

THE HOLD-UP PROBLEM IN COLOMBIAN CONTRACT LAW

By

Juan Antonio Gaviria Gil

Submitted to the

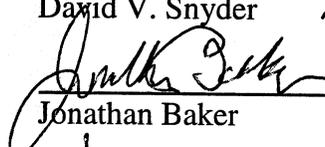
Washington College of Law of American University

in Partial Fulfillment of the Requirements for the Degree of Doctor of Juridical Science

Chair:



David V. Snyder


Jonathan Baker


Kathryn Zeiler



Dean of the Washington College of Law

4-18-14

Date

2014

American University

Washington, D.C. 20016

© COPYRIGHT

by

Juan Antonio Gaviria Gil

2014

ALL RIGHTS RESERVED

THE HOLD-UP PROBLEM IN COLOMBIAN CONTRACT LAW

BY

Juan Antonio Gaviria Gil

ABSTRACT

As its title suggests, this dissertation studies the interaction between an economic issue (the hold-up problem) and a legal system (Colombian law). For this purpose, this dissertation first defines the hold-up problem and explains its causes and possible solutions. The dissertation then analyzes how U.S. and Colombian laws deal with the hold-up problem and with its main harmful effect: the reduction of idiosyncratic investments. The U.S. law is studied here not only to facilitate the comparison of a civil law country's approach to the hold-up problem (Colombia) with the perspective of a common law country (the United States) but also to inquire whether some of the solutions to the hold-up problem under the latter legal system might be successfully transplanted to the former one.

The study of these legal systems delves into the role of both contractual and legal devices that may avoid, solve, or mitigate the hold-up problem (in general, that may prevent it). The contractual devices discussed here are no modification clauses, stipulated damages clauses, and reputation bonds. The legal devices, in turn, are legal rules entitling courts either to annul modifications in hold-up situations on grounds such as economic duress and bad-faith or to grant remedies for breach of contract.

This theoretical analysis is coupled with an experiment with Colombian students testing the theories stating that penalty clauses (on one hand) and a high level of legal remedies for

breach of contract (on the other) may prevent the hold-up problem. The results of this experiment failed to confirm the predictions of the theory. Based on the findings of the theoretical and experimental chapters, and before making some concluding remarks, the dissertation presents some proposals to efficiently address the hold-up problem in Colombian contract law.

ACKNOWLEDGMENTS

The author is in heavy debt to all the people that contributed to the writing of this dissertation – most importantly, to Professor David V. Snyder, who not only decided to accept the supervision of this project when it was only a very general sketch but also provided invaluable guidance during more than three years. The other Committee’s Members also gave insightful advice. Professor Kathryn Zeiler gave top-quality input regarding the design, performance, and analysis of the results of the experiment on the hold-up problem. Professor Jonathan Baker, in turn, provided invaluable guidance regarding the economic notions that this dissertation applies. The author is also deeply grateful to the American University, the Washington College of Law, and his Dean, Professor Claudio Grossman, who approved funding for the experiment on the hold-up problem.

Other people who gave meaningful advice during the writing process were Professor Lia Epperson, Director of the SJD Program; Professor Amy Tenney, deputy director of the said program; and William Ryan, from the Pence Law Library. Many other people contributed to the performance of the experiment on the hold-up problem. For instance, Pamela Díaz, Marcela Palacio, and Juan Arjona provided logistical assistance during the experimental sessions. Professors Néstor Londoño and Marcela Omaña from Universidad Pontificia Bolivariana; and Ángela Bejarano, María Franco, Gustavo López, Rafael Tamayo, José Toro, and Juan Vásquez from Universidad EAFIT yielded the time allocated to one or two of their classes to run the experiment with the students who volunteered to participate in the sessions. Last but not the least, many thanks to my editor, Sarah Maguire, who thoroughly checked the drafting for purposes of adequate flow in the prose and compliance with the Blue Book rules.

TABLE OF CONTENTS

ABSTRACT.....	i
ACKNOWLEDGMENTS	iii
CHAPTER I – INTRODUCTION.....	1
CHAPTER II –THE ECONOMICS OF THE HOLD-UP PROBLEM	9
<i>Section II.A. - Definition of the Hold-up Problem</i>	9
<i>Section II.B - Factors that May Create the Hold-up Problem</i>	17
<i>Section II.C - Governance Structures and the Hold-Up Problem.....</i>	25
CHAPTER III –THE HOLD-UP PROBLEM IN U.S. LAW.....	30
<i>Section III.A. – Introduction.....</i>	30
<i>Section III.B Private Attempts to Prevent the Hold-up Problem: Closing the Path to Extorted Modifications and Breach at the Formation of the Contract</i>	31
1. No-modification clauses	31
2. Stipulated Damages Clauses (Liquidated Damages Clauses and Penalty Clauses)	40
3. Reputation Bonds.....	56
<i>Section III.C – Public Attempts to Prevent the Hold-up Problem: Closing the Path to Extorted Modifications and Breach at the Performance of the Contract</i>	65
1. The Right to Demand Adequate Assurances of Due Performance.....	65
2. Good faith Modifications	76
3. Economic Duress	87
4. Remedies for Breach of Contract.....	103
<i>Section III.D Summary of Findings of Chapter III.....</i>	126
CHAPTER IV –THE HOLD-UP PROBLEM IN COLOMBIAN LAW	128
<i>Section IV. A. – Introduction.....</i>	128
<i>Section IV.B - Private Attempts to Prevent the Hold-up Problem: Closing the Path to Extorted Modifications and Breach at the Formation of the Contract</i>	130
1. No Modification Clauses	130
2. Penalty Clauses	133
3. Reputation bonds	144
<i>Section IV.C – Public Attempts to Prevent the Hold-up Problem: Closing the Path to Extorted Modifications and Breach at the Performance of the Contract</i>	144

1. <i>Exceptio Non-Adimpleti Contractus</i>	144
2. Good Faith Modifications	152
3. Economic Duress	157
4. Remedies for Breach of Contract.....	165
<i>Section IV.D. Conclusions</i>	183
CHAPTER V - AN EXPERIMENT ON THE HOLD-UP PROBLEM.....	184
<i>Section V.A - The Importance and Purpose of an Empirical Chapter in the Dissertation</i>	184
<i>Section V.B - An Experiment on the Hold-up Problem – A Review of the Literature</i>	185
<i>Section V.C - The Theoretical Framework</i>	191
1. Penalty Clauses	192
2. Legal Remedies for Breach of Contract.....	193
<i>Section V.D – Experimental Design</i>	194
1. Treatments.....	194
2. Main Features and Controls of the Experiment	206
3. Qualitative Hypotheses (Prediction of Results).....	209
<i>Section V.E – Results of the Experiment</i>	216
1. There Are Not Significant Differences Among Treatments Regarding the Number of Buyers who Rejected their Sellers’ First Offers	216
2. There Are Descriptive but not Significant Differences Among Treatments Regarding the Price of the Original Contract.....	220
3. There Are Not Significant Differences Among Treatments Regarding the Numbers of Buyers who Accepted the First Offer and Rejected the Second Offer ...	222
4. There Are Descriptive but not Significant Differences Among Treatments as to the Price that Triggered the Rejection in the Second Stage.....	224
5. There Are Descriptive but not Significant Differences Among Treatments Regarding the Prices that Sellers Offered in the Second Stage and that Their Buyers Accepted	225
6. There Were Descriptive but not Significant Differences Among Treatments Regarding the Seller’s False Claim About the Thirdco’s Offer for the Bauxite.....	227
7. There Was Evidence of Weak Extraction of Rents but not of Strong Extraction of Rents.....	228
8. Some Behavioral Reasons May Have Affected the Results	229
9. Summary or the Results	232
<i>Section V.F - Conclusions</i>	234
CHAPTER VI – PROPOSALS TO EFFICIENTLY ADDRESS THE HOLD-UP PROBLEM IN COLOMBIAN CONTRACT LAW.....	236
<i>Section VI.A – Introduction</i>	236
<i>Section VI.B – Legal Intervention and the Hold-up Problem</i>	237

<i>Section VI.C – Proposals to Efficiently Address the Hold-up Problem in Colombian Law</i>	241
1. Particular Proposals	241
2. General Proposals	252
<i>Section VI.D – Conclusions</i>	259
CHAPTER VII - CONCLUSIONS	261
BIBLIOGRAPHY	266

LIST OF TABLES

Table 1 – Illustration of Underinvestment as the Main Effect of the Hold-up Problem	13
Table 2 – Undercompensatory Nature of Legal Remedies in the United States	123
Table 3 – Effect of Time Value of Money and Uncertainty of Litigation	123
Table 4 – Summary of Findings of Chapter III.....	127
Table 5 – Examples of Reductions of the Amount of a Penalty Clause.....	143
Table 6 – Undercompensatory Nature of Legal Remedies in Colombia.....	181
Table 7 – Effects of Time Value of Money and Uncertainty of Litigation	182
Table 8 – Summary of Findings of Chapter IV	183
Table 9 – Main Figures of the Hypothetical Scenario	197
Table 10 – Buyco’s Losses	201
Table 11 - Damages in the First Treatment	202
Table 12 - Damages in the Second Treatment	204
Table 13 - Damages in the Third Treatment.....	205
Table 14 - Payments in Addition to the Show up Fee	208
Table 15 – Backward induction to determine whether buyers decide to invest	210
Table 16 – Number of Buyers Rejecting their Sellers’ First Offers	217
Table 17 – Original Prices for Pairs Reaching the Second Stage	220
Table 18 – Testing the Equality of Prices in the General and in the Penalties Treatment.....	222
Table 19 – Testing the Equality of Prices in the General and in the Penalties Treatment.....	222
Table 20 – Buyers Accepting their Sellers’ First Offer and Rejecting the Second One.....	223
Table 21 – Prices Offered and Accepted During the Second Stage	225
Table 22 – False Third-Party Offers for Pairs Reaching the Second Stage.....	227
Table 23 – Summary of the Results.....	233

CHAPTER I – INTRODUCTION

The Chief Executive Officer of a company (hereinafter “Buyco”) calls his colleague at another company (hereinafter “Selco”) and says: “Hi Jon, it’s Fred, how are you doing? Jon, our contract is not performing as well as we expected on our side, so we need to renegotiate it. I hope you will understand this friendly request. By the way, Jon, I am sorry to say that if your company does not accept our offer, we will be forced to stop buying your steel.”

Perhaps this story is not terribly surprising. It occurs every day in the business world, and nobody refers to it as blackmail, extortion, or foul play. Indeed, this kind of behavior is accepted and encouraged among business people. There are cases, however, where this behavior is impermissible, such as when the original contract required Selco to make a nine-figure dollar investment to manufacture and customize the steel – a process that made this investment worthless for any company other than Buyco. It might be surprising that Buyco’s Chief Executive Officer is coincidentally demanding a modification just after Selco’s investment was sunk and not before that or at the negotiation of the original contract. It might be even more surprising why Buyco is subtly threatening to breach the contract if Selco does not accept the price change. Many people reading these facts might logically conclude that Buyco’s behavior is outrageous. Indeed, it is. But sadly, Buyco’s behavior is also rational: Buyco’s Chief Executive Officer (Fred) is taking advantage of Selco’s sunk investment to increase its contractual surplus.

Selco’s Chief Executive Officer (Jon) might consider telling Fred to stop buying its steel as he threatened. But if Buyco follows through on this threat, Jon would consider, his company might find itself on the brink of bankruptcy not only because the contract accounts for a great percentage of its bottom line but also because the ensuing litigation would be lengthy, expensive,

and uncertain. Thus, chances are that Jon, while being outraged, would accept the modification only to avoid a bigger evil: breach. In such a case, Selco is held-up by its buyer.

This hypothetical scenario does not stop there. Jon tells some of his friends, top executives at other companies, about the “extortion” he suffered at the hands of Buyco. His colleagues’ reaction is natural: after listening to Selco’s predicament, they refrain from entering into contracts requiring idiosyncratic investments to avoid being in a vulnerable position during the performance of these contracts. They prefer, and no shareholder may criticize them for such decisions, to make general and low-risk investments. They are also held-up, and their refusal to make some investments is not good for companies or for the economy as a whole.

During the last decades, hundreds if not thousands of papers have been written about the hold-up problem.¹ This problem, therefore, is well understood. The literature is not restricted to economics, since some investigations have addressed the role of the law in the prevention of the hold-up problem.² Not surprisingly, most if not all of these papers have focused on U.S. law. As a result, the relationship between other laws and the hold-up problem, especially developing countries’ laws where investments are crucial for economic growth,³ is still rather unstudied.

This dissertation intends to bridge this gap, at least regarding the role of the laws of one country, Colombia, in the prevention of the hold-up problem. Put differently, many laws, cases, and scholarly research about the hold-up problem exist, but they are not even slightly related to

¹ For a list of some of these documents, see the bibliography at the end of this dissertation.

² See, e.g., Steven Shavell, *Contractual Holdup and Legal Intervention*, 36 J. LEGAL STUD. 325, 325 (2007) [hereinafter Shavell (Contractual)].

