling requirements; and (5) it complies with the Current Good Manufacturing Practice regulations.[562]

   In these circumstances, the cost can be identified and analysed, mostly in monetary units. This pharmacoeconomic tool is the simplest of the four as this simply focuses on the 'cost savings' of one treatment over another.[563] An example of applying CMA is the introduction of generic prescribing rather than a brand name which would achieve the same level of benefit at a reduced cost but cannot be used to evaluate programmes or therapies that lead to different outcomes.[564]

560 Trask 2011.
561 Ibid.
562 US FDA 2017.
563 Trask 2011.
564 Walley and Haycox 1997.

2. Cost-Benefit Analysis (CBA) is a method used to identify, measure and compare the benefits and costs of a programme or treatment alternative.[565] In this study, the evaluation is measured in monetary units and also includes the monetary value of the intangible cost that is incorporated within different states of health such as physical, emotional and psychological distress associated when being in an ill or healthy state.[566] According to Walley and Haycox (1997), CBA is the most all-encompassing but also the most difficult to apply of the four approaches.[567] It is useful for making decisions on a healthcare programme, such as for nationwide immunisation programmes that can be fully costed in terms of the resources utilised by running the programme, the evaluation can be compared with the mortality and morbidity due to the programme. [568]However, CBA may ignore many intangible benefits that are difficult to measure in monetary terms (e.g. relief of anxiety), but which are fundamentally important for patients.[569]

3. Cost Effective Analysis (CEA) is a method used to assess gains in health relative to the costs of different health interventions, and one of the first evaluations used to guide decisions on public health policies in developing countries by systematically combining information about effective interventions with information about their costs.[570] Moreover, it is applied to summarise the health benefits and resource use entailed by competing healthcare programmes and guide policymakers on the best option. CEA is measured in terms of health benefits which is quantified in health units (e.g. years of life saved or ulcers healed) and the costs are measured in monetary units.[571]

   In an example given by Jamison et. al., (2006) about Oral Rehydration Therapy (ORT), where each year more than 1 million children die from diarrhoea, and the use of ORT significantly reduces the severity and associated mortality rate, ORT does not cure the diarrhoea itself but helps to lower the casualties of diarrhoea, with the information gathered in the study showing that ORT can save lives being an important step in identifying a neglected way of improving health. The modest cost of this therapy from USD 2 to USD 4 per year of life saved helped in deciding that it is something public policy should promote. Many countries have seen positive

565 Trask 2011.
566 Kulkarni et al. 2009.
567 Walley and Haycox 1997.
568 Kulkarni et. al. 2009.
569 Walley and Haycox 1997.
570 Jamison et al. 2006.
571 Walley and Haycox 1997.

responses from this therapy and it is now being used to save millions of lives.[572] CEA is the most commonly applied form of economic analysis, yet it does not allow comparisons to be made between totally different areas of medicine with different outcomes.[573]

4. Cost-Utility Analysis (CUA) is described by Trask (2011) as a method for comparing treatment alternatives that integrate patients' preferences and the health-related quality of life (HRQoL).[574] HRQoL is a composite measure of the individual's physical or biological functioning, emotional or psychological state, level of independence, social relationships, and environmental forces.[575] CUA is similar to CEA in that there is a defined outcome and the cost to achieve that outcome is measured in monetary units. But the outcome in CUA is measured in terms of changes in patient well-being (utility) represented by quality-adjusted life year (QALY) and, since such an outcome measure is not disease-specific, it can compare the 'value' of health interventions across more than one area of medicine, for example, a coronary artery bypass grafting versus the use of erythropoietic for treating anaemia in chronic renal failure.[576] CUA is not often used for economic evaluations due to the lack of agreement on measuring utilities, difficulty comparing QALYs across patients and populations, and difficulty in quantifying patient preferences. However, when comparing treatment alternatives where HRQoL is the key health outcome being examined, CUA should be considered.[577]

Among the four economic evaluations, the CMA is utilised in this study and, aside from the method used, it is important to fully understand the therapeutic category of samples used, namely, first-line antihypertensives.

Antihypertensives are drugs for treating hypertension. Hypertension affects millions of lives around the world with data from the Statistical Office of the Republic of Slovenia (2009) showing that 26.3% of residents aged 15 or older have high blood pressure, 25.4% of whom were diagnosed by a medical doctor.[578]

572 Jamison et. al., 2006.
573 Walley and Haycox, 1997.
574 Trask 2011.
575 Pradelli and Wertheimer, 2012.
576 Walley and Haycox, 1997.
577 Trask 2011.
578 Statistical Office of the Republic of Slovenia, 2009.

In the latest guidelines on hypertension from the American College of Cardiology and American Heart Association (2017), a person is considered to have elevated BP if they have a systolic between 120–129 and diastolic of less than 80 mmHg and, for stage 1 hypertension, a systolic of between 130–139 and a diastolic between 80–89 mmHg, while stage 2 hypertension a systolic of at least 140 and a diastolic of at least 90 mmHg.[579]

Determining the category of a particular hypertension is the key to managing the condition. Two types of treatment are offered to patients suffering hypertension. The first entails lifestyle modification and pharmacological treatment. Patients with elevated BP are normally advised to undertake this lifestyle modification (or non-pharmacological treatment) which includes a low-salt diet, weight loss, cutting alcohol intake, since pharmacological treatment is not necessary with this category of hypertension.[580] Guidelines released by the Eighth Joint National Committee in 2014 for managing hypertension in adults state that, among the general population, pharmacological treatment should only begin when BP exceeds 150/90 mmHg in adults 60 years and older, or exceeds 140/90 mmHg in patients below 60 years.[581]

Five drugs are recommended for the initial pharmacological treatment of hypertension, namely, thiazide/thiazide-like diuretics, beta-blockers, angiotensin converting enzyme (ACE) inhibitor, angiotensin receptor blocker (ARB), and calcium channel blockers.[582] Diuretics are drugs used to increase urine output and sodium excretion that may be affecting the volume and composition of body fluids which are very useful in the treatment of hypertension. Beta-blockers are agents that antagonise the ß-adrenergic receptor which has a direct effect on regulating blood circulation and thereby reduces myocardial contractility, heart rate, and cardiac output while directly lowering BP. Angiotensin converting enzyme inhibitor and angiotensin receptor blocker both work on the body's renin-angiotensin system, ACE inhibitors are agents that inhibit the conversion of inactive angiotensin I to active angiotensin II, where angiotensin II increases the total peripheral resistance via direct and indirect effects on blood vessels and thereby lowers the vascular resistance, which includes diastolic and systolic blood pressure while, on the other hand, the mechanism of action for ARBs is to bind to the angiotensin I receptor, they have grater affinity compared to angiotensin II, therefore decreasing the amount of angiotensin II activation and achieving a result similar to ACE inhibition.

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579 American College of Cardiology and American Heart Association, 2017.

580 Whelton et al. 2017.

581 JNC 8 2014.

582 Leung et al. 2017.

Lastly, calcium channel blockers are drugs that inhibit the calcium channel function on smooth muscle and cardiac myocytes and sinoatrial (SA) and atrioventricular (AV) nodal cells, with effects including relaxation of the smooth muscles, especially the arterial bed.[583]

Initial treatment or first-line drugs for the general non-black population, including those with diabetes, are: thiazide diuretics, calcium channel blocker, angiotensin-converting enzyme (ACE) inhibitor, and angiotensin receptor blocker (ARB). In general, among the black population including those with diabetes initial treatments are thiazide diuretic or calcium channel blocker. If the target BP cannot be achieved using the above-mentioned treatment, a third drug from other classes is introduced an option, with this encompassing beta-blockers or aldosterone antagonists.[584]

In relation to the JNC's guidelines, a study by Mohd et al. (2012) shows the pattern of prescribing antihypertensives for geriatric patients. It revealed that calcium channel blockers and angiotensin receptor blockers are the most commonly prescribed, accounting for 37% and 21% of the sample population. For drugs used as part of monotherapy, a calcium channel blocker, Amlodipine, topped the list with 38% of all prescriptions, followed by angiotensin renin blockers; Losartan (11%) and Telmisartan (10%), the leading beta-blockers are Atenolol (6%) and Metoprolol (5%) while, for diuretics, Hydrochlorothiazide and Furosemide are equal with 1% of prescriptions.[585]

3. METHODOLOGY

The drug classification is extracted from the JNC8 (2014) world guidelines for the first line of treatment for hypertension. The sample selection is based on a study by Mohd et al. (2012) on the leading antihypertensives used for geriatric patients. However, the sample was considered with respect to the ACE inhibitor drug class due to its popularity having been the first drug discovered in this class. The dosage is chosen based on its lowest possible dose available in the market.

583 Goodman et al. 2006.

584 JNC 8, 2014.

585 Mohd et al. 2012.

Table 1: List of samples used in the study

Drug Classification	International Non-proprietary Name (INN)	Dosage Strength
Diuretics	Hydrochlorothiazide	25 mg
	Furosemide	20 mg
ACE inhibitor	Captopril	20 mg
ARB	Losartan	50 mg
Beta-blocker	Atenolol	25 mg
	Metoprolol tartrate	50 mg
Ca2+ Channel Blocker	Amlodipine	5 mg

The data is gathered through a set of questionnaires givento 2 different branches of pharmacies (Lekarna Ljubljana) in Ljubljana. The price and availability of both innovator drugs and its generic counerpart were obtained from the system within the pharmacy based on the currently existing market price, moreover, the data was checked and assessed by pharmacists on duty.

The relative percent difference is caputed with the formula:

$$\frac{P_i - P_g}{P_g} x100$$

where P_i is the price of innovator drug and P_g is the price of the generic version.
The percent change is not defined when the generic counterpart is not available in the market.
In addition, the actual cost difference is presented with a bar graph that is listed in the results and discussion.

4. RESULTS AND DISCUSSION

The results of the study are divided into two: first, the availability of first-line antihypertensive drugs (shown in Table 2) and the cost difference between a branded drug and its generic counterpart (shown in Table 3 and Figure 1).

4.1. Market Availability

Table 2 reveals the availability of the samples in branded and generic forms in the Slovenian pharmaceutical market.

Table 2: Availability of samples in the Slovenian market

Drug Classification	International Non-proprietary Name (INN)	Dosage Strength	Innovator	Availability	Generic Version	Availability
Diuretics	Hydrochlorothiazide	25 mg	Microzide	×	--	×
	Furosemide	20 mg	Lasix	✓	--	×
ACE inhibitor	Captopril	20 mg	Capoten	×	Kaptopril Alkaloid	✓
ARB	Losartan	50 mg	Cozaar	✓	Lorista	✓
Beta-blocker	Atenolol	25 mg	Tenormin	✓	--	×
	Metoprolol tartrate	50 mg	Lopressor	×	--	×
Ca2+ Channel Blocker	Amlodipine	5 mg	Norvasc	✓	Tenox	✓

The above table shows the branded products for the first line treatment of hypertension are considerably more available in the Slovenian market, holding a 57.14% share compared to 42.86% for its generic versions. The prevalence of innovator drugs suggests the Slovenian market of generic medicines for hypertensive patients is weak. Even though these medicines are already off-patent, there is a noticeably low number of generic medicines in this category of pharmaceuticals. The data collected show one example, the drug Amlodipine, as having only 2 possible options available in the pharmacy in Ljubljana, whereas figures given by Medindia.net reveal there are 280 brands of the same medicine available in the Indian market.[586] Regarding quality, concerning which the European Union has established high standards, many European companies such as Sandoz produce a generic version of Amlodipine that is available in other countries. Even the innovator company itself (Pfizer) makes a generic brand of the very same drug to provide a lower price, with this type of medicine being called branded-generics. According to a market report by Grand View Research (2014), Europe is the second largest player in branded generics and is segmented into Western Europe (Germany, Italy, England, Spain, France, Rest of Western Europe) and Eastern Europe (Russia).[587]

The low availability of generic products on the pharmaceutical market can push prices higher due to the low competition, and some of the medicines shown in the table only have one brand available, posing a strong risk of monopoly. To prevent this practice, the government must create a policy that prioritises the availability of

586 Medindia 2018.

587 Grand View Research 2014.

affordable medicines and encourages the importing/manufacture of generic products by creating an agreement with local manufacturers on making a generic brand of antihypertensive drugs and inducing pharmaceutical importers to increase the inflow of quality generic medicines into Slovenia. The parallel importing of medicine should also be considered an option in the case of patented ones but choosing the provider must be carefully considered since, in one case in the Philippines, Pfizer was found to be exercising a monopoly with the drug Amlodipine (Norvasc) in which the local purchase price of Norvasc was almost 7 times higher than the marketed price of Norvasc in India, Indonesia or Thailand. In response to this practice, the Philippine International Trading Corporation (PITC) and Bureau of Food and Drugs (BFAD) allowed the parallel importing of Norvasc which was sourced in Pakistan at a lower price. According to Philippine Executive Order 442, this was done to provide cheaper medicine to large masses of Filipinos, and the World Trade Organization allows the parallel importing of patented medicines without the patent holder's permission to increase the availability of cheaper medicines.