³ Investment is one of the four components of the gross domestic product of any economy (the others are consumption, government procurement, and net exports). See JOSÉ DE GREGORIO, *MACROECONOMÍA [MACROECONOMICS]* 38 (2007). In Colombia, the ratio of investment to gross domestic product is slightly below 30%. See DEPARTAMENTO ADMINISTRATIVO NACIONAL DE ESTADÍSTICA [COLOMBIAN AGENCY FOR STATISTICS] (Jan. 19, 2013), <http://www.dane.gov.co>.

Colombian contract law. The opposite is also true: many writings on Colombian contract law have been published, but they do not deal with the hold-up problem. Thus, the contribution of this dissertation will be the analysis of a link, unrecognized until now, between these two topics: the hold-up problem and Colombian contract law.

Hold-up, the situation arising in the example above,⁴ is a problem for many reasons. Most noticeably, hold-up leads to inefficient investments, which, in turn, harms the macroeconomic fundamentals of a country. Thus, if the hold-up problem is not well understood, and worse, if the law does not adequately address it, many huge and strategic investments for the economic development of Colombia will never be made. This negative scenario may arise in industries such as highways' construction, energy infrastructure, oil and gas extraction and transportation, mining exploration and extraction, heavy manufacturing industry, and technology-enhanced agriculture. This lack of enough investments, in turn, will prevent Colombia from taking advantage of a globalized economy and the preferential trade agreements the country has recently entered and, as a result, from reducing the unemployment rate as well as the technological gap with more developed countries.

The purpose of this dissertation is to confirm or reject the thesis stating that Colombian law does not *efficiently* address the hold-up problem. An efficient law, in the context of this dissertation, means a set of legal rules that prevent or counteract the under-investment effect of the hold-up problem. Put more simply, the closer the investments are to their optimal level, the more efficient the laws dealing with the hold-up problem. As the last statement suggests, this dissertation does not address legal or economic consequences of the hold-up problem other than

⁴ See discussion *supra* pp. 1-2. For a definition of the hold-up problem, see *infra* § II.A.

investments below the efficient level, such as an increase in transaction costs or a reduction in the reliability of contracts.

Although this dissertation deals with only the under-investment issue, at least two other harmful effects of the hold-up problem deserve some explanation. First, the hold-up problem leads to an increase in transaction costs because the parties deciding to make idiosyncratic investments do so only after taking some precautions, such as protective contract provisions, to avoid being extorted during the performance stage of the contract. Of course, these precautions are expensive; hence, their technical name is transaction costs.⁵ Even worse, protective contract provisions are not always effective to address the hold-up problem. Otherwise, these provisions would be used sparingly to prevent the hold-up problem. For example, a stipulated damages clause may prevent the hold-up problem. But stipulated damages clauses have a cost, as an increased or reduced price for the potentially held-up party. Furthermore, if this party is actually held-up, enforcing the stipulated damages clause is not an easy task.

Second, the hold-up problem also reduces the reliability of contracts; that is, the confidence that parties, and the market as a whole, should have in the fact that contracts are usually performed in accordance with the provisions that were voluntarily agreed on. Reliability in contracts is reduced because the hold-up problem forces a one-sided modification that one of the parties would not have accepted but for the fact of being afraid to lose a relationship-specific

⁵ For a definition of transaction costs, see *infra* § II.B.

investment. Needless to say, if contracts are not reliable, the efficiency of markets would be impaired and their failures would be worsened.⁶

This dissertation concludes that Colombian law does not completely prevent the hold-up problem. At most, some of the Colombian legal rules mitigate but do not avoid or solve the hold-up problem. This writing, of course, does not stop there. After arriving at this conclusion, the dissertation makes some proposals to efficiently address the hold-up problem from a legal standpoint; *i.e.*, how Colombian law can *avoid, solve, mitigate* or at least *not* aggravate the hold-up problem.

Avoiding means that the hold-up problem does not arise because the potentially held-up party does not abstain from entering contracts requiring an idiosyncratic investment and, furthermore, the non-investing party refrains from demanding a contract modification under threat of breach once the investment is sunk or, if such demand occurs, the other party rejects it after deciding that the threat to breach is not credible. *Solving* means that the hold-up problem arises but the law removes its negative consequences by either striking down a modification or giving adequate (that is, fully compensatory) remedies to the held-up party in case of breach of contract.

Mitigating means that the hold-up problem arises but the law, not being able to solve it, moderates its effects (*e.g.*, providing undercompensatory remedies to the held-up party in case of breach). Last but not the least, *not aggravating* means that the hold-up problem arises without being solved or mitigated, but at least the law does not exacerbate it.

⁶ As to the causality link between reliability in contracts and well-performing markets, *see* MANCUR OLSON, POWER AND PROSPERITY: OUTGROWING COMMUNIST AND CAPITALIST DICTATORSHIPS 185 (2000).

This dissertation does not discuss the hold-up problem in all kind of contracts. The scope is restricted to idiosyncratic investments and executory contracts between private merchants to manufacture and sell or supply goods. *Idiosyncratic* means that at least one party has invested in assets whose value in alternative uses is greatly reduced before performing its duties. This restriction follows the notion of the hold-up problem, which by definition entails sunk costs that are not easily redeployed to other uses in case of breach. *Executory* means that at least one party has not completely performed its duties when a demand for a modification backed by a threat to breach is made. Therefore, present sales are excluded. *Between private merchants* means that both consumer and administrative contracts are excluded. *To manufacture* means that the seller, and not the buyer, procures a substantial part of the capital and labor needed for producing the goods. *Goods*, for the purposes of this dissertation, are all kinds of tangible movables. To take just three illustrations, aluminum, plastic, and electricity are goods. Software programs are not considered goods due to practical reasons; intellectual property rights are beyond the scope of the dissertation. Practical reasons also lead to consider crops, timber, electricity, and minerals as goods within the dissertation's scope; the big investments that are usually required to produce these goods may trigger the hold-up problem.

Contracts for the sale and supply of goods, and no other contracts, are within the scope due to practical and theoretical reasons. The practical reasons are limitations on the length of this dissertation. An in-depth analysis of one kind of contract is preferred to a shallow analysis of all kinds of contracts. As to theoretical reasons, not only a significant part of the literature on the

hold-up problem refers to sales and supply agreements,⁷ but also there is an ample Colombian jurisprudence on sales and supply agreements.

This dissertation is divided into seven chapters. This chapter, the first one, is introductory. Chapter II describes the economics of the hold-up problem by defining it, mentioning its main factors, and describing the governance structures that may prevent it. Chapter III analyzes the hold-up problem in U.S. law. While the dissertation focus on Colombian law, the comparative analysis is relevant to establish whether foreign and international rules might successfully be transplanted to Colombia. In addition, if the contract is international (*e.g.*, one party has its domicile outside Colombia), the parties might choose a governing law other than Colombian law. The U.S. law is chosen on the following grounds: the dissertation was written in the United States; U.S. scholars have written the lion's share of the literature on the hold-up problem; and the United States is the first trade partner of Colombia.⁸

Chapter IV examines the hold-up problem in Colombian contract law, highlighting the differences between this legal system and the U.S. law. Chapter V, the empirical part of the dissertation, discusses the results of an experiment on the hold-up problem with Colombian participants testing the theories predicting that penalty clauses, on the one hand, and a high level of legal remedies for breach of contract, on the other hand, may prevent the hold-up problem.

Chapter VI, based on the analysis of the previous chapters, presents some proposals to efficiently address the hold-up problem in Colombian contract law and discusses the practical prospects for revising Colombian legal rules along the lines we suggest. These proposals are

⁷ OLIVER E. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* 1 (1985).

⁸ *See* MINISTERIO DE COMERCIO, INDUSTRIA Y TURISMO (COLOMBIAN MINISTRY OF COMMERCE, INDUSTRY, AND TOURISM) (Nov. 19, 2013), <https://www.mincomercio.gov.co/publicaciones.php?id=10422>.

amendments to Colombian laws and to the present approach of courts and arbitrators, clauses that sophisticated parties to a contract may provide to prevent the hold-up problem, and scholarly strategies to increase the production of legal writings on the hold-up problem under Colombian law. Last but not least, Chapter VII presents some concluding remarks.

CHAPTER II –THE ECONOMICS OF THE HOLD-UP PROBLEM

Section II.A. - Definition of the Hold-up Problem

The hold-up problem occurs when a company refrains from entering a contract and making a specific investment to avoid the risk that the other party to the contract will extort a “redistributive modification” – a modification for the exclusive benefit of the party who did not make the investment. The hold-up problem may trigger many problems in contract law and economics such as increasing transaction costs resulting from one party using expensive contractual safeguards to protect itself against extorted modifications, impairing the security and reliability of contracts and, more generally, making markets less efficient. This dissertation focuses on one harmful consequence of the hold-up problem: investment under efficient levels. Needless to say, a low level of investment may affect economic growth and employment rates, among others macroeconomic variables. If Colombian law does not efficiently deal with the hold-up problem, part of the specialized investments needed to compete in a globalized world and achieve high and steady rates of economic growth will not be made.

An example, more detailed than the one mentioned in the introductory chapter,⁹ is useful to obtain a better understanding of the hold-up problem. A buyer, some time ago, decided to construct a power plant in the Colombian hinterlands. To secure the main input required to produce electricity, this buyer entered a contract with a seller for the supply of natural gas during a certain term at a price . The seller bargained for a fixed term in order to recoup its billion-dollar investment in the drilling of a new natural gas well adjacent to the power plant. No pipeline connects the well with the heartland of Colombia. The contract worked well for some time, until

⁹ See *supra* Chapter I.

the buyer informed the seller that a third party obtained a license to extract and sell coal from a mine near to the power plant and that coal prices are much lower than natural gas prices. The seller does not know whether this information about coal prices is real or contrived. Based on this information about coal prices, the buyer proposed to reduce the contract price from p_0 to a lower price, p_1 . The buyer also threatened to breach the contract, to make some investments in its power plant to use coal rather than natural gas as the raw material, and to enter a contract with the third-party for the supply of coal if the seller does not accept this modification. The natural gas extracted from the well could not be sold to other companies at competitive prices due to transportation costs. The seller, being aware that litigation for breach of contract will be protracted, expensive, and uncertain, decides to accept the proposed modification. In this scenario, the seller is held-up by the non-investing buyer.¹⁰

This factual statement raises the following questions: (1) what does it mean that a party to a contract is held-up by the other party or, alternatively, what is the hold-up problem and why is it important; (2) which factors create the hold-up problem and which are the main terms associated with it; and (3) how can this problem be avoided, solved, mitigated, or, at least, not aggravated (in general, prevented). Chapter II intends to answer these questions.

¹⁰ This example could be the other way around; *i.e.*, the buyer, and not the seller, might be the held-up party. This might happen if the buyer could purchase the main input to operate its power plant only from one seller, who was available to sell its output to several buyers. The example used in an experiment on the hold-up problem assumes that the buyer is the held-up party. *See infra* Chapter V. On the other hand, this example resembles a famous quote of the cinema history. In the *Godfather*, Michael Corleone (Al Pacino) says to Kay Adams (Diane Keaton): “My father [Don Vito Corleone – Marlon Brando] made him an offer he couldn’t refuse.” After Ms. Adams asks: “What was that?” Michael Corleone answers “Luca Brasi [Lenny Montana] held a gun to his head, and my father assured him that either his brains or his signature would be on the contract.” *See* MARIO PUZO, *THE GODFATHER* 382 (2002); *see also* IMDB, <http://www.imdb.com/title/tt0068646/quotes> (last visited Jan. 19, 2013). In the *Godfather*, the options were the signature of the contract or the death of the victim. For a held-up party, the options are the acceptance of a modification or the financial death of the business concern.

Since the hold-up problem was first mentioned more than thirty years ago,¹¹ economists have proposed several definitions, including the following three. Professors Daniel A. Graham and Ellen R. Peirce states that “a problem [the hold-up problem] arises when one party to a contract agrees to a proposed modification either because of expected dire consequences should that party not agree to the modification or because the available remedies . . . are inadequate to deter breach by the other party.”¹²

This definition indicates that the hold-up problem leads to a modification to a contract that the held-up party accepts to avoid a breach. In the context of contracts for sale, this modification is usually an adjustment of the contract price—either a price reduction if the seller is the held-up party or a price increase in the opposite case. The definition also suggests that if remedies for breach of contract were fully compensatory (*i.e.*, if all damages might be recovered), a party would prefer suffering a breach rather than agreeing to a modification that reduces its benefit of the bargain. Hence, in theory, remedies might solve the hold-up problem. In practice, however, remedies are undercompensatory.¹³

The hold-up problem, however, is not restricted to modifications accepted to avoid breach of contracts. The anticipation of these changes leads to potential held-up parties to refrain from making any investments. In the words of Professor Abraham L. Wickelgren, “[t]he hold-up problem occurs when parties to a contract do not invest efficiently in the relationship because they fear that renegotiation of the contract will strip them of much of the gains from that

¹¹ See William P. Rogerson, *Contractual Solutions to the Hold-Up Problem*, 59 REV. ECON. STUD. 777, 777 (1992).

¹² Daniel A. Graham & Ellen R. Peirce, *Contract Modification: An Economic Analysis of the Hold-up Game*, 52 LAW & CONTEMP. PROBS. 9, 9 (1989).

¹³ See *infra* § III.C.4.

investment.”¹⁴ To put it simpler, a rational party, anticipating the hold-up problem, might decide to avoid it by investing below efficient levels or even by not investing at all.¹⁵ For this reason, the prevention of the hold-up problem is important.

Professors Robert Scott & Paul Stephan provide an example to explain how the hold-up problem leads to underinvestment.¹⁶ A simplified version of this example, using different figures, is as follows. A seller may produce either general-purpose goods or customized goods, whose costs are \$60 and \$100, respectively. The market price of the general-purpose goods is \$70. Buyers, on average, value the general-purpose goods at \$80 while a particular buyer values the customized goods at \$140. This buyer proposes to the seller to buy the customized goods at a price of \$120. If a contract is formed, the seller will make a relationship-specific investment and will receive the price of the customized goods upon their delivery. The seller, although tempted to agree to the price of \$120, anticipates that the buyer, after the relationship-specific investment has been made, will propose a new contract price of \$80 and will threaten to breach if this modification is not accepted. The seller knows that the modification will generate a net loss amounting to \$20 (the new price of \$80 less the cost of \$100). In case of breach, the customized

¹⁴ Abraham L. Wickelgren, *The Limitations of Buyer-Option Contracts in Solving the Holdup Problem*, 23 J. LAW, ECON. & ORG. 127, 127 (2007).

¹⁵ See Benjamin Klein, Robert G. Crawford & Armen A. Alchian, *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J. LAW & ECON. 297, 301 (1978). Professor Wickelgren is not the only scholar who claims that the hold-up problem leads to underinvestment. See also Aaron S. Edlin & Stefan Reichelstein, *Holdups, Standard Breach Remedies, and Optimal Investment*, 86 AM. ECON. REV. 478, 478 (1996) (stating that a party may be afraid of making a customized investment and, after that, losing part of its expected return in later negotiations); Steinar Holden, *Renegotiation and the Efficiency of Investments*, 30 RAND J. ECON. 106, 106 (1999) (concluding that efficient level of investments will be achieved only if the parties can obtain their expected marginal return); Thomas P. Lyon & Eric Rasmusen, *Buyer-Option Contracts Restored: Renegotiation, Inefficient Threats, and the Hold-up Problem*, 20 J. LAW, ECON. & ORG. 148, 149 (2004) (contending that parties to a contract may refrain from investing efficiently if any of them anticipates that the other party will threaten a breach in order to increase its contractual surplus in a renegotiation).

¹⁶ ROBERT E. SCOTT & PAUL B. STEPHAN, *THE LIMITS OF LEVIATHAN: CONTRACT THEORY AND THE ENFORCEMENT OF INTERNATIONAL LAW* 66 (2011).

goods will be scrap and, therefore, its market value will be zero. Remedies, assuming the absence of legal enforcement, will also be zero. Thus, a farsighted seller will reject the buyer's offer and will prefer to manufacture general-purpose goods, which can be sold to many buyers. In such a case, a certain profit of \$10 (the general purpose goods' price of \$70, less their cost of \$60) will be better than an uncertain profit of \$20 (the idiosyncratic goods' price of \$120 less their cost of \$100). The bottom line is that this seller will produce goods that buyers value at \$80 instead of goods that at least one buyer values at \$140. The deadweight loss for society is \$60 (the buyers' valuation of the general purpose goods, \$80 less the value that the customized goods have for at least one buyer, \$140). Table 1 summarizes these figures.

Table 1 – Illustration of Underinvestment as the Main Effect of the Hold-up Problem

CONCEPT	GENERAL GOODS	SPECIAL GOODS
Cost (C)	\$60	\$100
Original price (OP)	\$70	\$120
Buyers' valuation (V)	\$80	\$140
Anticipated renegotiated price (RP)	The original price	\$80
Original seller's profit (OSP = OP – C)	\$10	\$20
Anticipated seller's profit (AP = RP – C)	\$10	-\$20
Loss (value of the general goods – value of the customized goods)		-\$60

That the seller in this example prefers a certain profit of \$10 over an uncertain profit of \$20 also indicates that held-up parties are usually risk-averse. As a general rule, a person is risk-averse when it “would rather receive the expected value of a gamble with certainty than face the risk inherent in the gamble itself.”¹⁷

¹⁷ GEOFFREY A. JEHLE & PHILIP J. RENY, *ADVANCED MICROECONOMIC THEORY* 105 (2d ed. 2001). In a typical example of risk-aversion, a person prefers a payoff of slightly less than \$500, for sure, over a scenario with a 50% of

Another illustration is useful to further explain this concept of risk aversion in the context of the hold-up problem. Suppose that a seller and a buyer have entered into a contract whose original price is \$100. The buyer proposes a new price of \$80 under threat to breach. The seller anticipates that the buyer is 50% likely to breach the contract and that the expected value of remedies is \$70 (recall that remedies are undercompensatory). Thus, the expected value of the scenario in which the seller rejects the offer of modification is \$85 (the original price, \$100, adjusted by its likelihood, 50%, plus the value that the seller would receive in case of breach, \$70, adjusted by its likelihood, 50%). In this example, a risk-averse seller prefers a modification resulting in a price of \$80 with *certainty* over entering into the gamble of rejecting the offer, although it results in a larger *expected* price of \$85. More generally, a held-up party would prefer the certainty of a modified price to the uncertainty of whether the other party will breach the contract, even if this scenario might lead to a larger payoff.

So far, this dissertation has described the hold-up problem based on some definitions of leading scholars. Although those definitions are from authoritative sources, this dissertation evaluates the hold-up problem based on an original definition of the term. This original definition focuses primarily on the underinvestment issue rather than on the other issues that result from the hold-up problem.¹⁸

chances of winning \$1000 and 50% of chances of winning 0. See Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *ECONOMETRICA* 263, 264 (1979) (reporting the results of an experiment in which 80% of students preferred a certain gain of \$3000 instead of a gain of \$4000 with a 80% likelihood and a gain of \$0 with a 20% likelihood); (“Prospect theory shows that people are risk averse—they value losses more than an equal amount of gain.”); Larry T. Garvin, *Adequate Assurance of Performance: Of Risk, Duress, and Cognition*, 69 *U. COLO. L. REV.* 71, 152-53 (1998) (reminding that prospect theory holds that people are more averse to losses than to gains).

¹⁸ See discussion *supra* p. 9.

Thus, for the purposes of this dissertation, the hold-up problem is a bargaining power situation occurring when one party refrains from entering into a contract and making a relationship-specific investment to avoid the risk that the other party, once the investment has been sunk, demands a modification for its exclusive benefit backed by a credible threat to breach.¹⁹ This dissertation will refer to the party that makes the investment as the held-up party and to the other party as the non-investing party.

As this definition suggests, it may be divided into the following two parts.²⁰ On the one hand, the definition refers to the classical hold-up situation: a failure to invest when investing is efficient. On the other hand, this dissertation also includes within the definition the issue of extracting of rents during the performance stage, by which the non-investing party attempts to use its bargaining power to increase its contractual surplus through a threat to breach.

Since modification is a key term in this dissertation, it requires a definition and some further analysis.²¹ In the words of Professor David V. Snyder, “[a] modification results from an agreement to change a preexisting contract.”²² This definition encompasses, among others things, the notions of rescission, which “ends the earlier contract completely,”²³ and novation,

¹⁹ Admittedly, the hold-up problem might arise even before the potential held-up party makes its investment. That is, a party who has not yet made an investment, but who is bound to do it in order to perform an idiosyncratic contract already formed, might be vulnerable to the opportunistic behavior of the other party, who might make a request of modification under threat to breach. If the contract is breached, then the aggrieved party will not lose the investment, because it had not been made, but will lose its opportunity cost, i.e., the profit that would have result from entering into another contract.

²⁰ See generally Edlin & Reichelstein, *supra* note 15, at 478.

²¹ The definition of modification is mentioned here and not in Section II.A.2, because it is not, in strict sense, a factor creating the hold-up problem.

²² David V. Snyder, *The Law of Contract and the Concept of Change: Public and Private Attempts to Regulate Modification, Waiver, and Estoppel*, 1999 WIS. L. REV. 607, 626 [hereinafter Snyder (Modification)].

²³ See *id.* at 627.

“an agreement that replaces an existing agreement either by substitution of one set of obligations for another or by substitution of parties.”²⁴

A non-investing party, however, would be interested in a modification only from a narrow standpoint; *i.e.*, in a change to a preexisting contract that “carries forward something from the earlier contract,”²⁵ “without substituting an entirely new contract in its place.”²⁶

A modification, either from a broad or a narrow standpoint, might be of two kinds: (1) a surplus-maximizing modification or (2) a distributive modification. A surplus-maximizing modification makes at least one of the parties better off, without making anyone worse off. As a result, a surplus-maximizing modification is Pareto efficient.²⁷ Most of the time, this kind of change is a win-win modification, because it makes both parties better off, as happens when the buyer and the seller bargain for an additional quantity of the goods at a price lower than the buyer’s valuation but higher than the seller’s cost. A surplus-maximizing modification might also exist if only one of the parties is better off and the other party is not worse off. For instance, a modification providing a later date of performance, which is beneficial for a seller but indifferent for a buyer that does not need the goods before the new deadline, is a surplus-maximizing modification.

²⁴ See Martin H. Brinkley, *The Regulation of Contractual Change: A Guide to No Oral Modification Clauses for North Carolina Lawyers*, 81 N.C. L. REV. 2239, 2253 n.55 (2002); see also *Varnell v. Henry M. Milgrom, Inc.*, 337 S.E.2d 616, 619 (N.C. App. 1985) (“A novation is generally described as the substitution of a new contract for an existing valid contract by agreement of the parties.”).

²⁵ See Snyder (Modification), *supra* note 17, at 627.

²⁶ See Brinkley, *supra* note 24, at 2253 n.55.

²⁷ A situation is Pareto efficient or Pareto optimal when “there is no change from that situation that can make someone better off without making someone else worse off.” A. MITCHELL POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 7 n.4 (2003). For similar definitions of Pareto efficiency, see, among others: NICHOLAS MERCURO & STEVEN G. MEDEMA, *ECONOMICS AND THE LAW, SECOND EDITION: FROM POSNER TO POSTMODERNISM AND BEYOND* 21 (2006); DOUGLAS G. BAIRD, ROBERT H. GERTNER & RANDAL C. PICKER, *GAME THEORY AND THE LAW* 308, 311 (1998).

A redistributive modification, in contrast, is not Pareto-efficient but a zero-sum result. Redistributive modifications occur where a better bargain for one party entails a worse bargain for the other party. The modifications that arise due to the hold-up problem are redistributive modifications because, if the offer is accepted, then the contractual share of the held-up party will be reduced while the share of the non-investing party will be increased by the same amount.

Section II.B - Factors that May Create the Hold-up Problem

Section II.B explains the key terms related to the hold-up problem. The first term is bargaining power, which indicates that one party to the contract has better alternatives than the other party²⁸ and which is a function of two aspects: patience and disagreement points.

Simply put, the more patient a party, the stronger its bargaining power.²⁹ A held-up party who knows that recovering damages for breach will take a long time may be impatient and therefore be a weak bargainer. The second aspect is the parties' disagreement points or, put more simply, the options that parties have if the contract is breached. Needless to say, if investments are non-redeployable, disagreement points are almost inexistent for the held-up parties. Non-investing parties, in contrast, may have as an exit point the opportunity to replace their held-up parties with more efficient suppliers or purchasers.

The second term is transaction costs. The definition of this concept requires, as a first step, an explanation of incompleteness of contracts. A contract is incomplete, from an economic perspective, "when it is insufficiently state contingent,"³⁰ or when its terms are not optimal given

²⁸ See RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 118 (7th ed. 2010).

²⁹ See Alan Schwartz & Robert E. Scott, *Contract Theory and the Limits of Contract Law*, 113 *YALE L.J.* 553, 580 (2003).

³⁰ Alan Schwartz, *Incomplete Contracts*, in 2 *NEW PALGRAVE DICTIONARY OF ECONOMICS AND LAW* 277, 277 (Peter Newman ed., 1998).

all the states of nature that might be realized during its performance.³¹ To put it more simply, a contract is incomplete when the contract cannot foresee all the contingencies that may arise.³²

Since parties are not able to anticipate every state of nature at the formation stage,³³ or to define the contingencies that may occur later on,³⁴ all contracts are incomplete.³⁵ A state of nature, also called a state of the world,³⁶ is any condition or contingency that may or may not happen during the performance stage of the contract and over which the parties may or may not have control.³⁷ For instance, a state of nature is a market price of the goods at the time of delivery amounting to twenty percent more than the contract price. Another state of nature is a market price of thirty percent less than the contract price. It follows that the number of states of nature may be infinite and that, at the execution of the contract, parties can neither know nor forecast with accuracy the state of nature that will be realized, especially if the market is volatile and the manufacturing process is lengthy. In simpler words, contracts are incomplete because human beings cannot foretell the future.³⁸

³¹ See BAIRD, GERTNER & PICKER, *supra* note 27, at 308.