However, Pfizer argued no parallel importing was involved since no authorisation was given for the source as imported, and asked for a revocation of the import permit given to the Philippine International Trading Corp.[588]

4.2. Cost Difference

Table 3 presents the current price of the branded and generic medicines available for the initial treatment of hypertension. It also includes the percentage cost difference between the innovator and generic medicines.

Table 3: Presentation of the current price of the innovator drug vs a generic version as a percentage cost difference

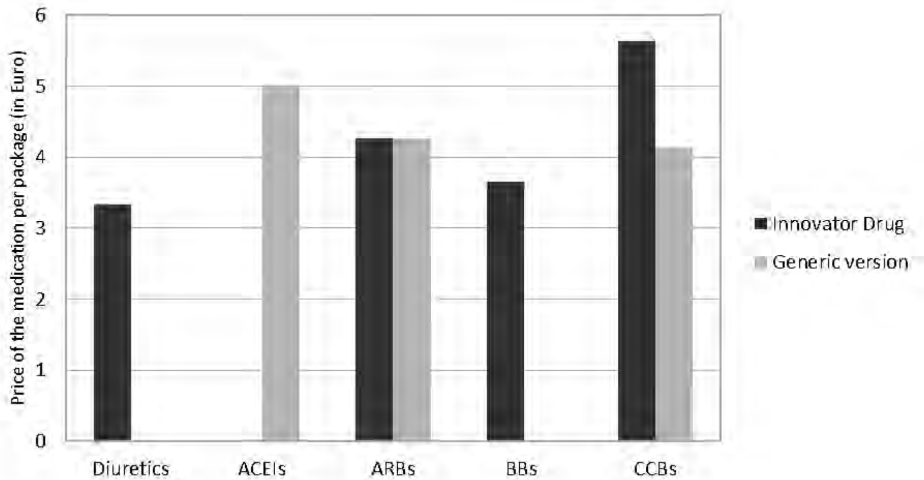
Drug name and dosage strength	Innovator Drug	Price (€) per pack	Generic Version	Price (€) per pack	% cost difference
Furosemide 20 mg	Lasix	3.33 €	NA	NA	Cannot determine
Atenolol 25 mg	Tenormin	3.66 €	NA	NA	Cannot determine
Captopril 12.5 mg	Capoten	NA	Kaptopril Alkaloid	5,00 €	Cannot determine
Losartan 50 mg	Cozaar	4.27 €	Lorista	4,27 €	0.00%
Amlodipine 5 mg	Norvasc	5.64 €	Tenox	4,14 €	36.23%

588 Sople 2016; Datta 2006.

The data in Table 3 show the price for Furosemide 20 mg and Atenolol 25 mg is unable to be compared because no generic versions of these drugs are available in the market. For Captopril 12.5 mg, only the generic version Kaptopril Alkaloid is available, preventing any cost comparison. For Losartan 50 mg, there is no price difference as the innovator and generic versions have the same price. Finally, the generic version of Amlodipine 5 mg Tenox is 36.23% cheaper than the innovator drug Norvasc.

A cost comparison of branded and generic versions of leading first-line antihypertensive is shown in the graph below (Figure 1) and divided per drug classification.

Figure 1. Cost comparison between the innovator and generic version of first-line antihypertensive drugs



Cost difference is a key factor for determining the feasibility of a mandatory generic substitution policy by showing the potential savings if generic medicines are allowed. However, among the five first-line antihypertensive drugs taken as samples, only two have a generic substitute with the price differences being 0% and 36.23%, respectively. Generally, generic medicines are cheaper than the innovator drug and in other EU countries like Germany the average price difference is 30%, in the Netherlands it is 20% and in the UK approximately 80%.[589] The varying cost differences can be attributed to the different pricing regulations in EU countries.

589 King and Kanavos 2002.

In a report by the European Generics Medicines Association (2016), only five European countries (Denmark, Germany, Netherlands, Sweden and the UK) have free pricing on generic medicines, meaning the manufacturer of generic medicines in these countries can set the price freely.[590]

Under this approach, the market competition for generic medicines is stronger and may see increases in market share as generic manufacturers can lower their price, boosting the cost difference between generic and branded medicines.[591] On the other hand, the remaining EU countries including Slovenia have a price-regulated medicine pricing system which means prices are set on a regulatory basis. Here, the price of branded medicines has been lowered, consequently lowering the entry for generic market competition.[592] This effect was seen in the Slovenian market where branded medicines for first-line antihypertensive drugs are more dominant in the market, while the market for generic competition is relatively weak.

Currently, Slovenian regulation uses therapeutic reference pricing (TRP). A study by Mardetko and Kos (2018) analyses the economic effect of this regulation and shows that after TRP was introduced the downward-sloping pharmaceutical expenditure has become less steep and consumption and market competition have not changed.[593] In France, which also uses a price-regulation method, the price competition for generic medicines and the market entry for these products were sustained by implementing mandatory generic substitution.[594]

5. CONCLUSIONS

The study shows varying outcomes for the cost difference between the samples. The first is the narrow choice of substitutes for first-line antihypertensives since the diuretic furosemide and beta-blocker atenolol have no generic versions available in the market. This prevents patients from choosing a cheaper version of their medicine as generic versions are known to be cheaper than the innovator. A similar situation is seen with the ACE inhibitor captopril as the only available drug is generic; while this may be a cost-saving option, it deprives patients of having an option over which drug they would prefer. For the result concerning ARB, losartan, where the price of the branded Cozaar manufactured by Merck Sharpe Dohme equals the price of Lorista manufactured by Krka, the equal prices can best be explained by the drug

590 European Generics Medicines Association 2016.

591 Simoens 2012; Schultz 2004; and Magazzini et al. 2004.

592 Simoens 2012; Dylst and Simoens 2010.

593 Mardetko and Kos 2018.

594 Simoens 2012; Sermet et al. 2010.

pricing regulation in Slovenia since many factors are considered when pricing pharmaceuticals. On the other hand, the 36.23% lower price of the generic version of the calcium-channel blocker amlodipine is a good indicator of cost savings for patients undergoing this therapy.

In general, the market for first-line antihypertensive drugs in Slovenia is not optimal. The lack of generic market competition can fuel the higher prices of medicines in Slovenia, in turn creating increased health spending. The health authority should further study compulsory generic substitution and its positive economic effects since many European countries are already using this policy to cut pharmaceutical expenditure. In addition, it is suggested that doctors and pharmacists should adjust and analyse the price of medications prior to first dispensing, as well as consistently use the International Non-Proprietary Name (INN) while prescribing so as to avoid brand patriotism. Patients should be better educated and informed about generic medicines so they are aware their effect is comparable to the innovator drug.

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CHAPTER 10. HEALTHCARE SYSTEMS COMPARED: GERMANY, THE NETHERLANDS AND ENGLAND

1. INTRODUCTION

Since 1950, the world's population above 60 years has tripled and it is estimated that the senior and geriatric population will increase to 2.1 billion by 2050.[595] Also known as chronic diseases, noncommunicable diseases are the cause of 41 million deaths a year, equivalent to 71% of all deaths globally. [596]Population ageing, the rise of chronic diseases, adverse events, allocation of care, allocation of financing, growing healthcare costs, technological innovations and a lack of transparency are just some of the challenges faced by most health systems. The majority of healthcare systems around the world are influenced by these challenges and legislators are seeking solutions to cope with them. Interestingly, while countries face similar challenges, their strategies and policies for managing their systems differ widely. An important reason for comparing systems is that governments are able to seek practices proven to have given positive results and suit the country's environmental and cultural characteristics in order to introduce them and make their respective health systems more efficient.

This chapter offers a brief, descriptive comparative investigation of different European healthcare systems by considering the German, Dutch and English healthcare systems as examples that perform well in measurements. Assessing the level of efficiency of these systems and identifying applicable practices may help Slovenian legislators in achieving better outputs from the resources available in the country. A favourable characteristic of the Slovenian healthcare system is its small size. Carrying out a project or amending national legislation in Germany or England brings a considerably bigger organisational and managerial challenge and requires substantially larger resources than in smaller countries. Considering the size adjustments, the current state of the health system, available resources, cultural differences, market needs, legislative directives, and technological advancements, Slovenia's health system could remove some inefficiencies and provide better health services for the citizens.

This chapter is structured as follows. The first part introduces the German healthcare system whose main characteristics include a free market of healthcare providers and health insurers. Next, similar to the German system is the Dutch one, which is

595 Alhassan Issahaku and Neysmith 2013.

596 World Health Organization 2018b.

mainly distinguished for having adopted the gate-keeping function. As an example of a single-payer system, part four examines the English healthcare system. Each part presents the each system's characteristics such as the main principles, organisational structures, financing, and types of insurance schemes. In the fifth part, the chapter provides a brief economic discussion based on the efficiency of these systems in comparison with health spending. Finally, chapter six concludes.

2. THE GERMAN HEALTHCARE SYSTEM

The German healthcare system is characterised for its long history and political dimension. Being the world's first country to adopt a national social health insurance system,[597,598] Germany's decentralised political system (federalism) is reflected in the country's self-regulatory and decentralised healthcare system. Individual states (*Bundesländer*) influence and share the decision-making power with the federal government and organisations of healthcare providers and healthcare insurers that act as self-regulators. In the 1883 Health Insurance Act, German chancellor Otto von Bismarck introduced the three main principles of solidarity, subsidiarity and corporatism[599] in the German healthcare system that today still form the grounds for continuous legislative development. Solidarity is represented by the distribution of funds and resources to ensure universal health insurance coverage by assisting that part of society unable to afford it, and by dividing health contributions between employers and employees.[600] Subsidiarity refers to the system's self-regulated and decentralised nature, as seen in the relatively low political and administrative influence on healthcare management. The federal government's role is primarily legislative, mostly setting regulations together with the states and other institutions,[601] and is not involved in negotiations. The individual institutions and associations involved, which form part of the healthcare system, act as self-regulators and can independently address problems despite their size. These associations are the main actors in the German system. The third principle, corporatism, refers to shifting responsibilities to professional associations and the participation of organised interests in formulating and executing political decisions.[602]

Another aspect unique to the German healthcare system is the health insurance system's division into two parts; social or statutory health insurance