³² From a legal standpoint, a contract is incomplete if it has a true gap, *i.e.*, if it fails to fully provide the obligations of the parties. See Ian Ayres & Robert Gertner, *Strategic Contractual Inefficiency and the Optimal Choice of Legal Rules*, 101 YALE L.J. 729, 730 (1992); see also BAIRD, GERTNER & PICKER, *supra* note 27, at 308.

³³ See Ayres & Gertner, *supra* note 32, at 730.

³⁴ See Jean Tirole, *Incomplete Contracts: Where Do We Stand?*, 67 ECONOMETRICA 741, 741 (1999). See also OLIVER E. WILLIAMSON, *THE MECHANISMS OF GOVERNANCE* 373 (1996) [hereinafter WILLIAMSON (1996)].

³⁵ See Artigot I Golobardes, Mireia & Gómez, Fernando, *Long-term Contracts in the Law & Economics Literature*, in 6 CONTRACT LAW & ECONOMICS, ENCYCLOPEDIA OF LAW & ECONOMICS 314, 331 (Gerrit De Geest, ed., 2011) (“Truly complete contracts do not exist.”).

³⁶ See Edlin & Reichelstein, *supra* note 15, at 478.

³⁷ Although there is no express definition of “state of nature” in the references that this dissertation uses, the meaning of this concept is inferred from its use in the following writings: Edlin & Reichelstein, *supra* note 15, at 480; Graham & Peirce, *supra* note 12, at 22; Holden, *supra* note 15, at 108; Lyon & Rasmusen, *supra* note 15, at 160; W. Bentley MacLeod & James M. Malcomson, *Investments, Holdup, and the Form of Market Contracts*, 83 AM. ECON. REV. 811, 815 (1993).

³⁸ See SCOTT & STEPHAN, *supra* note 16, at 66 (“The future is unknown and unknowable.”).

Even if parties could anticipate all states of nature, contracts might still be incomplete because the expenses of negotiating, drafting, and monitoring the allocation of rights and duties resulting from any possible contingency might be unaffordable. Those expenses are usually referred to as transaction costs, which Nobel Laureate Oliver E. Williamson defines as “[t]he ex ante costs of drafting, negotiating, and safeguarding an agreement, and, more especially, the ex post costs of maladaptation and adjustment that arise when contract execution is misaligned as a result of gaps, errors, omissions, and unanticipated disturbances; the costs of running the economic system.”³⁹

Both incompleteness of contracts and transaction costs reduce the ability of the parties to prevent the hold-up problem. If contracts were complete and transaction costs zero, the original contract would foresee and allocate all the contingencies that might arise during its performance. As a result, the non-investing party might not falsely claim unforeseen circumstances as a justification for demanding a modification under threat to breach.

Undeniably, the non-investing party might blatantly admit that it does not have any justification for requesting a contractual change other than increasing its surplus. If the non-investing party could not disguise its request as a justified contractual change, however, the held-up party would have a better chance of successfully contesting the modification before a court on the grounds that it was made in bad faith or under economic duress.

Alternatively, the held-up party might reject the demand for a modification because the breach scenario is not as terrible as in incomplete contracts. In complete contracts, parties may foresee all contingencies, including the effects of breach. An original complete contract,

³⁹ WILLIAMSON (1996), *supra* note 34, at 379.

therefore, might provide liquidated damages amounting to precisely the damages that the held-up party will suffer in case of breach, most of which would be unforeseeable or uncertain in incomplete contracts.

The third term is the kind of information related to hold-up situations. Information that both parties to a contract know is observable.⁴⁰ Information known to both parties to a contract is observable.⁴¹ Information is observable and also verifiable, in turn, if it can be conveyed to a third-party, such as a court, at a reasonable cost (*i.e.*, at a cost that is lower than the value of conveying the information).⁴² As a result, non-verifiable information cannot be used to seek the enforcement of a promise before a court.

In the context of the hold-up problem, a non-investing buyer might falsely claim as an excuse to breach a contract that the quality of goods is inferior to the standard provided in the contract. The information about the quality might be non-verifiable, especially if the goods are complex or idiosyncratic, as happens in hold-up situations.⁴³ Thus, the non-verifiability of information related to a breach of contract might make the case of a held-up party before a court less promising and, going back in time, lead this party to accept a modification under threat to breach.

⁴⁰ See BAIRD, GERTNER & PICKER, *supra* note 27, at 3011; SCOTT & STEPHAN, *supra* note 16, at 63; Lisa Bernstein, *Merchant Law in A Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765, 1791-92 (1996) [hereinafter Bernstein (Grain)].

⁴¹ See BAIRD, GERTNER & PICKER, *supra* note 27, at 89, 109, 311-17; SCOTT & STEPHAN, *supra* note 16, at 71; Bernstein (Grain), *supra* note 40, at 1791-92.

⁴² See *id.* at 89, 109, 311, 317; SCOTT & STEPHAN, *supra* note 16, at 71; Bernstein (Grain), *supra* note 40, at 1791-92.

⁴³ See Schwartz & Scott, *supra* note 29, at 578. See generally BAIRD, GERTNER & PICKER, *supra* note 27, at 111.

In addition to bargaining power, incompleteness of contracts, transaction costs, and non-verifiable information, other terms related to the hold-up problem are relationship-specific investments, quasi rents, credible threats, bounded rationality, and opportunism.

Relationship-specific investments are those highly valuable for the parties while they are performing the contract but whose value is significantly less or even zero for third parties or for the parties themselves when the contract ends.⁴⁴ An interesting question is how much less the value for third parties should be in comparison with the value within the contract to categorize an investment as a relationship-specific one. Professors Scott and Stephan answer this question by stating that relationship-specific investments are those that cannot be sold to a third party for a price above its cost.⁴⁵

Relationship-specific investments may lead to quasi rents. According to Professor Benjamin Klein, the quasi rent value of an asset “is the excess of its value over its salvage value, that is, its value in its next best use to another renter.”⁴⁶ For example, assume that a non-investing buyer values some idiosyncratic assets, which the held-up seller has created after making a relationship-specific investment, at \$100. Since these assets are idiosyncratic, other buyers only value them at, say, \$20. The quasi rent value of these assets is therefore the difference between these two figures: \$80.

Relationship-specific investments are a functional equivalent of two similar terms: idiosyncratic transactions and asset specificity. Idiosyncratic transactions are those in which the

⁴⁴ See Edlin & Reichelstein, *supra* note 15, at 478; Artigot I Golobardes & Gómez, *supra* note 35, at 314-15; MacLeod & Malcomson, *supra* note 37, at 813.

⁴⁵ SCOTT & STEPHAN, *supra* note 16, at 66; see also Benjamin Klein & Keith B Leffler, *The Role of Market Forces in Assuring Contractual Performance*, 89 J. POLITICAL ECON. 615, 619 (1981) (referring to a similar concept, sunk costs, which are “the non-salvageable part of an advance commitment”).

⁴⁶ See Klein, Crawford & Alchian, *supra* note 15, at 298.

capital and labor required for manufacturing the goods are very specialized and, thereby, the identity of the parties is quite relevant.⁴⁷ Asset specificity, in turn, refers to investments that cannot be redeployed without loss of substantial value if a contract is breached before its full return has been obtained.⁴⁸ The range of asset specificity goes from zero to complete, being zero in contracts for the sale of purely generic goods between parties whose identity is irrelevant. As the goods become more customized and the identity of the parties begins to matter, asset specificity increases.⁴⁹

The next term, credible threats, is described simultaneously with its antonym, empty threats. Professors Douglas Baird, Robert H. Gertner and Randal C. Picker state that a threat is credible if the threatening party can maximize its payoffs by carrying out the threat in case the other party does not accede to its request. Otherwise, the threat is empty.⁵⁰ In the realm of contracts, Professor Holden affirms that a threat to breach a contract is credible if the threatening party may obtain a higher payoff from carrying out its threat than from performing its duties under the original terms.⁵¹ Professor Williamson, in turn, defines credible threats using the following illustration: A says that it will do *X* (e.g., breaching the contract) if *B* does *Y* (e.g., refusing to

⁴⁷ See WILLIAMSON (1985), *supra* note 7, at 76.

⁴⁸ See WILLIAMSON (1996), *supra* note 34, at 116.

⁴⁹ See *id.* Professor Williamson defines the following six kinds of asset specificity: (1) site asset specificity, which occurs when two plants are located in close proximity with the purpose of minimizing on inventory and transportation costs; (2) physical asset specificity, which arises when specialized machinery is used to manufacture customized goods; (3) human asset specificity, happening when one party values the skills of the other party's employees much more than any third party; (4) dedicated assets, which are expansions of a plant or facility at the request of a particular buyer; (5) brand name capital, related to reputation investments; (6) temporal specificity, which occurs when a company's customized operations highly depend on opportune assistance of external skilled personnel. See *id.* at 59, 106, 116; WILLIAMSON (1985), *supra* note 7, at 55.

⁵⁰ See BAIRD, GERTNER & PICKER, *supra* note 27, at 305.

⁵¹ See Holden, *supra* note 15, at 110. Professor Klein proposes a similar definition by asserting that a threat is credible if the potential benefit from breaching the contract is higher than the damages to be paid to the other party. See Benjamin Klein, *Why Hold-Ups Occur: The Self Enforcing Range of Contractual Relations*, 34 ECON. INQUIRY, 444, 449 (1996).

agree to the proposed modification). If after *B* does *Y*, *A*'s best response is to do *Z* (e.g., performing its contractual duties pursuant to the original terms), then the threat is not credible to a rational *B*.⁵²

Both credible and empty threats may trigger the hold-up problem. Credible threats arise when the non-investing party may replace the held-up party with a more efficient supplier or purchaser. Empty threats, in turn, occur when the non-investing party, in order to obtain a favorable contract modification, falsely claims that it has a better trading opportunity to the held-up party, which cannot ascertain that the non-investing party's statement is a bluff.⁵³

The final two terms are bounded rationality and opportunism. Professor Herbert A. Simon defines bounded rationality as behavior that is "intendedly rational, but only limitedly so."⁵⁴ Due to bounded rationality, the capacity of the parties to foresee the states of nature that may arise during the performance of a contract is small.⁵⁵ In the context of hold-up situations, bounded rationality prevents the parties from foreseeing all the contingencies that may give rise to a fair and equitable modification. Hence, a non-investing party might take advantage of bounded rationality to claim that its offer to modification is not opportunistic but just a form to adapt the contract to an unforeseen state of nature.

Lastly, Professor Oliver E. Williamson defines opportunism as "self-interest with guile."⁵⁶

Professor Ian R. Macneil disagrees with this definition on the grounds that guile is not an

⁵² See WILLIAMSON (1996), *supra* note 34, at 236.

⁵³ Indeed, this dissertation will analyze the results of an experiment on the hold-up problem in which a non-investing seller offers a modification falsely claiming to have an opportunity to efficiently breach the contract. See *infra* Chapter V.

⁵⁴ HERBERT A. SIMON, *MODELS OF MAN: SOCIAL AND RATIONAL* 4 (1st ed. 1957).

⁵⁵ See WILLIAMSON (1985), *supra* note 7, at 76.

⁵⁶ *Id.* at 47.

essential element of opportunism. Macneil uses the following example to explain how opportunism may be present without guile, which he defines as “taking advantage of opportunities with little regard for principles or consequences.”⁵⁷ A buyer breaches a five-year requirement contract at the third year of performance in order to acquire similar goods from a cheaper supplier. The buyer acts without guile because it knows the principles or consequences of its acts. Specifically, the buyer knows that the seller needs five years to recoup its investment and that damages for breach of contract are undercompensatory. Although guile is absent here, the buyer’s conduct is opportunistic because it was something that the parties wanted to prevent by agreeing to a five-year contract. In light of the above, Macneil defines opportunism as “[s]elf-interest seeking contrary to the principles of the relation in which it occurs.”⁵⁸ If opportunism were absent, contracts would not be longer than one page. Rather, a pledge to perform the contract in a cooperative manner, to disclose all relevant information, and to avoid any strategic behavior would be enough.⁵⁹ Due to opportunism, a non-investing party may attempt to take advantage of the investment that a held-up party has made to increase its share in the profits.

Sections II.A and II.B defined the hold-up problem, mentioned its main effect (investments below the efficient level), and described the key factors that create such a problem. To avoid this loss of efficiency, the hold-up problem must be avoided, solved, mitigated, or, at least, not aggravated. Section II.C will explain the governance structures that parties might devise to achieve this purpose.

⁵⁷ Ian R Macneil, *Economic Analysis of Contractual Relations: Its Shortfalls and the Need for a Rich Classificatory Apparatus*, 75 NW. U. L. REV. 1018, 1023 n.20 (1981).

⁵⁸ *Id.* at 1023–24.

⁵⁹ See WILLIAMSON (1985), *supra* note 7, at 47.

Section II.C - Governance Structures and the Hold-Up Problem

“Governance structures” is, in short, a fancy name for solutions to the hold-up problem. The three main governance structures are: (1) vertical integration, (2) markets, and (3) hybrids.⁶⁰ In vertical integration, the “seller” and the “buyer” are not independent parties but instead two divisions of the same organization. As a result, intra-company activities assume the role of the contract and any discrepancy between internal divisions is solved by fiat.⁶¹ According to Nobel Laureate Professor Ronald H. Coase, firms prefer vertical integration to contracting when manufacturing goods is cheaper than purchasing them in the market.⁶²

Vertical integration has both benefits and drawbacks. The main advantage of vertical integration is the saving of the transaction costs that arise during the formation and performance of contracts. As Professor Williamson remarks, “[w]here a single entity spans both sides of the transaction, a presumption of joint profit maximization is warranted.”⁶³ Therefore, if the number

⁶⁰ See WILLIAMSON (1996), *supra* note 34, at 151. See also MERCURO & MEDEMA, *supra* note 27, at 270. Vertical integration, markets, and hybrids are the most relevant governance structures, although, other structures exist (*e.g.*, regulation). See Nick Van der Beek, *Long-term Contracts and Relational Contracts*, in 6 CONTRACT LAW & ECONOMICS, ENCYCLOPEDIA OF LAW & ECONOMICS 281, 284 (Gerrit De Geest ed., 2011). Since this dissertation exclusively focuses on private law, and not on administrative law, regulation is beyond the scope.

⁶¹ See Williamson (1996), *supra* note 34, at 104.

⁶² See R. H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386–405 (1937).

⁶³ WILLIAMSON (1985), *supra* note 7, at 78.

of parties is just one, the hold-up problem would not arise.⁶⁴ As to the cons, vertical integration increases bureaucratic costs.⁶⁵

The second governance structure is the market, which works well for the sale of generic goods or when the identity of the parties is irrelevant because competition is enough protection against opportunism.⁶⁶ Indeed, if one party breaches the contract, the other party may make a cover sale without too much inconvenience. Market structures plainly do not work well for idiosyncratic transactions where third parties value the goods substantially less than do the contracting parties.

Hybrids, the third governance structure, might deal with the hold-up problem more efficiently than the market.⁶⁷ A hybrid, as its name suggests, is a mix between a market and a hierarchical structure, which are the extremes of the spectrum or the polar modes. Hybrids, in

⁶⁴ Incidentally, when the hold-up problem arises in the performance of a contract for sale of goods, it might be solved through the merger of the buyer and the seller. This might have been the strategy that General Motors pursued in its contract with Fisher Body. See Artigot I Golobardes & Gómez, *supra* note 35, at 329; Klein, *supra* note 51, at 456.

⁶⁵ See WILLIAMSON (1996), *supra* note 34, at 104. Although vertical integration is mentioned to indicate that it can avoid the hold-up problem, this structure will not be analyzed in deeper detail because it makes any contract for sale needless.

⁶⁶ See WILLIAMSON (1985), *supra* note 7, at 42. See also Oliver E. Williamson, *Transaction-Cost Economics: The Governance of Contractual Relations*, 22 J.L. & ECON. 233–61, 239 (1979) [hereinafter Williamson (1979)].

⁶⁷ However, not all hybrids are within the scope of this dissertation. An illustration is a contract concentrating the property in one of the parties of the transaction, the buyer, while maintaining the seller as a separate entity. In this case, the buyer may hold the title of the capital and inputs needed to manufacture the goods. Professors Patrick Bolton and Mathias Dewatripont suggest that ownership gives an incentive for efficient relationship-specific investments and serves as a protection against hold-up because the owner of an asset may use it as a bargaining chip in negotiations in which the other party demands a contract modification. See PATRICK BOLTON & MATHIAS DEWATRIPONT, *CONTRACT THEORY* 38 (2004). See also WILLIAMSON (1985), *supra* note 7, at 172. Similarly, Professors Robert Cooter and Thomas Ulen refer to some manufacturers that protect against hold-up situations in contracts for the purchase of key inputs by owning the specialized equipment needed to produce such inputs and renting it to the supplier. Thus, if a contractor refuses to supply the inputs unless the contract price is increased, then the manufacturer may repossess the equipment, deliver it to another supplier and obtain the inputs without a significant delay. See ROBERT COOTER & THOMAS ULEN, *LAW & ECONOMICS* 216 (3d ed. 2000). Although ownership may avoid the hold-up problem, if the buyer is the owner and supplier of the capital and labor required for manufacturing the goods, then the contract is not for sale of goods but for sale of services and, therefore, beyond the scope of this dissertation.

contrast to vertical integration, allow parties to keep their autonomy and, in contrast to market structures, provide additional safeguards to those that competition offers.⁶⁸

Hybrid structures are usually relational contracts or clauses within relational contracts providing safeguards that prevent the non-investing party from behaving opportunistically.⁶⁹ Should the safeguards be absent, the parties might prefer to invest in a general-purpose (and cheaper) technology, where the market works well, rather than in the most efficient and customized purpose technology.⁷⁰

This section describes hostages as an example of hybrids structures or contractual safeguards.⁷¹ Hostages create credible commitments,⁷² encourage efficient investment, and reduce the incentives that a non-investing party may have to extort a modification from the held-up party through a threat to breach. These hostages may be promises to pay either monetary or non-monetary assets in the case of breach. Stipulated damages clauses, which can be either

⁶⁸ See WILLIAMSON (1996), *supra* note 34, at 104.

⁶⁹ See *id.* at 379; MERCURO & MEDEMA, *supra* note 27, at 280; Van der Beek, *supra* note 60, at 283.

⁷⁰ See WILLIAMSON (1996), *supra* note 34, at 379.

⁷¹ Professor Williamson applied the notion of hostages to idiosyncratic contracts. In this context, hostages are the economic equivalent of the men who medieval kingdoms held as prisoners to guarantee that other kingdoms were faithful to a treaty or to any other promise. See Oliver E. Williamson, *Credible Commitments: Using Hostages to Support Exchange*, 73 AM. ECON. REV. 519–540, 519 (1983). Needless to say, most of the hostages used in the medieval age, such as prisoners, are now banned. See UGO MATTEI, *COMPARATIVE LAW AND ECONOMICS* 186 (1999) [hereinafter MATTEI, *COMPARATIVE*] (reminding that an offer of a pound of flesh as insurance on proper performance is unacceptable in any legal system); see also COOTER & ULEN, *supra* note 67, at 221 (stating that an ideal hostage is something that the hostage-giver values considerably and the hostage-taker values little; otherwise, the hostage would deter neither the hostage-giver from breaching a contract—beginning a war in medieval terms—nor the hostage-taker from appropriating it); cf. Robert E. Scott, *Conflict and Cooperation in Long-Term Contracts*, 75 CAL. L. REV. 2005, 2039–40 (1987) (warning that if a hostage is an asset with a ready resale value, then the hostage-taker would have an incentive to induce a breach and to appropriate the asset) [hereinafter Scott (Conflict)].

⁷² Professor Williamson defines a credible commitment as a “[c]ontract in which a promisee is reliably compensated should the promisor prematurely terminate or otherwise alter the agreement.” WILLIAMSON (1996), *supra* note 34, at 377. Professors Cooter and Ulen, in turn, say that a commitment is credible when one party is aware that the other party has foreclosed an opportunity. In war language, the actions by which armies burning bridges or boats signals that a retreat is no longer available are credible commitments. In legal language, a credible commitment signals that a retreat from a contract is no longer possible or, at least, no longer profitable. See COOTER & ULEN, *supra* note 67, at 187.

penalties or liquidated damages clauses, are examples of monetary hostages.⁷³ Reputation bonds, in contrast, are an illustration of non-monetary assets.⁷⁴

Stipulated damages clauses, those providing a fixed amount that the breaching party must pay to the aggrieved party, increase the cost of carrying out a threat to breach and, therefore, may prevent the hold-up problem.⁷⁵ On the other hand, reputation bonds are a typical example of non-monetary hostages and one of the most common private ordering mechanisms.⁷⁶ The name of reputation bonds is used because, similar to what happens in financial markets, a company posts a reputation bond whenever it does business in order to signal itself as a reliable partner and, as a result, to obtain better deals.⁷⁷ A company that breaches its commitments withdraws part of its reputational capital, with the subsequent diminution in the balance of the bond. Since this is an undesired effect, the prospect to damage to reputation reduces the incentives that the parties have to behave opportunistically because the increased costs of doing business in the future may outweigh the present benefits of an extorted modification.⁷⁸

Still, the hold-up problem may arise if governance structures, of which penalty clauses and reputation bonds are just two illustrations, are not adequately designed. In such a case, the injured party may still resort to courts in order to solve or mitigate the hold-up problem. The role of courts might be two-fold. On the one hand, courts may strike down a modification that a non-

⁷³ The differences between liquidated damages clauses and penalty clauses are mentioned *infra* Section III.B.2.

⁷⁴ See *supra* § III.B.3.

⁷⁵ See WILLIAMSON (1985), *supra* note 7, at 13, and Kathryn E. Spier & Michael D. Whinston, *On the Efficiency of Privately Stipulated Damages for Breach of Contract: Entry Barriers, Reliance, and Renegotiation*, 26 RAND J. ECON. 180, 180 (1995).

⁷⁶ See BOLTON & DEWATRIPONT, *supra* note 67, at 31.

⁷⁷ See *infra* § III.B.3.

⁷⁸ See Williamson (1979), *supra* note 66, at 240; see also WILLIAMSON (1996), *supra* note 34, at 115.

investing party extorted either on grounds of duress or because it was in bad-faith.⁷⁹ On the other hand, if the contract was breached, courts may grant remedies, either monetary damages or a right to specific performance.⁸⁰

The intervention of courts, however, is not a perfect solution to the hold-up problem for at least two reasons. First, information about the circumstances that triggered the dispute may be non-verifiable for courts.⁸¹ The buyer, for instance, might claim that it did not breach but cancelled the contract because the quality of the goods that the seller delivered was below the agreed standard. Due to the idiosyncratic nature of the goods, a held-up seller might not successfully prove that the quality of the goods was in accordance with the contract provisions. Second, remedies for breach of contract are undercompensatory. The governance structures mentioned here are analyzed in depth in the two following Chapters, the third about the U.S. law,⁸² and the fourth about Colombian law.⁸³

⁷⁹ For a deeper analysis of good-faith modifications, see *infra* Sections III.C.2 *infra* and IV.C.2. For a deeper analysis of economic duress, see *infra* Sections III.C.3 and IV.C.3.

⁸⁰ For a deeper analysis of remedies for breach of contract, see *infra* Sections III.C.4 and IV.C.4.

⁸¹ See *supra* § II.B.

⁸² See *infra* Chapter III .

⁸³ See *infra* Chapter IV.

CHAPTER III –THE HOLD-UP PROBLEM IN U.S. LAW

Section III.A. – Introduction

Chapter III discusses in depth whether U.S. law prevents the hold-up problem in idiosyncratic contracts to manufacture and sell goods. The purpose of this analysis is to pave the way for a comparative legal study about Colombian law in Chapter IV⁸⁴ and for making some proposals in Chapter VI,⁸⁵ and to define the theories related to the hold-up problem that will be tested in Chapter V.⁸⁶ Overall, this chapter argues that the some U.S. laws mitigate the hold-up problem but do not avoid or solve it.

Since the scope of this dissertation is restricted to sale of goods, Chapter III will focus on the legal rules incorporated in Article 2 of the Uniform Commercial Code (“UCC”)⁸⁷ that may prevent the hold-up problem. The Restatement (Second) of Contracts (1981) (hereinafter the “Restatement (Second)”) will be mentioned only regarding issues of contract law that the UCC does not address, such as economic duress. The Restatement (Second) occasionally might be mentioned as persuasive authority or to make a comparison between the rules of the UCC and of the common law.

This chapter is divided into three sections beyond this introduction. Section III.B discusses whether held-up parties might prevent the hold-up problem by providing hybrid governance structures or contractual safeguards in their contracts.⁸⁸ Section III.B examines the

⁸⁴ See *infra* Chapter IV.

⁸⁵ See *infra* Chapter VI.

⁸⁶ See *supra* Chapter V.

⁸⁷ Unless otherwise noted, the references to the UCC in this dissertation are to the official text that the American Law Institute and the National Conference of Commissioners on Uniform State Laws have enacted.

⁸⁸ Regarding hybrid structures, see *supra* Section II.C.

following three kinds of contractual safeguards: no-modification clauses (§ III.B.1); stipulated damages clauses (§ III.B.2); and reputation bonds (§ III.B.3).⁸⁹

Where Section III.B focuses on whether contractual safeguards prevent the hold-up problem by reducing the incentives that the non-investing party has either to demand a modification or to threaten a breach, Section III.C analyzes whether the U.S. law may achieve the same purpose.⁹⁰ In particular, Section III.C.1 discusses whether the legal rules on the right to demand adequate assurances prevent the hold-up problem. Sections III.C.2 and III.C.3 discuss whether mandatory legal rules entitling a held-up party to contest a modification before a court play a similar role. Section III.C.2 focuses on the mandatory rules on good-faith modifications while Section III.C.3 studies the mandatory rules on economic duress. Next, Section III.C.4 evaluates whether legal remedies wholly or partially compensate an aggrieved held-up party. Finally, Section III.D summarizes the findings of Chapter III.