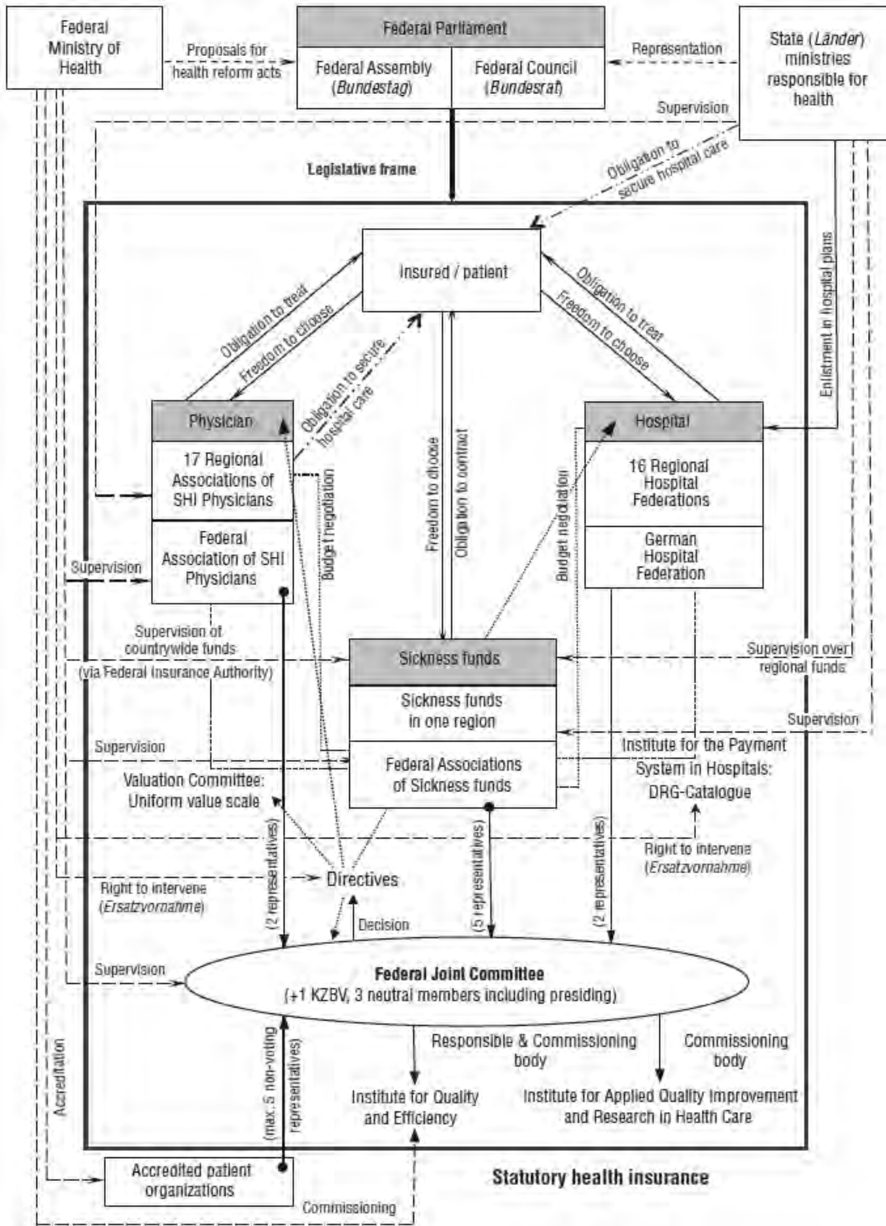
597 Bärnighausen and Sauerborn 2002.
598 Busse et al. 2017.
599 Alber 1992.
600 Clarke and Bidgood 2013.
601 Busse and Blümel 2014.
602 Obermann et al. 2013.

(SHI or *Gesetzliche Krankenversicherung*) and private health insurance (PHI or *Private Krankenversicherung*). Although such a division is relatively common in many other countries, the German system stands out since both the SHI and the PHI have contracts with the same health providers, meaning that hospitals and all other physicians do not differentiate between privately insured patients and those holding social health insurance.[603]

Patients insured under either scheme are freed to choose health providers and health insurers within a very well-developed network.[604] Allowing a free choice of health providers has strengthened the competition among office-based doctors and hospitals. However, enabling a free choice of sickness funds brought a relatively fundamental change which increased the competition among sickness funds. Prior to the Health Care Structure Act of 1993, individuals were assigned to a particular sickness fund (i.e. health insurance company) according to their occupation and received different benefits. White-collar workers had access to packages with considerably more privileges than blue-collar workers. Once individuals were given the option of choosing a sickness fund, changes in supply and demand forced sickness funds to lower their contribution rates.[605] Yet the free choice of medical providers led to the over- and misuse of services,[606] an area the German government has been trying to control by introducing voluntary limits on patients' choice of providers to promote more balanced use of health services (namely by introducing reforms such as the Statutory Health Insurance Modernisation Act of 2004 and the Statutory Health Insurance Competition Strengthening Act of 2007). At the same time, these reforms strive to make competition stronger among health insurance companies and health providers so as to increase the quality of health services, the efficiency of systems, and responsiveness of patients.[607] Patients are able to choose from among 110 sickness funds[608] that offer a wide range of benefit packages. This way minimises the infrastructural and geographical barriers to healthcare access in Germany, partly due to the government's increased financial incentives to open practices in areas with insufficient health services. Concepts of affordability, according to the principle of solidarity, and the availability of healthcare services, according to freedom of choice and the government's competition incentives, allow a mandatory health insurance scheme to be enforced. Since the 2007 reform, all German citizens are obliged to hold a basic insurance package.

603 Busse and Blümel 2014.
604 Lisac et al. 2010.
605 Greß 2002.
606 Advisory Council for the Concerted Action in Health Care 2001.
607 Lisac et al. 2010.
608 GKV-Spitzenverband 2018.

Figure 1



Source: Germany: Health system review, 2014[609]

609 Busse and Blümel 2014.

Statutory health insurance scheme:

1. Physicians/hospitals are obliged to treat the insured and the insured has the freedom to choose a physician/hospital
2. The insured is free to choose a sickness fund and the sickness fund is obliged to enter into a contract with the insured
3. Negotiations on size of the budget
4. The Federal Ministry of Health makes proposals for healthcare reform acts to the Federal Parliament
5. State ministries represent the Federal Parliament
6. State ministries supervise physicians and regional funds
7. State ministries make enlistments in hospital plans
8. The Federal Ministry of Health supervises the Federal Association of SHI Physicians, sickness funds and the Federal Joint Committee
9. The Federal Joint Committee consists of representatives of the German Hospital Federation (2), the Federal Association of Sickness Funds (5), the Federal Association of SHI Physicians (2), accredited patient organisations (max. 5, but without a vote), KZBV (1) and three neutral members.
10. The Federal Ministry of Health approves the accredited patient organisations
11. The Federal Ministry of Health has the right to intervene in the Directives
12. The Federal Ministry of Health commissions the Institute for Quality and Efficiency
13. Physicians, hospitals and the Federal Joint Committee fall within the jurisdiction of the Directives
14. The Federal Joint Committee is responsible for commissioning the Institute for Quality and Efficiency and also the Institute for Applied Quality Improvement and Research in Health Care
15. The Federal Joint Committee determines the Directives.

The German healthcare system has two main funding sources: employee and employer contributions collected by the Central Reallocation Pool (*Gesundheitsfond*) and transferred to the sickness funds according to a morbidity-based risk-adjustment scheme.[610] Prior to the 2007 healthcare reform, the sickness funds were free to individually set contribution rates. In the 2007 Act to Strengthen Competition in Statutory Health Insurance, the federal government introduced a uniform income-related contribution rate defined in legislation.[611] Sickness funds normally determine an additional community-rate premium with the result that the prices of different sickness funds' health insurance packages vary.

610 Busse, Blümel and Spranger 2017.

611 Thomson et al. 2013.

Patients or insured persons can opt for two types of health insurance – social or private. Statutory or social health insurance (SHI) is offered by so-called sickness funds (*Krankenkassen*) which act as health insurance companies, and are non-governmental and non-profit organisations operating under public law. On 1 January 2018, statutory health insurance was offered by 110 sickness funds and statutory health insurance was provided to some 70 million insured persons, roughly 90% of the German population.[612] Sickness funds offer different packages which allow individuals to adapt their health insurance to their needs in exchange for above- -standard cost-sharing requirements.[613] All employed citizens, pensioners and individuals earning below €57,600 gross a year are obliged to hold SHI.

Non-earning dependants do not need to contribute to the health insurance scheme. The uniform levy for SHI is 14.6% of wage-related income and is equally divided between employer and employee. Sickness funds separately charge additional contributions, ranging between 0.3% and 1.8% in 2017.[614] SHI covers preventive services, inpatient and outpatient hospital care, physician services, mental healthcare, dental care, optometry, prescription drugs, physical therapy, medical aids, rehabilitation, hospice and palliative care, and sick-leave compensation.[615] Giving insured persons a free choice of sickness fund ultimately led to a 70% decline in the number of sickness funds due to mergers.[616] This has increased individuals' negotiating power when contracting health providers, allowing them to lower their contribution rates and enjoy a more competitive position in the health insurers' market.

In certain conditions, insured persons can also opt for the private health insurance offered by private sickness funds. This insurance type is only available to public officers, self-employed persons and individuals with an income exceeding €57,600 gross a year in 2017.[617] Contrary to SHI, PHI is regulated by private law. Private health insurance contracts impose a risk-related premium and last a lifetime if not terminated by the insured persons. PHI is partially regulated in order to ensure stable premiums. Persons holding SHI can opt for supplementary or complementary PHI to insure additional services not covered by SHI.

612 GKV-Spitzenverband 2018.

613 Busse et al. 2017.

614 Busse et al. 2017.

615 Blümel and Busse 2016.

616 Busse et al. 2017.

617 Busse, Blümel and Spranger 2017.

The need to care for the ageing population was stressed in the 1994 reform and its introduction of long-term statutory healthcare insurance. It is a mandatory insurance scheme, normally provided by the same sickness funds and automatically included in the package. Long-term health insurance is offered by both sickness fund types, therefore the insurance itself exists in both social and private form. Sickness funds carry out the administrative procedures, but not the management and financing.[618] Like for SHI, long-term insurance is financed by contributions from wages at the rate of 2.55% of gross wages, and shared among the employer and employee. Insured persons older than 23 without any children must contribute an additional 0.25 percentage points.[619]

Healthcare providers offer their services in roughly two ways; ambulatory care is mainly provided by physicians whereas inpatient care is chiefly provided by hospitals. Contracts with physicians, namely general practitioners and specialists, are established by regional associations responsible for managing the financial flows between sickness funds and physicians. There are more than 171,000 ambulatory-care physicians and psychotherapists, of whom 60% practise alone and some 25% have a dual practice.[620] Physicians are normally paid on a fee-for-service basis according to a uniform fee schedule determined in the contract between regional associations and physicians. The fee is limited to a maximum number of patients a practice can accept and reimbursement points per patient. In addition, physicians similarly receive a fee for service from privately-insured patients, for whom prices are higher. Services not covered in an insurance packages must be paid directly to the health provider. If, however, a patient holds PHI, the direct payment is paid upfront and a reimbursement form is sent to the private sickness fund.[621] Unlike the Dutch system, German general practitioners (GPs) do not have a formal gate-keeping function, although the so-called family physician care model offered by the sickness funds incentivises that very model.

On the other hand, hospitals provide the majority of inpatient care. The hospitals' capacities are determined by the states. Half of all hospital beds are offered by public hospitals, while a third is offered by private, not-for-profit hospitals, while the rest are private for-profit hospitals. The number of private hospitals has been growing in recent years. Reimbursements for hospitals are paid through a system of diagnosis-related groups (DRG).[622]

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618 Campbell, Ikegami and Gibson 2010.

619 Bundesministerium für Gesundheit 2017.

620 Kassenärztliche Bundesvereinigung.

621 Blümel and Busse 2016.

622 Blümel and Busse 2016.

Decision-making power in the German healthcare system is spread among the federal government, states, and self-governed and regulated civil society institutions. The federal level comprises three key actors: the Federal Council (*Bundesrat*), the Federal Assembly (*Bundestag*) and the Federal Ministry of Health (*Bundesministerium für Gesundheit*), which has six departments (central department; fundamental policy issues and telematics; pharmaceuticals, medical devices and biotechnology; healthcare delivery and SHI; health protection, disease control, biomedicine; long-term care insurance, and prevention). With the support of several federal agencies and institutes (e.g. the Federal Centre for Health Education, the German Institute for Medical Documentation and Information etc.), the Ministry of Health's main responsibilities are to license, supervise and share information with the public.[623] Apart from the subordinate agencies, the Federal Financial Supervisory Authority supervises the private sickness funds and the Federal Insurance Authority supervises the SHI-administrating institutions' actions and decisions from the legal perspective. A notable legislative body is the Federal Joint Committee which has regulatory power to decide on matters determining services in the scope of SHI. In addition, the Committee sets the quality standards for healthcare providers.

On the level of the states, each of the 16 states or *Länder* independently manages the legislature where health-related content is typically combined with labour and social affairs, family and youth affairs etc. The legal framework is normally determined at the federal level, whereas details are later defined in two steps: among organisations operating at the federal level supervised by the Ministry of Health, and among ministries at the state level dealing with healthcare issues.

3. THE HEALTHCARE SYSTEM IN THE NETHERLANDS

In 2006, the Dutch government issued the Health Insurance Act which fundamentally changed the regulatory mechanisms and structures for financing the Dutch system. The reform introduced uniform health insurance. The Dutch healthcare system entails a market involving intense competition between health insurance providers so that, contrary to the old system where insurance was partly private and partly public, the new system is uniform mandatory insurance[624] available to all Dutch residents.[625] In the new compulsory system, private health insurance companies compete for the insured and are becoming the key driver in the healthcare sector, contracting healthcare providers based on the price and quality of services.[626]

623 Busse and Blümel 2014.

624 Greß, Manouguian and Wasem 2007.

625 Ministry of Health, Welfare and Sport 2016.

626 Schäfer et al. 2010.

The government started 'regulated competition' among health insurers to meet four objectives: accessibility, quality, efficiency and affordability.[627] The system therefore combines universal healthcare coverage and patient-oriented competition, which is a fundamental driver of quality and prices. Healthcare providers for secondary and tertiary care are very roughly distinguished between hospitals and medical clinics. Hospitals are institutions that continuously deliver different types of patient treatment services using medical equipment and specialised staff.[628] They vary in the size and scope of the services they provide but, generally, have a certain number of departments dealing with various types of medical care (e.g. emergency department, neurology, intensive care, cardiology, oncology etc.). In contrast to larger hospitals, medical clinics also differ in the size and scope of their services but normally offer specialised treatments and are thus smaller.

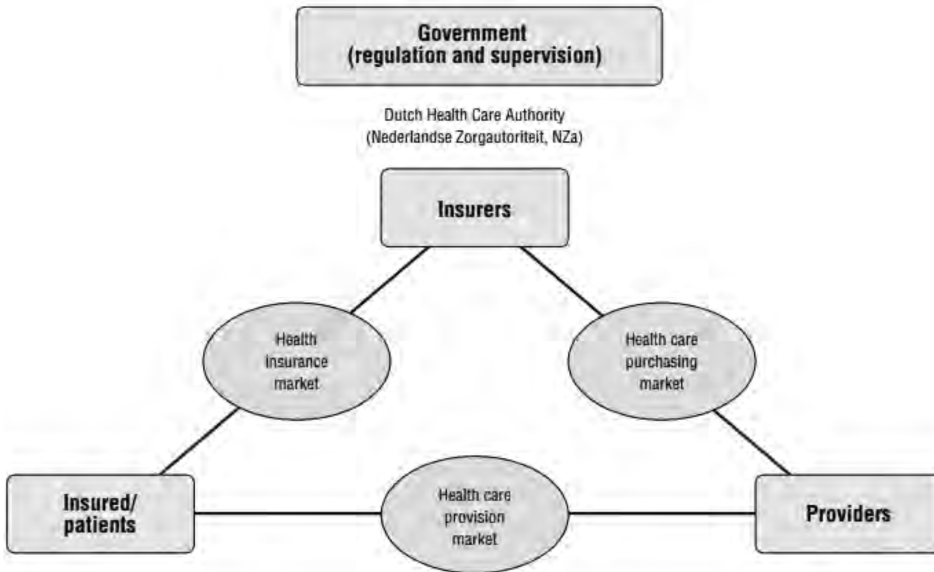
The basic health insurance package must contain the healthcare types specified by the government.[629] A health insurer must make sure that an insured purchasing the basic package can access all of the required types of services.[630] The health insurer also has the freedom to choose the contractor for predefined healthcare services and this is where medical clinics and hospitals enter into negotiations to sell their services. The organisational structure of markets and actors in the Dutch healthcare sector is basically divided into four actors: government, insurers, insured/patients and providers; and three markets: health insurance market, healthcare purchasing market and healthcare provision market.

The Health Insurance Act of 2006 significantly altered the roles of actors in the Dutch health system. Prior to the 2006 Act, the government held authority to manage prices, volumes and capacities. Under the new regulation, it has become a regulator and a supervisor of the whole system and it is not directly involved anymore. The government now supervises how prices and volumes are managed by other actors in the structure. To make sure the insured/ patients get all the information they need to choose freely among providers and insurers, the government is also responsible for sharing information about waiting lists, prices, and the quality of healthcare providers. Its objective today is to boost competitiveness among healthcare providers to reduce the waiting lines and for them to become more patient-oriented.

627 Authority for Consumers and Markets 2017.
628 World Health Organization 2018a.
629 Ministry of Public Health, Welfare and Sport 2016.
630 Ministry of Public Health, Welfare and Sport 2016.

Insured or patients must be insured. This applies to all Dutch citizens. They are entitled to independently choose and may switch health insurer annually.[631] As well as their health insurer, the insured are also able to freely choose their health provider. An insured individual must purchase the basic benefit package offered in two policy types; a benefits in-kind policy or a "*natura*", or a restitution policy or a "*restitutie*". The distinction between the two policies influences access to healthcare providers.[632]

Figure 2



Source: Dutch healthcare organisational structure after the 2006 reform Schäfer, et al., 2010[633]

Health insurance companies compete in the market to acquire individual insured or patients. The market of healthcare purchasing is based on negotiations between insurers and healthcare providers which reflect the prices, quality of services and volumes providers are capable of offering. The basic health insurance package is the basis for medical services that insurers need to provide by way of contract in sufficient volumes at accessible locations. Three kinds of policies are offered, the "*natura*", "*restitutie*" and "*combinatie*". The in-kind or "*natura*" policy is one where the health insurer must provide care through health providers under contract with or employed by the health insurer. Should the insured opt for a health provider not under contract

631 Schäfer et al. 2010.

632 Schäfer et al. 2010.

633 Schäfer et al. 2010

with their health insurer, the insurer has an option to require compensation from the insured that enables the choice of health provider to be financially feasible.[634] With restitution policy or "*restitutie*", the insured can select a provider. The health insurer directly covers the expenses for the care provided and is not allowed to limit the reimbursement for the insured.[635] Risk carriers also issue combinations ("*combinatie*") which have developed in practice. These come with an opportunity to directly reimburse health providers under contract with health insurers.[636] Prices for basic packages vary among insurers. Through 'selective contracting'[637,638], they can choose which health provider to enter into a contract with based on costs and quality. In 2017, there were nine health insurers (groups) in the Netherlands, and 24 risk carriers.[639] Insurers are also required to offer health insurance to all insured or patients regardless of their health situation.[640]

In addition to hospitals, medical care is provided by several other medical institutes or clinics, which may be divided into two main groups: independent treatment centres and private clinics. Independent treatment centres (ITC/ZBC) are subject to the Health Insurance Act and do not admit patients in case of an emergency. They offer services that may be characterised as planned care. The organisational scheme consists of two or more specialists. ITCs can offer insured and non-insured care. In 2014, there were 213 independent treatment centres in the Netherlands.[641] Private clinics can exist in various other forms such as non-insured care and sole practitioners. In 2014, there were 106 private clinics in the Netherlands.[642] During the 1990s, the Netherlands saw overcapacity among health providers with too many independent treatment centres and the government discouraging new market entries. This overcapacity almost led to the acceptance of a law aimed at prohibiting new centres being established. However, in the early 2000s waiting lines in hospitals grew and the government loosened the regulation limiting new entries. The 2006 reform brought even greater freedom to the new entrants. The reform for the first time introduced the possibility of ITCs taking patients for overnight care. Maarse[643] claims the number of new centres has gone up rapidly since 2000 and that most health insurers have contracts in place with the new centres.

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634 Schäfer et al. 2010

635 Schäfer et al. 2010

636 Schäfer et al. 2010

637 Den Exter et al. 2004.

638 Schäfer et al. 2010

639 Vektis.

640 Ministry of Public Health, Welfare and Sport 2016.

641 NVZ 2014.

642 NVZ 2014.

643 Maarse 2008.

An individual patient cannot access secondary care, unless they are in potential mortal danger. The General Practitioner (GP) works as a "gate-keeper"[644] and refers patients on for specialised treatment. Patients can choose their healthcare providers according to their options and health insurance packages.

The Dutch health insurance fund has two financial sources; the main source is the government revenue stream, and the other is insured residents.[645] The Health Insurance Act rests on three pillars or 'compartments'. The state of the legislature before and after the Health Insurance Act of 2006 is graphically represented below to reveal the differences. The second compartment was alternated and a uniform scheme was imposed.

Table 1

	Before the Act of 2006		After the Act of 2006
3rd	Supplementary private health insurance (voluntary)		Supplementary private health insurance (voluntary)
2nd	Sickness funds (ZFW) (compulsory below a certain income)	Private health insurance (PHI) (mostly voluntary)	Health Insurance Act (ZVW) (compulsory for all)
1st	National health insurance for Exceptional Medical Expenses (AWBZ) (compulsory for all)		National health insurance for Exceptional Medical Expenses (AWBZ) (compulsory for all)

Sources: Den Exter, et al., 2004;[646] Greß, Manouguian and Wasem 2006[647]

In 2015, National Health Insurance for Exceptional Medical Expenses (AWBZ) was transferred to multiple different laws, namely:the Long-term Care Act, the Health Insurance Act (Zvw) via the basic package, the Social Support Act (Wmo) and the Youth Act.

The third compartment is supplementary health insurance not included in the basic package or necessary healthcare services. This healthcare package can be purchased from insurers but is not part of the mandatory health insurance.[648]

644 Ministry of Public Health, Welfare and Sport 2016.

645 Muiser 2007.

646 Den Exter et al. 2004.

647 Greß, Manouguian and Wasem 2006.

648 Muiser 2007.

Official records of the Ministry of Public Health, Welfare and Sport show that around 90% of the population takes out supplementary insurance for additional care.[649] The Long-Term Act (*Wet Iangdurige zorg or Wiz*) applies to individuals who require intensive care (chronic illness, severe mental and physical limitations etc.). This applies to services such as staying in a healthcare institution, counselling, nursing and care, medical care related to a disease, limitation or disorder, tools and transportation to the supervision or treatment site. The Health Insurance Act (*Zorgverzekeringswet or ZVW*) from 2006 replaced the old ZFW and PHI acts. The Act is implemented by health insurers, whereas the Dutch Healthcare Authority (NZa) only has a supervisory and regulatory role to ensure adherence to the standards. It is funded through six channels:

1. Income-dependent contribution – insured citizens contribute with income-related compulsory contributions, currently the rate is 6.9% of total taxable income for employees and 5.65% for entrepreneurs and pensioners;[650]

2. Health insurance premium – the premium paid to the health insurer when purchasing an insurance package. It is around €1,200 a year, depending on the price imposed by the health insurer. In addition, citizens above the age of 18 must pay the mandatory policy premium. For citizens below the age of 18, health insurance is covered by the government from public funds;[651]

3. Own risk – introduced in order to limit unnecessary visits to the doctor for healthcare; a deductible amount of €385 is paid by the insured to the health insurer before the insured is entitled to any reimbursement from the basic insurance. Healthcare services included in the own-risk contribution are hospital care, specialist care, medicines, ambulance transport, paramedical care and certain aids. However, certain types of care are not in the deductible part: general practitioner, obstetric care, maternity care, care for people below the age of 18, care reimbursed under WIz and Wmo and care for supplementary insurance (alternative medicine or dental care);

4. A personal contribution only applies to certain types of care: particular medicines, hearing aids, wigs, hospital birth without a medical need, maternity care;

5. Care allowance – low-income citizens are entitled to apply for an allowance to cover the health insurance premium, which depends on the insured's income;

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649 Ministry of Public Health, Welfare and Sport 2016.

650 ZorgWijzer 2018.

651 Ministry of Public Health, Welfare and Sport 2016.

6. Risk equalisation – health insurers are now allowed to reject any insured who would like to purchase their insurance packages. To provide balance in health insurers' portfolios of insured with poor health risks, health insurers are entitled to receive contributions to even out the costs.[652]

The National Health Care Institute (*Zorginstituut Nederland*) is an independent institution responsible for the basic health insurance package and supports the government in package-related issues. The Ministry of Public Health, Welfare and Sports[653] provides a list of these types of care: medical care provided by GPs, medical specialists (consultant physicians) and obstetricians; district nursing; hospitalisation; mental health services, including hospital care (mental-health-related) up to a maximum of three years; medications; dental care up to age 18; services provided by various types of therapists, including physical therapists, remedial therapists, speech therapists and occupational therapists; nutritional/dietary care; medical aids; ambulance support/sedentary medical transport; physiotherapy for people with chronic illness.