Section III.B Private Attempts to Prevent the Hold-up Problem: Closing the Path to Extorted Modifications and Breach at the Formation of the Contract

1. No-modification clauses

a. Introduction

Section III.B.1 discusses the role of no-modification clauses in the prevention of the hold-up problem. No-modification clauses are those providing that any contract modification, either oral or written, is unenforceable. From a theoretical standpoint, no-modification clauses might

⁸⁹ In a strict sense, reputation bonds are not contractual provisions. This topic is discussed *infra* Section III.B, however, because the parties themselves, and not the law, are who post these bonds to prevent the hold-up problem.

⁹⁰ The law also plays a role in Section III.B because it makes possible the enforcement of two of the three contractual safeguards discussed there: no modification clauses and stipulated damages clauses. This role, however, is more tenuous and indirect than in Section III.C.

prevent the hold-up problem because, as their name suggests, they close the door to any future change during the contract's formation stage. Preventing future changes during formation discourages the non-investing party from demanding a renegotiation backed by its strong bargaining position after investments cost are sunk. Despite their theoretical appeal, this section concludes that no-modification clauses do not achieve their purpose because they are unenforceable. On top of that, the enforceable contractual devices that might replicate the role of no-modification clauses in preventing the hold-up problem are highly imperfect substitutes. In light of the above, the U.S. legal rules on no-modification clauses fail to avoid, solve, or mitigate the hold-up problem.

b. The Legal Rules on No-Modification Clauses and its Role in the Prevention of the Hold-up Problem

To reiterate, no-modification clauses provide that any change to a contract, either written or oral, is unenforceable.⁹¹ Put differently, a no-modification clause attempts to freeze the deal. Parties who sign up to a no-modification clause, however, are not tied to a mast, as Odysseus was. While Odysseus was not able to untie himself, parties might untie their commitment not to modify their contract; *i.e.*, they can decide, as a first step, that the no-modification clause is no longer useful and rescind it; and, as a second step, agree to a modification.⁹² The issue, then, is whether to enforce the first agreement, closing the door to any modification, or the second one, reopening this door.⁹³

⁹¹ See Kevin E Davis, *The Demand for Immutable Contracts: Another Look at the Law and Economics of Contracts Modifications*, 81 N.Y.U. L. REV. 487, 487 (2006).

⁹² See POSNER, *supra* note 28, at 130.

⁹³ See Snyder (Modification), *supra* note 22, at 639-40.

The UCC remains silent on whether no-modification clauses are enforceable.⁹⁴ Hence, the common law governs the no-modification clauses provided in contracts for sale of goods.⁹⁵ Pursuant to this common law, chronology controls. The modification (*i.e.*, the later agreement), trumps the clause providing that any change to the contract was unenforceable (*i.e.*, the original agreement).⁹⁶ In *Beatty v. Guggenheim*, Justice Cardozo famously held:

Those who make a contract may unmake it. The clause that forbids a change may be changed like any other . . . Whenever two men contract, no limitation self-imposed can destroy the power to contract again.⁹⁷

In short, parties are not free to contract over the scope of freedom of contract,⁹⁸ and, as a result, no-modification clauses are unenforceable in the United States.

No-modification clauses could prevent the hold-up problem if they were enforceable.⁹⁹ If parties could rely on the enforceability of the clauses, a non-investing party would not waste its

⁹⁴ The UCC has rules about the enforcement of no-oral-modification clauses, but this is another topic. *See* UCC § 2-209(2) and (4).

⁹⁵ *See* UCC § 1-103(b); *see also* Christine Jolls, *Contracts as Bilateral Commitments: A New Perspective on Contract Modification*, 26 J. LEGAL STUD. 203, 208 n.16 (1997).

⁹⁶ *See* *Beatty v. Guggenheim Exploration Co.*, 122 N.E. 378, 381 (N.Y. 1919); *see also* RESTATEMENT (SECOND) OF CONTRACTS § 311 cmt. a (“The parties to a contract cannot by agreement preclude themselves from varying their duties to each other by subsequent agreement”); Davis, *supra* note 91, at 490-91 (“Anglo-American courts have established a general principle that any contractual provision that purports to limit the enforceability of a subsequent modification is unenforceable”).

⁹⁷ *Beatty*, 122 N.E. at 381. In another leading case, *Bartlett v. Stanchfield*, the court reminded that “[a]ttempts of parties to tie up by contract their freedom of dealing with each other are futile.” *Bartlett v. Stanchfield*, 19 N.E. 549, 550 (Mass. 1889); *see also* Snyder (Modification), *supra* note 22, at 640 (“[T]he later agreement probably reflects what the parties want better than their earlier agreement does”). Some scholars criticize the ban on no modification clauses because it is inefficient, *see, e.g.*, Alan Schwartz & Joel Watson, *The Law and Economics of Costly Contracting*, 20 J. L. ECON. & ORG. 2, 4-5 (2004) [(hereinafter Schwartz & Watson (Contracting))], an unreasonable restriction of freedom of contract, *see* Jolls, *supra* note 95, at 204, or paternalistic, *see* Schwartz & Scott, *supra* note 29, at 610.

⁹⁸ Undeniably, the issue in both *Beatty* and *Bartlett* was the enforceability of a no-oral-modification clause under the common law. The logic suggests, however, that if an oral agreement may rescind a no-oral-modification clause, then any agreement may rescind a provision barring any kind of modifications. Professor Davis contends that cases in which a U.S. court has decided the enforceability of a no modification clause apparently does not exist. *See* Davis, *supra* note 91, at 490 n.8, 490-91, 515 (making this assertion after performing “searches on Lexis and Westlaw for cases citing or cited by Restatement (Second) of Contracts § 311 and a Westlaw search for state or federal cases using the term “anti-modif!””).

time demanding a modification under threat to breach if the original contract had such a clause. The hold-up problem therefore would be avoided. If, for the sake of argument, one party makes an offer of modification that the other accepts, the accepting party – that is, the held-up party, might successfully claim before a court that the agreed-to modification is unenforceable. Under this scenario, the hold-up problem would be solved or, considering the litigation costs, at least mitigated.

Even if no-modification clauses were enforceable, their functionality might be limited from a practical standpoint. Recall that modifications can be either Pareto-efficient or redistributive.¹⁰⁰ Both parties would favor Pareto-efficient modifications, but only the potentially held-up party would disfavor redistributive changes. A no-modification clause, by its definition, prevents both kinds of modifications and, in turn, prevents the hold-up problem at the price of preventing surplus-maximizing modifications.¹⁰¹ Given that, a contract providing that redistributive modifications are unenforceable while any other kind of modification is enforceable might, at first glance, be an answer to this issue. But this fine distinction would not work on the practical level; the parties to a contract along with third-parties such as courts would find it very difficult to distinguish between redistributive and efficient modifications.¹⁰²

⁹⁹ See Jolls, *supra* note 95, at 208.

¹⁰⁰ See *supra* § II.B.

¹⁰¹ See SCOTT & STEPHAN, *supra* note 16, at 61 (suggesting that unforeseen states of nature may render no modification clauses inconsistent with the parties' goal of maximizing the contractual surplus).

¹⁰² See Davis, *supra* note 91, at 505 (“[I]t may be . . . impossible to draft a partially immutable contract that successfully defines and distinguishes circumstances in which modifications should and should not be permitted.”).

c. Functional Substitutes of No-Modification Clauses and Their Role in the Prevention of the Hold-up Problem

Because of the unenforceability of no-modification clauses, parties might use other contractual safeguards intended to mimic their role in preventing the hold-up problem through the increase of renegotiation costs.¹⁰³ This dissertation will discuss whether the use of a third-party and the imposition of formal requirements for agreeing to a modification are functional equivalents of no-modification clauses.¹⁰⁴ Unfortunately for the prevention of the hold-up problem, the short answer in both cases is no.

As to the first method, the seller and the buyer may agree to pay some amount, X , to a third-party if they decide to renegotiate the contract. X should exceed the additional contractual surplus, S , that the non-investing party might obtain through a purely redistributive modification.¹⁰⁵ This method, however, might not work. The non-investing party might propose to the held-up party a modification under threat to breach while, at the same time, might offer to the third-party a share of S if it agrees to rescind the no-modification clause and release the parties from paying X . The latter offer is also made under threat: the contract will not be renegotiated and the third-party will not receive anything if the offer is not accepted. A far-

¹⁰³ See Schwartz & Watson (Contracting), *supra* note 97, at 5. See also Jolls, *supra* note 95, at 232 (“A separate means of achieving commitment to an original contract . . . is to write the contract in such a way that transaction costs eliminate the attractiveness of otherwise ex post profitable modifications.”).

¹⁰⁴ Other substitutes of no modification clauses exist, such as most-favored-nation clauses (MFN clauses). MFN clauses, named after similar provisions in the context of the World Trade Organization, “involve one party making a binding commitment to another party not to deal with any third party on more favorable terms.” Davis, *supra* note 91, at 512; see also Knoeber, Charles, *An Alternative Mechanism to Assure Contractual Reliability*, 12 J. LEGAL STUD. 333 (1983). MFN clauses, however, might work in distribution contracts between one principal and many agents; in contracts between a company that owns a pipeline and several gas producers; or in agreements between a processor and several growers, among other examples, but not in contracts for sale of idiosyncratic goods. After all, a MFN clause, by definition, needs at least two sellers (or two buyers) in similar conditions and, in such a case, the goods would not be idiosyncratic.

¹⁰⁵ See THOMAS SCHELLING, *THE STRATEGY OF CONFLICT* (1981); Davis, *supra* note 91, at 519.

sighted third-party will anticipate that receiving any amount less than S , even it is negligible, makes it better off than receiving nothing.¹⁰⁶

This issue might be solved if the third-party is a sophisticated company that specializes in this kind of transactions and, therefore, refuses to participate in order to keep its reputation.¹⁰⁷ To the author's knowledge, no company specializing in this kind of business exists. Another solution is to engage multiple third-parties and, therefore, make prohibitive the transaction costs of obtaining a release from them.¹⁰⁸ This alternative, however, would also make prohibitive the transaction costs of implementing the third-party scheme at the formation stage.¹⁰⁹

The third-party method has additional disadvantages. First, the contractual provision offering the third-party an amount of money in case a modification is agreed to may be regarded as a penalty clause and therefore be unenforceable.¹¹⁰ Second, a third-party scheme will deter not only redistributive modifications but also Pareto-efficient modifications.¹¹¹

The second method is to impose some formalities for any modification in order to increase the costs of renegotiation. To take two examples, the original contract may provide that several layers of consent within each of the parties' organizations are required for any modification¹¹² or that any change to the contract must be in writing. To create several layers of consent, for example, a modification might bind a party only if some of its internal stakeholders

¹⁰⁶ For similar examples in contexts other than the hold-up problem, see Davis, *supra* note 91, at 519; BAIRD, GERTNER & PICKER, *supra* note 27, at 118; Schwartz & Watson (Contracting), *supra* note 97, at 24.

¹⁰⁷ See Davis, *supra* note 91, at 519 n.95; BAIRD, GERTNER & PICKER, *supra* note 27, at 118.

¹⁰⁸ See BAIRD, GERTNER & PICKER, *supra* note 27, at 118; Jolls, *supra* note 95, at 232-33.

¹⁰⁹ See Davis, *supra* note 91, at 492-93.

¹¹⁰ See RESTATEMENT (SECOND) OF CONTRACTS § 356; Davis, *supra* note 91, at 519-20; *infra* § III.B.2.

¹¹¹ See Baird, *supra* note 27, at 118; Davis, *supra* note 91, at 519; Schwartz & Watson (Contracting), *supra* note 97, at 24.

¹¹² See SCOTT & STEPHAN, *supra* note 16, at 80.

have approved it, such as in-house lawyers, a committee in charge of supervising the performance of the contract, or the board of directors with a qualified majority voting.

Creating several layers of consent has serious drawbacks. To begin with, formalities intended to increase the transaction costs of recontracting, which is desirable, also increase the costs of contracting, which is an undesired side effect.¹¹³ Furthermore, the additional layers of consent increase the barriers not only to purely redistributive modifications but also to Pareto-efficient modifications and thereby reduces the flexibility of the contract.¹¹⁴ Finally, the formalities that the original contract provides might be orally modified or even orally waived.¹¹⁵

The second example of formalities is no-oral-modification clauses, which, as the name suggests, provide that any modification must be in writing with the signature of both parties. In contrast with the common law,¹¹⁶ no-oral-modification clauses are valid under the UCC,¹¹⁷ although an oral agreement may operate as a waiver of that no-oral-modification clause.¹¹⁸ The unclear drafting of the legal rules on no-oral-modification clauses in the context of sale of goods,¹¹⁹ however, has led to a tremendous amount of litigation and to contradictory judicial

¹¹³ See Alan Schwartz & Joel Watson, *Economic and Legal Aspects of Costly Recontracting*, 27 (Yale Law School, Law & Economics, Working Paper No. 242, April 2000), available at <http://ssrn.com/abstract=224444> or <http://dx.doi.org/10.2139/ssrn.224444> [hereinafter Schwartz & Watson (Recontracting)].