The first compartment was introduced in 2007 and is implemented by municipalities that are obliged to offer facilities and support for elderly. The current Wmo Act was introduced in 2015 when the National Health Insurance for Exceptional Medical Expenses (AWBZ) was reorganised and a large part was transferred to Wmo. Under the new legislation, the municipalities play an important role in providing support for elderly citizens to live at home and participate in society. Services include promoting liveability and social cohesion, supporting family carers, providing social care, promoting public mental health, providing information, advice and client support, promoting addiction policy etc.[654]

As well as the Wmo, The Youth Act (*De Jeugdwet*) is also enforced by the municipality and provides care for youth and children. The municipality seeks to strengthen the educational climate within families, schools and neighbourhoods, advising children and young people and promoting self-reliance and the participation of young people.[655]

652 ZorgWijzer 2018.

653 Ministry of Health, Welfare and Sport 2016.

654 ZorgWijzer n.d.

655 ZorgWijzer 2018.

Services include care and assistance with parenting problems (ambulatory youth assistance and foster care), mental healthcare (treatment of psychological problems, dyslexia care, stay in an institution, forensic care), care with a physical or mental disability, individual supervision and spending of the day in a group, transport by escort and transport to an institution, personal care and child protection and juvenile rehabilitation.

4. THE HEALTHCARE SYSTEM IN THE UNITED KINGDOM

Healthcare in the United Kingdom is, like its government, divided into four individual countries: England, Scotland, Northern Ireland, and Wales. Each is managed and controlled independently and, while they do have common features, it is difficult from a legislative perspective to regard them as one since each government manages health matters separately. The subject of this study is England's healthcare system as it is the country with the highest population density (around 83% of all UK residents live in England)[656,657] and largest health budget with GBP 124.7 billion for 2017/2018.[658] In all four countries, a central organisation "National Health Service" (NHS; except in Northern Ireland where its official name is Health and Social Care) is in charge of providing health services in the respective countries. The NHS was founded after the Second World War in 1948 and builds on three core principles: meeting the needs of all, free health services at the point of delivery, and the basis is seen as clinical need, not the ability to pay. These principles still form the basis for the government's decisions.[659] To give an example, emergency treatment services and treatment services for infectious diseases are free for all, including visitors to England.[660] The main principles strive to ensure health services are provided to all UK residents, regardless of personal wealth by not paying for services at the point of access.[661] Since a contribution insurance scheme is not in place in England, administration costs, which include the tracking of health procedures, are minimal. The English healthcare system is residency-based and the largest single-payer health system in the world.[662]

656 ONS 2012.

657 Boyle 2011.

658 The King's Fund 2017.

659 The NHS in England 2018.

660 Department of Health & Social Care 2017.

661 Cylus et al. 2015.

662 Department of Health & Social Care 2017.

In 2012, the Parliament of United Kingdom accepted the Health and Social Care Act, which reformed the structure of NHS England. After the reform, NHS England gained control over the budget, setting diagnosis-related group rates for provisions, and the supervision of Clinical Commissioning Groups (CCGs). CCGs are funded by the NHS England, operate in communities, and are responsible for commissioning health services.[663] The Department of Health, which was previously responsible for delivering the NHS, now acts as a policymaker and provides strategic directions and leadership.[664] In addition, the main responsibilities of NHS England are to purchase primary care and services that are directly commissioned.[665]

The Clinical Commissioning Groups set up by the NHS are organisation sets which include all general practitioners in a specific geographical area. The reason for establishing them lies in the assumption that GPs have more frequent encounters with patients than specialists and better understand their needs, and are thus able to limit unnecessary spending.[666] CCGs were founded under the 2012 Health and Social Care Act and the change in health commissioning in England. Prior to that Act, primary care trusts (PTCs) were responsible for commissioning services.

The United Kingdom has adopted the gate-keeping function at the primary-care level to enter specialised care, which is mostly provided in hospitals.[667] Primary care is usually referred to GPs, whereas in some cases the first contact can be made by telephone or at walk-in centres. Walk-in centres are usually led by nurses and first started operating in 2000 in order for patients to receive primary care without needing to book an appointment for minor issues. They were also established to reduce waiting times in emergency care by eliminating minor injuries to make space for urgent ones. CCGs also commission services offered in their geographical area, i.e. hospitals and community-based healthcare.[668] Organisations commissioned for the provision of healthcare services include NHS trusts and other private providers.

The health system is financed by the government of the UK, which collects funds through general taxation and National Insurance contributions, which make up approximately 10 percent. A small percentage is contributed by patient charges for services which are not covered by the NHS as cost-sharing payments and via direct payments.[669]

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663 Department of Health 2016.

664 Cylus et al. 2015.

665 NHS England 2014b.

666 The King's Fund 2013.

667 Cylus et al. 2015.

668 NHS 2016.

669 Hawe and Cockcroft 2013.

The government then allocates the funds first to England and grants so-called blocks for all other countries. A block budget refers to funds allocated to "cover a range of services for a specified time period".[670] England's health policies are determined by the UK government directly, while the other countries have their own governments and ministries for health issues.[671] The decision on the spending of England's funds lies with the Department of Health and the Secretary of State for Health, which is accountable for the NHS' performance in England.[672] NHS England is further split into four regional centres with 27 area teams responsible for commissioning healthcare services such as primary care (general practitioners and other primary care providers), and specialised care services as described below.[673] Next, resources are allocated to the CCGs which control the majority of the allocated funds. They mainly cover non-hospital prescription drugs, non-specialist secondary care and community services.[674] The third part of the health budget in England is transferred to local authorities responsible for commissioning public health services for their respective local population.[675] Following the core principles, patients are provided with free-of-charge health services at the point of use. Certain services, however, require a co-payment such as dental care, social care and pharmaceuticals. England applies a so-called prescription drug charge, which is exempted in special cases: mainly for children, the elderly and pregnant women. Sometimes, direct payments are required for services such as private treatment, social care, ophthalmology and over-the-counter medicines.[676]

670 Marshall, Charlesworth and Hurst 2014.

671 Cylus et al. 2015.

672 Royal College of General Practitioners 2004.

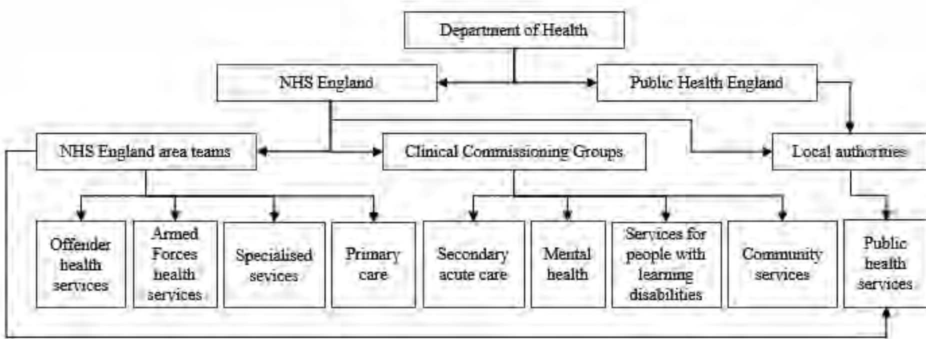
673 NHS England 2014a

674 Naylor et al. 2015.

675 Naylor et al. 2015.

676 Cylus et al. 2015.

Figure 2



Source: Adapted from Marshall, Charlesworth et al., 2014[677]

However, the NHS is not the only body providing healthcare in the UK. In 2018, the private sector was worth around GBP 1.47 billion according to Laing & Buisson.[678] In 2014, around 11 percent of the total UK population held some form of private health insurance.[679] Private insurance can be taken out in the form of a company-paid scheme or individual-paid scheme, where the former tend to be cheaper due to insurance pooling. Persons insured under individual-paid schemes tend to be older and have higher health risks,[680] yet insurance premiums are increasing with age so insured individuals who benefit most from private insurance belong to the 30–64 age group.[681] Private insurance is mostly taken out for health services not covered by the NHS or to receive NHS-covered services faster. A notable feature of England's private sector is that it also subcontracts the NHS' services out, meaning a patient not insured under a private insurance scheme may be treated by private healthcare providers. Although private insurance and treatment are usually regarded as a faster and better way of health provision, the private health market in England has attracted criticism. A 2018 report by the Care Quality Commission showed that around 30% of 206 private acute hospitals require a change in how well they are led and need improvements to ensure sufficient quality care.[682]

677 Marshall, Charlesworth and Hurst 2014.
678 Laing & Buisson 2013.
679 The King's Fund 2014.
680 Laing & Buisson 2013.
681 The King's Fund 2014.
682 Care Quality Commission 2018.

Although, compared to Germany, the UK contributes a much smaller amount of national funds to healthcare as a percentage of GDP, it has been performing relatively well.[683] However, like in most countries, the system faces the challenges of an ageing population, differences in health status among socioeconomic groups, chronic illnesses and following the latest technologies while keeping the costs stable and low.

5. THE EFFICIENCY OF HEALTHCARE SYSTEMS

The above overview of the three healthcare systems clearly shows how historical events and governmental decisions have formed and shaped the different health legislation in the geographically neighbouring countries. The rising costs (exacerbated by inefficiencies), advances in medical technology, and the increase in pharmaceutical costs are the main areas of discussion and the cause of most of the mentioned reforms in all three countries. Making the use of healthcare resources more efficient can substantially improve the performance and avoid multiple serious matters such as society's reduced willingness to fund, the denial and poor quality of treatment to patients in need due to inappropriate resource use, and wasted opportunity costs which could be better used in other sectors (education, technology, infrastructure…).[684]

To compare the efficiency of health systems from an economic point of view, researchers have developed several models to project measurable indicators on to a common scale. The most common method for measuring the level of efficiency and performing a benchmarking analysis is the Data Envelopment Analysis (DEA), which is closely linked to the production theory in microeconomics. Like combinations of inputs determine the maximum output in the production function,[685] combinations of the measures discussed below reveal the efficiency of the performance.[686] Defining measurable outputs, or 'products' of healthcare systems, and inputs, or the resources used for the 'product' of the system, for the DEA model (or any other analysis), which depend on the system's capabilities and not mainly on external uninfluential factors, creates a challenge for analysers.

However, common indicators have been identified. The inputs typically used in analyses may be divided into three categories: financial inputs (the percentage of GDP allocated to healthcare, total per capita health expenditure in purchasing power parities (PPP), healthcare costs as a percentage of GDP per capita etc.), physical inputs (number of hospital beds, doctors, nurses, midwifes and other staff, days of drug supply etc.)

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683 Cylus et al. 2015.

684 Cylus, Papanicolas and Smith 2016.

685 Seiford and Thrall 1990.

686 Cylus, Papanicolas and Smith 2016.

and environmental inputs (smoking, alcohol consumption, diet, education, income etc.). Similarly, the most commonly used outputs may be placed in two groups: health services (general, acute and maternity outpatient first attends, accident and emergency attends, drugs, maternity, mental illness, learning disabilities, general, acute episodes) and health outcomes (life expectancy[687] – at birth and at age 65, health adjusted life expectancy – at birth and at age 65, amenable mortality rates, infant mortality rate etc.).[688,689,690] It is noted that various efficiency analyses use different combinations of the above-mentioned inputs and outputs.

According to Asandului, Roman and Fatulescu's[691] efficiency analysis of EU healthcare systems from 2014, the German system scored below average, the Dutch was close to average, whereas the United Kingdom was one of the most efficient European health systems. An EU efficiency analysis by Medeiros and Schwierz[692] suggests that, among the observed three, the Dutch system is one of the top performers in efficiency scores, while the UK and Germany are average performers. Still, a quite old comparison from the World Health Organisation from 2000 ranked the Netherlands 17th, the UK 18th and Germany 25th in overall system performance among all world countries.[693] A 2014 analysis by Bloomberg ranked the UK 10th, Germany 23rd and the Netherlands 40th among 51 observed countries.[694] Cylus, Papanicolas and Smith[695] in the Health System Efficiency report compare life expectancy with real per capita health expenditures in PPP (USD) for the period 2010–2012 and conclude that the Netherlands and the UK were able to retain higher life expectancy than in Germany, but on the health expenditure scale the UK had managed to do this at a lower cost. Germany then follows, whereas the Netherlands spends the most to retain almost the same level of health expectancy as in the UK.

Although health spending is normally treated as an input, it is interesting to observe it alongside efficiency ratios. Since researchers regard the UK as a single country and because England has the largest share of capital expenditure and the highest population density, the UK should be used for comparison.

687 Tudorel et al. 2009.
688 Medeiros and Schwierz 2015.
689 Asandului, Roman and Fatulescu 2014.
690 Hussey et al. 2009.
691 Asandului, Roman and Fatulescu 2014.
692 Medeiros and Schwierz 2015.
693 World Health Organization 2001.
694 Bloomberg 2014.
695 Cylus, Papanicolas and Smith 2016.

The latest health spending data available from the OECD show the UK spent 4.192 $/capita, accounting for 9.7% of GDP, the Netherlands spent 5.385 $/capita, accounting for 10.5% of GDP, and Germany spent 5.551 $/capita, accounting for 11.3% of GDP.[696] As discussed, the UK contributes a much smaller share of funds for healthcare than Germany or the Netherlands.

Although efficiency analyses are based on different inputs from various periods, thus making comparisons largely biased, it can still be seen that the UK's health system tends to achieve higher scores, suggesting a higher overall level, especially considering the cost-efficiency ratio. While contributing a higher percent of GDP to healthcare, the Netherlands, is achieving similar results. Germany, on the other hand, continuously scores lower than the UK and the Netherlands, most likely due to the amount of capital spent. This is one of the most recognisable problems facing the German health system.[697]

6. CONCLUSIONS

While comparing the efficiency and health expenditure of Germany, England and the Netherlands, one should consider the issue of efficiency with regard to their organisational structures when seeking the most appropriate areas for legislative change in a third country with similar demographic and cultural characteristics. The German and Dutch free markets on one hand give the insured a free choice of medical and health insurance providers, with this driving the quality of the health services provided. On the other hand, the UK is a single-payer healthcare system with free universal coverage where the central organisation provides the majority of health services and funds. While the UK saves considerable administrative costs due to its single management system, Germany and the Netherlands drive the competition to increase the quality of health services, creating additional costs for controlling, managing and administrating. The question to be thoroughly analysed by legislators is whether the costs of incentivising to drive quality through market freedom compensate for the increase in the quality of health services, or whether a unified system can manage to find other ways to raise the quality of services while keeping costs low.

With this perspective in mind, Slovenia should find suitable approaches to continue increasing its health system's efficiency. The latest analyses show that Slovenia spends 2,835 $/capita, corresponding to 8.6% of GDP on healthcare,[698] ranking it among

696 OECD 2016.

697 McKinsey&Company 2010.

698 OECD 2016.

average spenders in the European Union. Efficiency analyses also mainly consider it as an average performer, with several indicators known to be a challenge: long waiting lines, obesity rates above the EU average, above-average alcohol consumption among OECD countries, a shortfall in medical staff, low staff salaries etc.[699] Although indicators show that overall Slovenia is not underperforming, the average score could nevertheless quickly drop, as seen during the 2008 crisis when difficult times in 2010 led to negative health spending in real terms.

Currently, Slovenian healthcare faces two main problems, a shortfall in medical staff and long waiting lines. At their core, both problems are connected to financial inputs, mainly their distribution. Medical staff are increasingly leaving public hospitals due to the low wages and heavy workloads left for the remaining staff. On the other hand, around 85% of medical equipment is outdated, causing breakdowns and delayed and rescheduled appointments and that are some of the causes of the long waiting lines. Following a public outcry over a suspected violation of the Law on Public Procurement, involving around €70 million to procure medical materials and medical devices, it seems the financial inputs for Slovenian healthcare are not distributed optimally.

The biggest difference between the English and Dutch healthcare systems is that the Netherlands has adopted a so-called managed competition model where the government establishes the legislative framework and supervises and controls the regulated market in which health providers compete, whereas the English system is organised as a system in which most health providers work within a single national body. The Netherlands specifically adopted its system to cut healthcare expenditure and make the prices of medical services transparent. This includes lowering individual health providers' costs by improving medical processes and optimising administrative and purchasing costs. Introducing free-market elements is argued to increase competitiveness in the market and, to a certain extent, is forcing health providers to reduce their costs.

Similar initiatives were proposed by the Medical Chamber in Slovenia. An important vehicle for ensuring free-market components in a regulated system is a non-biased supervisory and control mechanism that encourages transparency of spending and internal processes of health providers to make sure patients can receive the best treatment for the money spent. Due to the apparent misdistribution of costs, Slovenian legislators must provide for greater competitiveness and minimise costs in a way that does not lower labour income, which is currently a major problem, but by seeking improvements in internal administrative processes, treatment processes and procurements.

699 OECD 2014.

Increasing funding will not have long-run positive results if the problems apparent in the internal systems are not minimised or eradicated. In such a case, efficiency levels may be expected to rise along with the general health status of the Slovenian population.

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PART V. LABOUR LAW AND ECONOMICS

Nađa Vujović

CHAPTER 11. LAW AND ECONOMICS IMPLICATIONS OF MATERNITY LEAVE IN SLOVENIA

1. INTRODUCTION

This chapter aims to investigate the economic and societal implications of maternity leave. The approach taken is threefold. First, the chapter compares the maternity leave legislation in Slovenia with that in a sample of 11 EU countries chosen to ensure geographical diversity. It is found that maternity leave in Slovenia is shorter than the average of our sample, but the share of wages paid to mothers on such leave is above the sample average. This may suggest a trade-off exists between how long and how well-paid maternity leave is. However, it should be emphasised this contribution exclusively analyses the provisions of maternity leave and skirts around the debate on related parental and childcare leave, which in Slovenia are always combined with maternity leave. Second, the chapter explores the possibility that a country's economic development is associated with the length of its maternity leave and the share of wages paid during that leave. To this end, multiple microeconomic measures of the EU countries in our sample (GDP per capita, HDI, Gini coefficient, unemployment rate, and gender pay gap) are conducted, but no correlation is found between these measures and the quality of maternity leave in terms of length and pay. This suggests there is no evidence that providing longer maternity leave in Slovenia would harm the economy. Third, it is investigated whether the quality of maternity leave relates to a child's health and cognitive development. The literature review performed suggests the amount and quality of time mothers spend with their children benefits children's physical and cognitive development.

The Equal Opportunities Commission (EOC) of the UK conducted a survey 13 years ago on pregnancy discrimination in the workplace. "Pregnancy discrimination" refers to any act of discrimination against pregnant women at work (discriminating against a woman because she is pregnant) – for example, job termination.

The survey found that 75% of women who were either pregnant or had young children had experienced discrimination in the workplace. For example, 7% of the surveyed mothers had lost a job due to pregnancy.[700]

Individual cases of discrimination are also known. For instance, one famous case is Hayes v. Malleable Working Men's Club (1985) where the plaintiff Ms Hayes was dismissed because she was pregnant. The Employment Appeal Tribunal in London held this was discrimination on the grounds of sex.[701] Another similar case is Dekker v. VJV-Centrum (1991) where Ms Dekker, a young woman, applied to work in a youth training centre. Despite being the best qualified candidate, she was rejected for being pregnant. The employer justified its decision by explaining she would have soon taken maternity leave, for which they would have been obliged to pay 80%–100% of her salary under Dutch law of the time. The European Court of Justice (ECJ) ruled in favour of Ms Dekker, stating this was a direct breach of the Equal Treatment Directive.[702] This Directive guarantees equal treatment in employment and occupation for all EU citizens.[703]

These cases set solid bases for the protection of working mothers under the law. The Equal Treatment Directive treats pregnancy discrimination as direct sex discrimination and employers cannot use pregnancy or maternity as criteria in decision-making (Council Directive 92/85/EEC, 19 October 1992).[704] However, despite such legislation and the ECJ's rulings women still feel they are not protected in the workplace. One study suggests that, although the ECJ has been "active in fighting against pregnancy discrimination in the workplace", some policy changes could be made – for example, treating pregnancy as a state requiring special protection, and treating pregnancy discrimination as more than "direct sex discrimination". Further, women are not protected from being dismissed once their maternity leave ends.[705]

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700 J. MORELL and V. YOUNG, *Pregnancy discrimination at work: a survey of employees*, Equal Opportunities Commission, EOC Working Paper Series, Manchester 2005.

701 Hayes v. Malleable Working Men's Club and Institute. [1985] I.R.L.R. 367.

702 Case C-177/88, *Dekker v Stichting Vormingscentrum voor Jong Volwassenen* (VJV-Centrum) Plus. [1990] ECR I-03941.

703 Council Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation [2000] OJ L 303.

704 Council Directive 92/85/EEC of 19 October 1992 on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding (tenth individual Directive within the meaning of Article 16 (1) of Directive 89/391/EEC) [1992] OJ L 348.

705 MALISZEWSKA-NIENARTOWICZ, *Pregnancy Discrimination in the European Union Law Its Legal Character and the Scope of Pregnant Women Protection*, Mediterranean Journal of Social Sciences, vol. 4, Rome 2013, pp. 441–448.

As one can observe, women around the EU experience sex discrimination due to being pregnant and working at the same time.

Pregnancy is followed by maternity leave and there has recently been much debate about its length, benefits and importance. Every country in the EU has its own laws regulating the length of maternity leave. Slovenia has a well-developed family policy that protects women from workplace discrimination and is also among the countries with relatively long maternity leave. This chapter has two aims. First, maternity leave policies in Slovenia are evaluated and compared to those in other EU countries in order to identify ways to improve the Slovenian policies. Second, it is suggested that there is a link between a country's economic development and the quality of its maternity leave policies, with the goal of emphasising the importance of a high-quality maternity leave plan for a country's economic development. The chapter determines the quality of maternity leave policies by observing the benefits given to mothers, such as the length of maternity leave and share of salary they receive. Given the decline in birth rates in Europe in recent years,[706] it is important to critically evaluate the current maternity leave policies and identify areas for improvement to ensure governments are putting policies in place that will encourage young people to start families if they wish to, without fear of financial insecurity and/or losing jobs.

This paper considers the following research questions:

RQ1: What is the maternity leave policy in Slovenia? What are its biggest advantages and disadvantages?

RQ2: How does the maternity leave policy in Slovenia compare to that in the rest of the EU?

RQ3: Is there a link between how economically developed a country is and the length of its maternity leave?

RQ4: How can a country's economy benefit from long, well-paid maternity leave?

The study has two parts: a) an evaluation of maternity leave policies in Slovenia. This evaluation will entail a thorough analysis of the current maternity leave legislation. The chapter merely analyses so-called maternity leave, leaving to one side childcare leave (which are generally taken together) and looks at its length, the benefits given to mothers, and the share of salary they receive. Then, a comparison is undertaken with a sample of EU countries, namely: Austria, Belgium, Estonia, France, Germany,

706 Lanzieri 2013.

Greece, Hungary, Italy, Poland, Spain, Sweden and the UK. This comparison helps put Slovenian policies in a broader context and identify their strengths and weaknesses. Good practices in other countries are identified and improvements for Slovenia suggested where appropriate. The investigation particularly focuses on these issues: (1) the length of maternity leave (that is, maternity leave without childcare leave); and (2) the share of wages paid during maternity leave; and 3) the link between economic development and maternity leave policies. The term "quality of maternity leave policies" designates the length of maternity leave, percentage share of salary/wages paid, and the protection of mothers after they re-enter the workforce. Moreover, the chapter also focuses on the following issues: (1) whether countries with a high GDP and human development index (HDI), low unemployment rates, low gender pay gaps, and a low Gini coefficient are more likely to have longer and better paid maternity leave; and (2) whether there is any evidence the economy and society benefit from longer, well-paid maternity leave. The chapter considers the same countries as in the previous section, together with Slovenia. Further, the investigation tries to find a link between the time a mother spends with their child in early childhood with its later development as an adult, since stable, well-developed adults contribute more to society and, in turn, support economic growth with their productivity.

To summarise, the structure of this contribution is as follows: in the first part, the chapter presents an overview of maternity leave policies in Slovenia and then compares these policies with those in 12 other EU countries. In the second part, using both data from the first part of the chapter and macroeconomic data, the chapter investigates whether there is a link between a country's economic development and the quality of its maternity leave policies. Part three concludes.

2. SLOVENIAN MATERNITY LEAVE POLICY

Of the 30 articles contained in "*Zakon o starševskem varstvu in družinskih prejemkih*" (ZSDP-1), Uradni list RS, 003-02-4/2014-8 (hereinafter. the Parental Leave Act),[707] what are most relevant for the investigation of maternity leave (excluding childcare leave) are Articles 19 and 20 because they relate to the length of maternity leave. The chapter places them in three categories: a) maternity leave (the focus of the analysis); b) paternity leave; and c) childcare leave.