¹¹⁴ See *id.* at 81-82.

¹¹⁵ A waiver “results from a unilateral act dispensing with a contractual condition.” Snyder (Modification), *supra* note 22, at 626. In this example, the waiver will dispense the formalities to be complied with as a condition to agree to a modification. See generally Schwartz & Watson (Contracting), *supra* note 97, at 20 (“Courts discourage or do not enforce party efforts to make renegotiation more costly.”).

¹¹⁶ For cases holding that no oral modification clauses are unenforceable under the common law, see, among others, *Beatty v. Guggenheim Exploration Co.*, 122 N.E. 378, 381 (N.Y. 1919), and *Bartlett v. Stanchfield*, 19 N.E. 549, 550 (Mass. 1889); see also E. ALLAN FARNSWORTH, *CONTRACTS* 449 (2008) [hereinafter FARNSWORTH (CONTRACTS)]; Brinkley, *supra* note 24, at 2258-59.

¹¹⁷ See UCC § 2-209(2).

¹¹⁸ See *id.* § 2-209(4); *Wisconsin Knife Works v. Nat’l Metal Crafters*, 781 F.2d 1280 (7th Cir. 1986); see also Snyder (Modification), *supra* note 22, at 645-46 (stating that no oral modification clauses are valid, an attempted modification contravening these clauses are not valid, but such attempt may be effective as a waiver).

¹¹⁹ See UCC § 2-209(2) and (4).

decisions. Some precedent enforces oral agreements in contracts providing a no-oral-modification clause while other precedent holds the opposite.¹²⁰

In *Wisconsin Knife Works v. Nat'l Metal Crafters*, Judge Richard A. Posner, speaking on behalf of the majority, held that an oral modification may operate as a waiver only if one of the parties relied on it.¹²¹ Judge Frank Easterbrook, in his dissent, said that reliance is not an essential element of a waiver.¹²² More importantly for this dissertation is the divergence of opinions between two of the most prominent law and economics scholars, Judges Posner and Easterbrook, about the role of no-oral-modification clauses in the prevention of opportunism. Judge Posner contended that no-oral-modification clauses may police extortionate modifications by replicating, in the context of sale of goods, the cautionary and evidentiary roles of the requirement of consideration in the common law.¹²³

Judge Easterbrook, on the other side of the discussion, argued that no-oral-modification clauses are useless to deal with opportunistic behavior because a party extorting a modification may obtain a writing without too much inconvenience.¹²⁴ Due to this shortcoming of no-oral-modification clauses, Judge Easterbrook contended that the drafters of the UCC decided to police

¹²⁰ See Robert A. Hillman, *Standards for Revising Article 2 of the U.C.C.: the NOM Clause Model*, 35 WM. & MARY L. REV. 1509, 1522-25 (1994) [hereinafter Hillman (Standards)]; Frank A. Rothermel, *Comment: Role of Course of Performance and Confirmatory Memoranda in Determining the Scope, Operation and Effect of "No Oral Modification" Clauses*, 48 U. PITT. L. REV. 1239, 1239 (1987). For a case enforcing a no oral-modification clause, see *Pantano v. McGowan*, 530 N.W.2d 912, 915 (Neb. 1995). For a case enforcing an oral modification agreed in a contract providing a no oral modification clause, see *Wisconsin Knife Works v. National Metal Crafters*, 781 F.2d 1280 (1986).

¹²¹ *Wisconsin Knife Works*, 781 F.2d at 1285.

¹²² *Id.* at 1290.

¹²³ *Id.* at 1286; see also UCC § 2-209(1) (providing that a modification does not need consideration to be binding). Regarding the cautionary and evidentiary functions, see Hillman (Standards), *supra* note 120, at 1522-23 (1994).

¹²⁴ See *Wisconsin Knife Works* 781 F.2d at 1292 ("A person who has his contracting partner over a barrel, and therefore is able to obtain a concession, can get the concession in writing. The writing will be the least of his worries.").

extorted modifications through the requirement of good faith.¹²⁵ This dissertation joins the camp that Judge Easterbrook defends. A sophisticated non-investing party may easily obtain a writing from a held-up party who prefers to accept a modification rather than suffering a financially devastating breach. Thus, no-oral-modification clauses, and more generally, any imposition of formal requirements for agreeing to a modification, are an imperfect substitute of no-modification clauses in the prevention of the hold-up problem.

d. Concluding remarks

The key question here is whether parties to a contract may rescind a no-modification clause during its performance and, as a result, agree to an enforceable modification. If the answer were no, the non-investing party would not demand a redistributive change. Even assuming that such change is proposed, the held-up party would likely reject it. In the worst scenario, one in which the modification is demanded and accepted, the held-up party might successfully contest it before a court. Being sure that the original contract will not be renegotiated, the potentially held-up party would set the efficient level of investment and the hold-up problem would be prevented.

For better or for worse, the answer to this question is yes. No-modification clauses are unenforceable under the U.S. law and, therefore, parties may not provide them to prevent the hold-up problem.¹²⁶ On top of that, some contractual devices intended to mimic the role of no modification clauses by increasing the costs of renegotiation are imperfect substitutes. In sum,

¹²⁵ See *Wis. Knife Works*, 781 F.2d at 1292; see also UCC § 1-304.

¹²⁶ See generally Lyon & Rasmusen, *supra* note 15, at 149 (reiterating that a commitment not to renegotiate is impossible since the parties retain the freedom to rescind it); SCOTT & STEPHAN, *supra* note 16, at 80 (affirming that parties retain the power to renegotiate their contracts as long as they have legal capacity).

the U.S. legal rules on no modification clauses fail to avoid, solve, or mitigate the hold-up problem. Luckily, these rules do not aggravate said problem.

2. Stipulated Damages Clauses (Liquidated Damages Clauses and Penalty Clauses)

a. Introduction

Section III.B.2 discusses whether two kinds of stipulated damages clauses – liquidated damages clauses and penalty clauses – prevent the hold-up problem. This section concludes that liquidated damages clauses mitigate the hold-up problem but neither avoid nor solve it. From a theoretical standpoint, penalty clauses are a better protection against the hold-up problem than are liquidated damages. Penalty clauses may either avoid or solve the hold-up problem in the best scenario or at least mitigate it in the worst scenario. Regrettably, penalty clauses are unenforceable under the U.S. legal rules, which means that parties cannot provide them to efficiently deal with the hold-up problem. Even more regrettably, considerable time might lapse before more efficient rules on penalty clauses are enacted due to the slow rhythm at which the U.S. contract law moves.¹²⁷

b. The Legal Rules on Liquidated Damages Clauses and Penalty Clauses

UCC § 2-718(1), the legal rule applicable to liquidated damages clauses and penalty clauses in contracts for sale of goods, provides:

Damages for breach by either party may be liquidated in the agreement but only at an amount which is reasonable in light of the anticipated or actual harm caused by the breach, the difficulties of proof of loss, and the inconvenience or non-feasibility of otherwise obtaining an adequate remedy. A term fixing unreasonably large liquidated damages is void as a penalty.¹²⁸

¹²⁷ See *XCO Int'l Inc. v. Pac. Scientific Co.*, 369 F.3d 998, 1002 (7th Cir. 2004).

¹²⁸ UCC § 2-718(1).

Pursuant to this mandatory legal rule,¹²⁹ two kinds of stipulated damages clauses exist: (1) valid liquidated damages clauses, which provide a reasonable estimation of the loss arising out of a breach; and (2) clauses fixing damages clearly higher than the harm arising out of a breach. This dissertation will refer to clauses providing reasonable estimates of losses as liquidated damages clauses. Clauses fixing damages substantially higher are invalid liquidated damages, penalty clauses or simply penalties, which are unenforceable.¹³⁰

Since liquidated damages are valid while penalties are unenforceable, a test to distinguish between these two kinds of stipulated damages clauses is warranted. The case law developed such a test with the following three prongs: (1) whether the parties intended to provide a liquidated damages clause or a penalty clause; (2) whether the clause is a reasonable estimate of damages; and (3) whether the amount of damages is difficult to predict.¹³¹ The majority of courts hold that the burden of proving that a stipulated damages clause does not comply with this test lies on the party challenging it,¹³² *i.e.*, the non-investing party in hold-up situations.

¹²⁹ See JAMES J. WHITE & ROBERT R. SUMMERS, UNIFORM COMMERCIAL CODE 197 n.1 (5th ed. 2000).

¹³⁰ See Kenneth W. Clarkson, Roger L. Miller & Timothy J. Muris, *Liquidated Damages v. Penalties: Sense or Nonsense*, 1978 WIS. L. REV. 351, 352; Samuel A. Rea Jr., *Efficiency Implications of Penalties and Liquidated Damages*, 13 J. LEGAL STUD. 147, 147 (1984). Penalties are banned not only for historical reasons (see FARNSWORTH (CONTRACTS), *supra* note 116, at 812) but also because U.S. contract remedies are compensatory and not punitive. See RESTATEMENT (SECOND) OF CONTRACTS § 356 cmt. a; FARNSWORTH (Contracts), *supra* note 116, at 760. Regardless, the unenforceability of penalty clauses “remains a major unexplained puzzle in the economic theory of the common law.” Richard A. Posner, *Some Uses and Abuses of Economics in Law*, 46 U. CHI. L. REV. 281, 290 (1979); see also Paul H. Rubin, *Unenforceable Contracts: Penalty Clauses and Specific Performance*, 10 J. LEGAL STUD., 237, 237 (1981).

¹³¹ The Connecticut Supreme Court was one of the firsts courts to develop this test in *Banta v. Stamford Motor Co.*, 92 A. 665, 667 (Conn. 1914). Although this case was later disapproved of, *Norwalk Door Closer Co. v. Eagle Lock & Screw Co.*, 220 A.2d 263, 263 (Conn. 1966), the test remains in application. See also FARNSWORTH (Contracts), *supra* note 116, at 813-14. On the other hand, additional factors are irrelevant. For instance, a penalty clause is unenforceable even if this provision was the result of a negotiation between sophisticated parties of similar bargaining power. See *In re A.J. Lane & Co., Inc.*, 113 B.R. 821, 828 (Bankr. D. Mass. 1990).

¹³² See *Lake River Corp. v. Carborundum Co.*, 769 F.2d 1284, 1290 (7th Cir. 1985); *Energy Plus Consulting, LLC v. Ill. Fuel Co., LLC*, 371 F.3d 907, 909 (7th Cir. 2004); *Vernitron Corp. v. CF 48 Assocs.*, 104 A.D.2d 409, 410 (N.Y. App. Div. 1984). See also FARNSWORTH (CONTRACTS), *supra* note 116, at 815; Larry DiMatteo, *A Theory of*

The first factor, intention, might have been important some time ago but not today.¹³³ Today, neither the intention nor the language of the parties has any weight in determining whether a stipulated damages clause is enforceable.¹³⁴ As a second and key condition¹³⁵ of enforceability is that the stipulated damages provision must be a reasonable estimate of damages or, in other words, that the forecast must not be greatly disproportionate in relation to “the anticipated *or* actual harm”¹³⁶ that a breach of contract may cause.¹³⁷ Four cases might arise.¹³⁸ First, a stipulated damages clause is unreasonable both at the time of contracting and at either the time of breach or of trial. This is an easy case: the clause would likely be a penalty. The second case is the opposite: a stipulated damages clause is reasonable both *ex ante* and *ex post*. This is another easy case: the clause would likely be enforceable. The third case arises when the clause is reasonable *ex post* but not *ex ante*. Since the legal rule refers to reasonableness in the light of the anticipated *or* the actual harm, the stipulated damages clause should be enforceable. The fourth and more difficult case occurs when the stipulated damages clause is reasonable *ex ante* but not *ex post*, especially if the damages are low or zero. In theory, since UCC § 2-718(1) provides that reasonableness is evaluated “in light of the anticipated *or* actual harm,”¹³⁹ the

Efficient Penalty: Eliminating the Law of Liquidated Damages, 38 AM. BUS. L.J. 633, 667 (2001) [hereinafter DiMatteo (Theory)].

¹³³ See FARNWORTH (Contracts), *supra* note 116, at 817.

¹³⁴ For cases holding that intention is no longer relevant, see, e.g., *Brooks v. Bankson*, 248 Va. 197 (1994) (holding that labelling of a deposit as liquidated damages is not dispositive). Scholars also agree on the irrelevance of the intention test. See, e.g., Charles J. Goetz & Robert E. Scott, *Liquidated Damages, Penalties and the Just Compensation Principle: Some Notes on an Enforcement Model and a Theory of Efficient Breach*, 77 COLUM. L. REV. 554, 576 n.59 (1977) (contending that intent alone is immaterial and rarely alone the basis of a holding related to the enforceability of stipulated damages clauses).

¹³⁵ See Clarkson, Miller & Muris, *supra* note 130, at 356.

¹³⁶ UCC § 2-718(1) (emphasis added).

¹³⁷ See FARNWORTH (Contracts), *supra* note 116, at 814.

¹³⁸ See Rea, *supra* note 130, at 149-51.