707 *Maternity leave law* (2014), Act 19. Uradni list RS, št. 26/2014 z dne 14. 4. 2014: 2. - ZSDP-1.

2.1. Slovenian Maternity Leave Policy – sensu strictu

(1) Maternity leave legislation

Working mothers in Slovenia are entitled to 105 working days of maternity leave under Article 19 of the Parental Leave Act, of which 15 days must be used.[708] Article 20 states that in the event a child is stillborn, the mother has the right to an additional 42 days of leave from the relevant day. Should a child die during maternity leave, the mother has the right to an additional 10 days of maternity leave. Should a mother put the child up for adoption, 42 days of maternity leave are given after the child's birth. Finally, if a mother put the child up for adoption and has already used 42 days of maternity leave, they have no rights to any more maternity leave.[709] Mothers receive 100% of their salary throughout their maternity leave.

(2) Paternity leave legislation

Under the Parental Leave Act a father is entitled to 30 days of paternity leave – a falling number since in 2017 it was 7 weeks.[710] The father cannot transfer his 30 days of leave to the mother under any circumstance.[711] Maternity leave may be transferred to the father if the mother dies, abandons the child or is incapable of caring for the child (as stated by a doctor).[712] However, the length of paternity leave is just 30 days, less than in 2017 when it was 7 weeks[713], and the father cannot transfer these 30 days to the mother.[714]

(3) Childcare leave legislation

Article 29 of the Parental Leave Act (ZSDP-1) also regulates so-called childcare leave[715] which lasts for 260 days and may be used by both parents. These 260 days can be extended upon the birth of twins, early childbirth etc.[716]

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708 *Maternity leave law* (2014), Act 19. Uradni list RS, št. 26/2014 z dne 14. 4. 2014: 2. - ZSDP-1.

709 *Maternity leave law* (2014), Act 20. Uradni list RS, št. 26/2014 z dne 14. 4. 2014: 2. – ZSDP-1.

710 EU Legislation on Maternity and Paternity Leave, European Parliamentary Research Service, [2016].

711 *Maternity leave law* (2014), Act 25. Uradni list RS, št. 26/2014 z dne 14. 4. 2014: 2. – ZSDP-1.

712 *Maternity leave law* (2014), Act 25. Uradni list RS, št. 26/2014 z dne 14. 4. 2014: 2. – ZSDP-1.

713 EU Legislation on Maternity and Paternity Leave, European Parliamentary Research Service, [2016].

714 *Maternity leave law* (2014), Act 25. Uradni list RS, št. 26/2014 z dne 14. 4. 2014: 2. – ZSDP-1.

715 Zakon o starševskem varstvu in družinskih prejemkih (ZSDP-1), Uradni list RS, 003-02-4/2014-8.

716 Ibid.

If the parents of the child already have another child under the age of 8 in their care, leave is extended by an additional 30 days, for twins leave is prolonged 90 days, and if a child is ill it is also extended 90 days.[717]

2.2. Comparison of Slovenian and EU Member States' Maternity Leave Policies

The current EU legislation states the minimum length of maternity leave should be 14 weeks (98 days), two weeks of which should be mandatory.[718] This gives countries freedom to choose the actual length of leave themselves on top of the EU minimum. For example, the maternity leave in Belgium is the same as in Slovenia – 15 weeks, although mothers receive 82% of their salary in the first 32 days, and 75% thereafter.[719] Although Italy has longer maternity leave of 22 weeks, mothers there only receive 80% of their salary. However, should they wish to have an additional 6 months with their child, in that period they receive just 30% of their salary.[720]

While Sweden has the longest maternity leave in the EU, namely, 68 weeks, during which time mothers receive 80% of their salary. Greece offers 17 weeks at 100% of salary. The UK offers 52 weeks (approximately 1 year) at 90% of salary in the first six weeks, and GBP 145.18 a week or 90% of average weekly earnings (whichever is lower) for the next 33 weeks.[721] Finally, countries that pay mothers 100% of their salary include Estonia with maternity leave of 62 weeks, Austria, which offers a week more than Slovenia (16 weeks), and France and Spain that both also offer 16 weeks. A cross-cultural sample of 13 EU countries is compared in Table 1, along with the sample's descriptive statistics, and EU averages.

717 Ibid.

718 EU Legislation on Maternity and Paternity Leave, European Parliamentary Research Service, [2016]

719 Addati et al. 2014.

720 Ibid.

721 UK Government 2013.

Table 1. Selected EU countries and their maternity leave length, share of salary paid, and macroeconomic measures of development

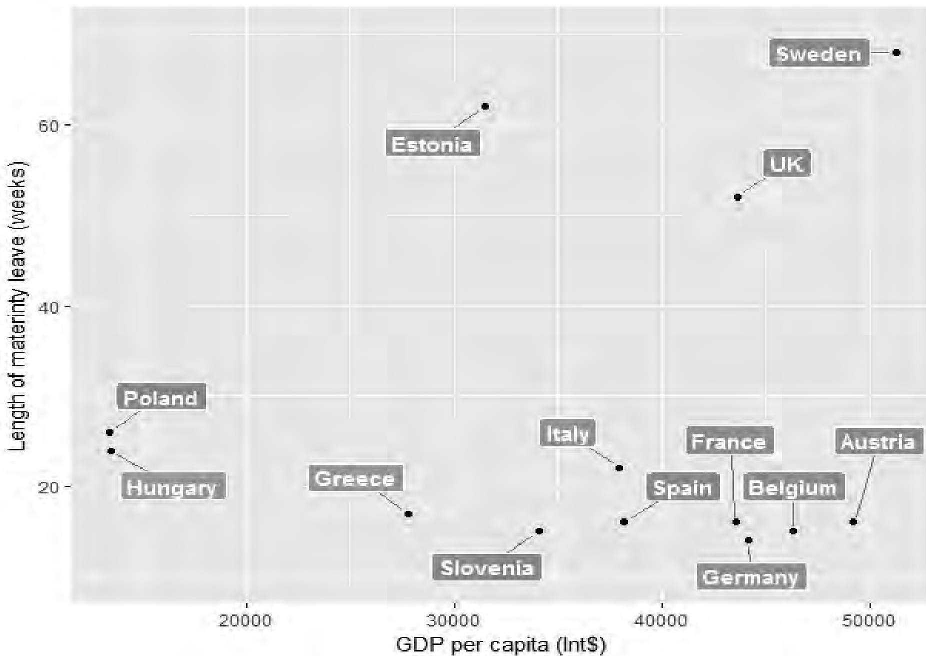
Country	Length of maternity leave (weeks)[722]	Salary paid on leave (%)[723]	GDP per capita / Int$[724]	HDI[725]	Gini coefficient[726]	Unemployment rate (%)[727]	Gender pay gap (%)[728]
Austria	16	100	49,247	0.893	27.6	5.5	20.1
Belgium	15	82*	46,301	0.896	26.3	6.6	6.1
Estonia	62	100	31,473	0.865	32.7	5.4	25.3
France	16	100	43,550	0.897	30.1	9	15.2
Germany	14	100	44,184	0.926	29.5	3.6	21.5
Greece	17	100	27,776	0.866	34.3	20.9	12.6
Hungary	24	70	13,459	0.836	27.9	3.8	14
Italy	22	80**	37,970	0.887	33.1	11.1	5.3
Poland	26	100	13,429	0.855	32.08	4.5	7.2
Slovenia	15	100	34,063	0.89	24.4	5.9	7.8
Spain	16	100	38,171	0.884	34.5	16.3	14.2
Sweden	68	80	51,264	0.913	25.4	6.5	13.3
UK	52	90***	43,620	0.909	31.6	4.3	21
Average	27.9	95.0	36,500.5	0.9	30.0	8.0	14.1
Median	17	100	38,171	0.89	30.1	5.9	14
Maximum	68	100	51,264	0.926	34.5	20.9	25.3
Minimum	14	70	13,429	0.836	24.4	3.6	5.3
EU-wide	27	88.8	36,700	0.874	30.8	7.3	16

**Belgium: 82% of salary is paid in the first 32 weeks of maternity leave, with 75% of salary paid thereafter.*
***Italy: 80% of salary is paid in the 5 months (≈152 days), with an option of an extra 6 months at 30% of salary.*
**** UK: 90% of salary paid in the first 6 weeks, with either weekly GBP 145.18 or 90% of average weekly salary (whichever is lower) during the next 33 weeks.*

722 Addati et al. 2014.
723 Ibid.
724 International Monetary Fund 2018.
725 Human Development Reports 2016 and 2017.
726 GINI Index (World Bank Estimate), 2017.
727 The European Commission 2017.
728 The Gender Pay Gap (Eurostat) 2017.

Compared to the other EU countries, Slovenia's maternity leave length is below average. The only country whose maternity leave is shorter than Slovenia's is Germany in both the assessed sample and across the entire EU.[729] Belgium is the only other EU country to have the same maternity leave length, with all other countries having longer leave. Sweden offers the maximum length – 68 weeks. The median length is 18 weeks, namely 50% of countries have maternity leave shorter than 18 weeks and leave in the other 50% is longer than 18 weeks. On the other hand, Slovenia is above the EU average in terms of the percentage of salary paid, where the average is 88.8% and Slovenia offers 100%. One should note, however, that some countries have policies that reduce the share of salary paid after a certain period passes. To deal with this, the average percentage paid was used for our analysis. The median percentage is 95%. The mean is smaller than the median because Slovakia only offers 65% of salary, while Hungary offers 70%, which drags the average down. One could consider these two countries as outliers as they have the lowest reimbursements for mothers across the entire EU. The chapter presents a visual analysis of countries' lengths of maternity leave and GDP per capita in order to look for any specific trend (Figure 1).

Figure 1. Length of maternity leave and GDP per capita



729 However, one should note that this might be due to the fact that also Germany, as Slovenia, de facto combines its maternity leave with the childcare leave.

3. A CORRELATION BETWEEN A COUNTRY'S DEVELOPMENT AND ITS MATERNITY LEAVE POLICIES?

Different measures of development are used in macroeconomics. The most widespread macroeconomic measure of development is gross domestic product (GDP) per capita, which is the total value of all final goods and services produced in a country, per citizen, per year.[730] This information is obtained from the International Monetary Fund. Another frequently used measure is the HDI (Human Development Index), a composite indicator measuring three dimensions of development: level of health, level of education, and standard of living.[731] The HDI is particularly relevant to our research questions as it includes health and the standard of living, which are closely related to maternity leave. Data for this analysis were taken from Human Development reports. On top of these two measures, we considered the unemployment level in each country (European Commission figures), the Gini coefficient (a measure of income inequality from the World Bank, where 0 means no inequality, and 1 or 100% means maximum inequality), and the gender pay gap (Eurostat). The findings are shown in Table 1. All measures are for 2017, except for gender pay gap where the most recent measurements were for 2016.

Poland has the lowest GDP per capita in the analysed sample, and the length of maternity leave in the country is also below the EU average, although the percentage share of salary paid is above average. Sweden has the highest GDP per capita in the sample, and the longest maternity leave not only in the sample but for the entire EU. All of the countries in the sample fall into the "very high development" category of the HDI, indicating the health, wealth and education of a society are at a high level. The Gini coefficient is low in all countries, showing small differences in income distribution. The unemployment rate is notably the highest in Greece with 20.9%, followed by 16.3% in Spain and 11.1% in Italy. When it comes to the gender pay gap, in the sample Italy had the smallest gap and Estonia is the largest. The gender pay gap in Slovenia is among the lowest in the sample.

4. BENEFITS OF MATERNITY LEAVE FOR CHILD DEVELOPMENT

Research shows that longer maternity leave and, in turn, a longer time that mothers spend with their new-borns impacts not just infant health, but also brain development. One study conducted in Canada showed that longer maternity leave led to more breastfeeding[732], which has many benefits for child development.

730 Tragakes 2015.

731 Tragakes 2015.

732 Baker and Milligan 2007.

For example, regularly breastfed children have a reduced risk of illnesses such as asthma, diarrhoea, ear infections, dental carries, respiratory diseases, and an improved immune function in their childhood.[733] Population health is an HDI component, suggesting that breastfeeding is related to one of the factors contributing to the development of society. The same study shows "evidence of consistently positive effects of breastfeeding on intellectual development"[734]. Infants who are breastfed may be more alert, cry less, and engage in interactions with their parents. Further, breastfeeding might have positive effects on mothers, such as stress reduction and an increase in confidence as a parent.[735] Another study suggests that infants who are regularly breastfed for at least three months have enhanced development in key parts of the brain, and show improved brain development by the time they are 2 years old. This study also shows a positive association with breastfeeding and behavioural performance.[736]

Prolonged breastfeeding and its effects on development of a child are not the only positive benefits of longer maternity leave. A study in the UK showed that a young child's cognitive and social skills improve considerably if their mothers are able to spend more time with them (due to longer maternity leave), especially in early childhood.[737] Next, a study on job-protected maternity leave conducted in the USA showed that mothers whose jobs are protected and have appropriate maternity leave spend more time with their infant. Working mothers are less likely to engage in activities related to child education, such as reading to the children and supervising their play and study. All of this affects child cognitive development.[738] Finally, a Norwegian study showed that, after an increase in Norway's maternity leave, mothers were able to spend more time with their child, with this leading to a 2% point decline in high school dropout rates, as well as a 5% increase in wages at age 30, from which they concluded that "policies facilitating increases in parents' time with children during the first year of life may have a positive impact on children's abilities later in life".[739] Note, however, that one study found that, while prolonged maternity leave resulted in more maternal care, this did not have substantial and significant consequences for the social and motor development of the children in the study.[740]

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733 Woodward and Liberty 2017, pp. 32–35.

734 Ibid.

735 Ibid.

736 Deoni 2013, pp. 77–86.

737 Francesconi and Heckman 2016.

738 Baker and Milligan 2015.

739 Carneiro et al. 2015, pp. 366–412.

740 Baker and Milligan 2008.

While some studies failed to show that maternity leave boosts child development, there is substantial evidence that maternity leave leads to extended care and contact between mothers and children, and that this benefits child development.

5. DISCUSSION

It should be noted that the performed assessment did not focus on the entire EU, but on a subset of 13 countries. However, the chapter aims to include countries from all regions in order to make our sample as representative of the entire EU as possible. Descriptive statistics for the entire EU are also provided to place Slovenia in a better context.

The performed overview of maternity leave policies in Slovenia suggests that mothers in Slovenia are protected by the Parental Leave Law and by the Childcare Act. The Parental Leave Act contains a total of 30 articles that define mother's rights before and after she gives birth. Article 19 of the Parental Leave Act specifies the minimum and maximum lengths of maternity leave. It is noted that fathers in Slovenia do not have the same rights as mothers when it comes to paternity leave as they can take just 30 days off work. Overall, our conclusion is that the law protects mothers well as the provisions of the articles are clear and no room is left for misinterpretation by employers or employees. Slovenia is below average when it comes to the length of its maternity leave (the EU average is 27 weeks, Slovenia offers 15 weeks), and the length is among the shortest across the entire EU, with only Germany having shorter maternity leave. However, Slovenia ranks above average when it comes to the share of salary (the average is 88.8%; Slovenia reimburses the entire salary). The Slovenian policy's biggest disadvantage is its length, while the primary advantage is the fact that mothers receive their salaries in full. One should note that this period is *de facto* prolonged by the Childcare Act for the next 260 days[741] and thus in total means 365 days of leave. Yet, as already stated, for analytical reasons the chapter focuses solely on so-called maternity leave. Hence, *de facto* Slovenia enables 52 weeks of combined maternity and childcare leave.

To summarise: the length of maternity leave (without childcare leave) in Slovenia is below the EU average, but the share of salary paid is above the average. One may conclude the maternity leave policy in Slovenia is well developed with respect to two factors, namely, the length is a week longer than the minimum required by the EU, and mothers are paid a bigger share of their salary than in some other countries such as, for example, Greece.

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741 Zakon o starševskem varstvu in družinskih prejemkih (ZSDP-1), Uradni list RS, 003-02-4/2014-8.

The biggest disadvantage of the Slovenian policy is its length. Yet, in practice, this maternity leave is combined with 260 days of childcare leave, producing *de facto* 365 days of leave. Moreover, mothers receive 100% of their salary. This raises the question as to whether there is a trade-off between the length of maternity leave (without childcare leave) and the share of salary paid. For example, the country with the longest leave – Sweden – does not pay the full 100% of salary, while the country with the shortest leave – Germany – pays 100% of salary. Perhaps long maternity leave is not feasible in a well-developed country if the mother is fully reimbursed, and perhaps this is why Slovenia offers such short leave and then combines it with 260 days of childcare leave. There are countries that have longer maternity leave, but no childcare leave and offer 100% of the salary, starting from those that offer just a week more than Slovenia, such as Austria and Luxembourg (and combine this with childcare leave like in Slovenia), but also, for example, Estonia, which offers 62 weeks of fully paid maternity leave (but no childcare leave). On the other hand, Estonia has lower GDP per capita than Slovenia and also the largest gender pay gap in Europe.

There are countries, however, with a higher GDP per capita than Slovenia and a lower gender pay gap, but offer longer, fully paid maternity leave, such as France. This might mean there is no correlation between a country's development and the length of its maternal leave – by all accounts, Germany is highly developed, but has a large gender pay gap and the shortest maternity leave (without childcare leave). On the other hand, Estonia is less developed than Germany, but also has a big gender pay gap – yet, maternity leave in Estonia is the second-longest in the EU. Hungary has the smallest gender pay gap in the sample, but also the lowest GDP per capita in the sample, while the length of its maternity leave and share of salary paid are below average. To summarise, there does not seem to be a correlation between a country's development and the length of its maternity leave. Yet there may be a correlation between the gender pay gap and the length of maternity leave – for example, all countries with a pay gap above 20% (in our sample) offer maternity leave with a below-average length, with the exception of Estonia.

Overall, the investigation performed found no specific trend between the social and economic development of a country, also confirmed by the scatter plot shown in Figure 1 where no trend is visible between the length of maternity leave and a country's development. Hence, one may conclude that longer maternity leave does not directly negative affect the economic performance of the observed countries. For example, Sweden has both the longest maternity leave in the EU, high GDP and a low unemployment rate. In addition, countries such as Hungary and Greece, which are among the less developed EU countries, have maternity leave with a below-average length. One may conclude that if Slovenia were to increase its maternity leave, the economy would probably remain unchanged. The question is, however, whether

Slovenia could still offer to pay 100% of the salary if its maternity leave were longer. Yet, one should recall that the *de facto* maternity leave in Slovenia is, due to the 260 days of childcare leave, actually 365 days (with 100% payment of salary). Obviously, Slovenia is able to cover 100% of salary for the entire period of 365 days. If a trade-off were to made between the length (maternity leave of a mere 15 weeks) and pay, who would decide which opportunity cost is smaller – that of less time with the child, or that of less money? Perhaps a good solution would be to implement a policy similar to Belgium's and offer full reimbursement for a fixed period of time, with the option of extending maternity leave at lower pay. Yet this would result in another trade-off whereby mothers would have to decide between money and time they can spend with their child, which might affect their overall morale and relationships with their child and work.

Finally, it is necessary to emphasise that one cannot be certain whether the economy would benefit from longer and well-paid maternity leave because policies across the EU vary significantly and show no specific trend. Even if the economy would be harmed by, say, a slight drop in GDP or a slight rise in the Gini coefficient, one might still argue that society would benefit in the long run due to the importance of the time a mother spends with her child in its early childhood. This brings us to the last part of the performed analysis.

It has been shown that the greater the time a mother spends with her child during early childhood, the more developed the child's cognitive functions are. Further, mothers are more likely to breastfeed if they spend more time with their children, resulting in better overall health of the infant and its stronger immunity. This may hold considerable economic implications for the development of society. It is suggested that a child be exclusively breastfed for a minimum of 6 months[742] – however, maternity leave in Slovenia is a little over 3 months. If maternity leave were made longer, the time mothers spend with their children would increase and, in turn, the child's health would be improved.

However, this is just a trend – there is no evidence to indicate that Slovenians are less healthy than other nations which provide longer maternity leave. It could be that the effect of the 260-day childcare leave accounts for the observed pattern and, in reality, mitigates and supplements the relatively short maternity leave. At the same time, an increase in the length of maternity leave now might bring positive health changes in the long run.

742 Better Health Channel, GOV. AU, Breastfeeding – deciding when to stop, Victorian Ministry of Health, 2018.

This could help increase the HDI. Further, research shows the possibility of a decrease in high school dropout rates and a rise in wages due to longer maternity leave in Norway. Children who spend more time with their mothers may develop faster than those who spend less time with their mothers, which affects their early-years development and, later, nurtures them to become more efficient and productive adults. Cognitive functions include memory, reasoning, attention, language etc., which are all important in the workplace. Employees seek to develop attributes such as critical thinking and if a greater share of the population had such skills, the country's annual output could rise due to increased efficiency, leading to higher GDP and perhaps even lower unemployment. Still, the quality of care in infancy is just one of many factors that affect one's cognitive development. Mothers who work can still provide adequate care for their children and can outsource care.

6. CONCLUSIONS

This study has focused on analysing the parental leave law in Slovenia and compares it to other EU countries, investigating whether there is a link between a country's economic development and the length of its maternity leave and the share of salary paid during maternity leave. It is reiterated that this chapter solely considers the provisions on maternity leave and excludes the debate on related parental and childcare leave, which in reality are generally combined with maternity leave. The questions of interest were the following: (1) What is the maternity leave policy in Slovenia? What are its biggest advantages and disadvantages? (2) How does the maternity leave policy in Slovenia compare to that in the rest of the EU? (3) Is there a connection between how economically developed a country is and the length of its maternity leave? (4) How can a country's economy benefit from long, well-paid maternity leave? First, the chapter presented a brief summary of the Parental Leave Act – namely, Articles 19 and 20. It then compared the results with the rest of the EU and found that Slovenia is below the average when it comes to the length of maternity leave (it is 14 weeks in Slovenia, the EU average is 27, and the median is 18), with only Germany having shorter maternity leave (and Belgium having the same length as Slovenia). However, one may note that these differences might merely be due to different legal terminology and legal concepts being used. Namely, as already stated, the Slovenian regulation and daily practice combines maternity leave with childcare leave, de facto enabling 62 weeks of maternity leave. On the other hand, Slovenia ranks above average for the percentage of salary paid while on maternity leave – the EU average is 88.8% while Slovenia reimburses mothers 100% of their salary.

Next, the chapter reveals there is no specific link between a country's development and the length of its maternity leave (in a narrow sense). Measures were made of development via GDP per capita, the HDI, the Gini coefficient, unemployment rate, and gender pay gap and no clear trend was found since both EU countries with the shortest (Germany) and longest maternity leave (Sweden) are among the most highly developed. While some countries less developed than Slovenia have longer maternity leave (for example Hungary), other countries more developed than Slovenia have longer maternity leave (like the UK). A solution for extending maternity leave that might produce the smallest negative impact on the economy is to set a time limit on maternity leave up to which mothers have their salary fully reimbursed, with the possibility of extending maternity leave at a smaller share of salary. However, this might result in a trade-off between time spent with children and money, which is a negative consequence, because both choices carry significant opportunity costs. Yet, if one considers the fact that maternity leave may be combined with childcare leave, then the issue might already be correctly addressed.

Finally, the chapter aimed to show that the economy and society itself could benefit from extensive and well-paid maternity leave. To do this, external research was consulted. The results show a positive correlation between longer maternity leave and the health and cognitive function development of a child. This is partly due to the benefits of prolonged breastfeeding, which is more likely when maternity leave is longer. Many factors influence an individual's cognitive development, with one of them being breastfeeding and extended contact with the primary caregiver. However, one cannot argue that breastfeeding is the most important or most crucial factor of child development. It is believed that investing in good parental care policies is the most important as that can help mitigate that one factor. This may result in a rise in the HDI (because it encompasses, among other factors, health, education and wealth), but also in GDP. I thus argue that any trade-off between maternity leave length and share of salary paid might in the long run pay off due to possibilities of enhanced economic and societal development.

One limit is that this chapter has merely concentrated on maternity leave and disregarded the childcare leave provisions and it only employs secondary data – perhaps primary data obtained through interviews, surveys and direct field analysis of mothers in the workplace would have enabled a deeper insight and understanding of the topic. Moreover, the geographical sample used is another limitation of the analysis performed. Perhaps comparing all of Europe as well as the Americas, for example, would yield more informative results. Still, I decided to exclusively focus on the EU because it holds the most relevance for the Slovenian case.

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