¹³⁹ UCC § 2-718(1) (emphasis added).

clause should be enforceable. After all, the conjunction “or” in the legal rule suggests that the aggrieved party has “two avenues”¹⁴⁰ to prove reasonableness: at the time of contracting and at the time of breach (or of trial).¹⁴¹ In practice, courts disagree about whether to enforce stipulated damages that are reasonable *ex ante* but not *ex post*. Cases are legion on both ways.¹⁴²

In any event, a scenario in which an aggrieved held-up party does suffer low or zero losses seems highly unlikely. In this very rare case, a held-up party would prefer a low- or zero-damages breach to a modification that reduces its surplus of the contract. Hence, a far-sighted non-investing party would not bother to demand a modification and the hold-up problem would not arise.¹⁴³

The third and last prong is whether the amount of damages is difficult to prove. This condition is not analyzed in isolation and is helpful to determine whether the amount of a stipulated damages clause is reasonable.¹⁴⁴ As Justice Abrahamson put it: “The greater the difficulty of estimating or proving damages, the more likely the stipulated damages will appear reasonable. If damages are readily ascertainable, a significant deviation between the stipulated amount and the ascertainable amount will appear unreasonable.”¹⁴⁵

¹⁴⁰ DiMatteo (Theory), *supra* note 132, at 667-68.

¹⁴¹ See FARNWORTH (Contracts), *supra* note 116, at 815; Goetz & Scott, *supra* note 134, at 560 n.25.

¹⁴² See Rea, *supra* note 130, at 151. For courts holding that reasonableness *ex ante* is enough, see, e.g., *Banta v. Stamford Motor Co.*, 92 A. 665, 667 (Conn. 1914). For courts holding that reasonableness *ex ante* is not enough, see, e.g., *Rowe v. Shehyn*, 192 F. Supp. 428, 430 (D.D.C 1961).

¹⁴³ For this reason, this dissertation omits the discussion in the case law about the enforceability of penalty clauses where the breach causes minimal or zero damages.

¹⁴⁴ See *Wassenaar v. Panos*, 331 N.W.2d 357, 370 (Wis. 1983) (affirming that reasonableness and difficult to predict damages are intertwined).

¹⁴⁵ *Id.* at 530-31; see also *In re A.J. Lane & Co., Inc.*, 113 B.R. 821, 828 (Bankr. D. Mass. 1990); see also Goetz & Scott, *supra* note 134, at 559 (“[A]s the uncertainty facing the contracting parties increases, so does their latitude in stipulating post-breach damages.”).

c. The Role of Stipulated Damages on the Prevention of the Hold-up Problem

Stipulated damages clauses have some features that prevent the hold-up problem. In comparison with penalty clauses, some of these features are useful to a lesser degree or not useful at all regarding liquidated damages clauses. In particular, stipulated damages prevent the hold-up problem by including some losses that the law rarely awards, signaling a commitment to honor a contract, and providing insurance against breach. As other features not applicable to liquidated damages, penalties deter breaches by making litigation more attractive to the held-up party and less attractive to the non-investing party if its amount is big enough to be compensatory after taking into account the expenses of litigation and avoid transaction costs resulting from a very detailed liquidated damages clause.

As a first feature, the amount of a stipulated damages clause might be closer to the actual harm than the conventional damages. A liquidated damages clause is enough for parties intending to take advantage of this feature. In other words, unless other features of stipulated damages clauses are desired, a penalty clause is unnecessary; it would only increase both the price of the contract and the risk of a court overturning the clause.

A liquidated damages clause might provide at least three kinds of damages that the law rarely awards.¹⁴⁶ First, unforeseeable damages, such as consequential losses, could be provided.¹⁴⁷ Since unforeseeable damages are usually difficult to estimate, it is unlikely that their inclusion would turn a stipulated damages clause into a penalty.¹⁴⁸ Consequential damages might

¹⁴⁶ *Wassenaar*, 331 N.W.2d at 366 (“[I]n providing for stipulated damages, the parties to the contract could anticipate the types of damages not usually awarded by law.”).

¹⁴⁷ See FARNWORTH (Contracts), *supra* note 116, at 820 (reminding that a party may assume the risk of unforeseeable losses through the provision of a liquidated damages clause).

¹⁴⁸ See *Wassenaar* 331 N.W.2d at 367.

also arise in hold-up situations. To illustrate, suppose that a buyer makes a relationship-specific investment building an aluminum factory and enters into some contracts to supply aluminum to its clients downstream. Upstream, however, only one seller can provide at competitive prices the main raw material needed to manufacture aluminum: electricity. If this seller breaches the contract, the buyer would suffer the consequential damages resulting from not honoring the contracts for sale of aluminum.¹⁴⁹

Second, the contract might provide damages that the court considers too remote, speculative or uncertain to award if not mentioned in the contract.¹⁵⁰ Liquidated damages might “afford the only possibility of compensation for losses that are not susceptible of proof with sufficient certainty.”¹⁵¹ For example, a buyer who is afraid of being held-up might bargain for a liquidated damages clause whose amount includes losses that are non-verifiable to a court, such as the goodwill losses resulting from its seller delivering idiosyncratic goods lacking the quality agreed in the contract.

Third, liquidated damages *might* include losses that the aggrieved party should have mitigated. The word “might” is emphasized because this possibility is more controversial than in the case of unforeseeable or uncertain losses. On one side of the controversy, Justice Abrahamson, in a case about a labor contract, contended that courts cannot reduce liquidated

¹⁴⁹ A similar example will be used to explain why remedies are undercompensatory *infra* Section III.C.4 *infra* and *infra* Chapter V in an experiment on the hold-up problem. As a real example of a valid liquidated damages clause that included consequential damages, although in a labor context as opposed to a contract for sale of goods, see *Wassenaar*, 331 N.W.2d at 357.

¹⁵⁰ See Goetz & Scott, *supra* note 134, at 572. See also Aaron S. Edlin & Alan Schwartz, *Optimal Penalties in Contracts*, 78 CHICAGO-KENT L. REV. 33, 35 (2003) (arguing that parties benefit from liquidated damages clauses when valuations are non-verifiable). For cases holding that uncertain or speculative damages are not recoverable, see, e.g., *United States v. Griffith, Gornall & Carman, Inc.*, 210 F.2d 11 (10th Cir. 1954).

¹⁵¹ FARNWORTH (Contracts), *supra* note 116, at 811; see also Larry A. DiMatteo, *Penalties as Rational Response to Bargaining Irrationality*, 2006 MICH. STATE L. REV. 883, 909 [hereinafter DiMatteo (Penalties)] (mentioning that liquidated damages clauses may protect subjective valuations that the law does not recognize).

damages clauses if the aggrieved party failed to mitigate damages (in this case, the reduction would have amounted to the salaries that the plaintiff might have earned at another job).¹⁵² On the same side of the controversy, Judge Posner states that liquidated damages eliminate any duty of mitigation.¹⁵³ Professor Farnsworth joins the other side by stating that liquidated damages clauses should not include avoidable losses because it would encourage waste.¹⁵⁴

On top of the reasons indicated above, liquidated damages clauses are usually closer to the actual harm because the parties know better than courts the losses that a breach would cause.¹⁵⁵ Put more bluntly, courts make mistakes, especially in the context of hold-up situations in which the contracts are idiosyncratic and the information is non-verifiable.¹⁵⁶

As a second feature, penalty clauses allow a promisor to credibly communicate to the promisee that the contract will be honored.¹⁵⁷ As Judge Posner put it: “Penalty clauses provide an earnest of performance.”¹⁵⁸ The credibility of the promise derives from the promisee’s assumption that a promisor intending to breach would not commit itself to pay an amount in damages larger than the estimated harm.¹⁵⁹

¹⁵² See *Wassenaar*, 331 N.W.2d at 357.

¹⁵³ *Lake River Corp. v. Carborundum Co.*, 769 F.2d 1284, 1291 (7th Cir. 1985).

¹⁵⁴ See FARNWORTH (Contracts), *supra* note 116, at 819.

¹⁵⁵ See Aristides N. Hatzis, *Having the Cake and Eating it Too: Efficient Penalty Clauses in Common and Civil Contract Law*, 22 INT’L REV. L. & ECON. 381 (2006) [hereinafter Hatzis (Cake)]; see also Alan Schwartz, *The Myth that Promisees Prefer Supracompensatory Remedies*, 100 YALE L.J. 369, 370 (1990) [hereinafter Schwartz (Myth)] (“[E]ven with the benefit of hindsight, courts seldom could do better for the parties than the parties can do for themselves”)

¹⁵⁶ Schwartz & Scott, *supra* note 29, at 616-17.

¹⁵⁷ See Rea, *supra* note 130, at 156-57. See also POSNER, *supra* note 28, at 127-28.

¹⁵⁸ *Lake River Corp.*, 769 F.2d at 1289.

¹⁵⁹ Signaling means that one party conveys non-verifiable information (*e.g.*, the likelihood of honoring a contract) to the other party. See BAIRD, GERTNER & PICKER, *supra* note 27, at 315. This signaling function is particularly useful for parties that, being new to a market, lack a reputation to persuade their wary suppliers or customers that they are reliable partners. See Clarkson, Miller & Muris, *supra* note 130, at 367-68; Hatzis (Cake), *supra* note 155, at 174.

Penalty clauses, because of their signaling function, might efficiently address hold-up situations. Recall from § II.A that a potentially held-up party might refrain from making an idiosyncratic investment in order to avoid the non-investing party, during the performance stage of the contract, proposing a redistributive modification under threat to breach.¹⁶⁰ A penalty clause, however, might signal that the non-investing party intends to perform as originally agreed and, therefore, make the potentially held-up party less hesitant to enter the contract and to make a specific investment.

Since penalty clauses are unenforceable in the United States,¹⁶¹ the question is whether the other kind of stipulated damages clauses, liquidated damages, might also signal a promisor's intent to perform a contract as originally agreed. The answer is a qualified yes; the signaling function of liquidated damages might prevent the hold-up problem but to a lesser extent than penalty clauses.

This answer requires a further explanation. On the one hand, the answer is yes because a liquidated damages clause including not only conventional damages but also unforeseeable, uncertain, and avoidable losses might be enough to signal the intention of a promisor to honor the contract.¹⁶² On the other hand, the affirmative answer is qualified because ascertaining idiosyncratic damages with enough precision is a hard task. If the liquidated damages estimate is on the low side, then the signaling function might be weakened (the higher the amount of the stipulated damages clause, the stronger the signal than the promisor will perform as agreed). By contrast, if the estimation is clearly on the high side, then the clause might be unreasonable and,

¹⁶⁰ See *supra* § II.A.

¹⁶¹ See UCC § 2-718(1).

¹⁶² See Rea, *supra* note 130, at 157.

as a result, unenforceable. Naturally, the fact that idiosyncratic losses are difficult to measure may weaken the case for unreasonableness. In comparison with liquidated damages, the amount of a penalty clause might be provided without need of a precise estimation.

As a third feature, penalty clauses work as an insurance policy against breach that the promisor issues in favor of the promisee.¹⁶³ The premium of this insurance policy is the extra price that the promisor charges as consideration for agreeing to pay damages in excess of the estimated loss.¹⁶⁴ This insurance characteristic of penalty clauses may shift the risk from the held-up party to the non-investing party.¹⁶⁵ This feature is linked to the signaling function and, more particularly, to an efficient distribution of information costs. An investing party cannot ascertain, without considerable expenses, whether the other party will pull a hold up. A penalty clause, working as an insurance policy, provides this information.¹⁶⁶

Penalty clauses work efficiently as insurance policies when two conditions are present: the promisee will suffer an idiosyncratic loss in case of breach, and the promisor is the cheapest insurer.¹⁶⁷ Both conditions might arise in hold-up situations. To begin with, a held-up party might suffer an idiosyncratic loss if the contract is breached because its relationship-specific investment would likely be scrap and the information about the actual losses may be non-verifiable to a court.¹⁶⁸

¹⁶³ See COOTER & ULEN, *supra* note 67, at 236; MATTEI (COMPARATIVE), *supra* note 71, at 184; Edlin & Schwartz, *supra* note 150, at 42.

¹⁶⁴ See Clarkson, Miller & Muris, *supra* note 130, at 367-68; COOTER & ULEN, *supra* note 67, at 236-37.

¹⁶⁵ See Rea, *supra* note 130, at 148; MATTEI (COMPARATIVE), *supra* note 71, at 186.

¹⁶⁶ See Schwartz & Scott, *supra* note 29, at 617; *see also supra* § II.A.

¹⁶⁷ See COOTER & ULEN, *supra* note 67, at 236-37.

¹⁶⁸ See Hatzis (Cake), *supra* note 155, at 167.

The non-investing party, in turn, is the cheapest insurer or, perhaps, the only insurer in hold-up situations. Since the investment is idiosyncratic, the held-up party will likely be unable to obtain insurance in the market. Assuming, *arguendo*, that such market exists, an insurance policy that a third-party issues would likely be more expensive and less effective than the insurance that the non-investing party is willing to provide through a penalty clause. A promisor is the cheapest insurer because it knows with higher certainty than any other party whether a hold-up situation will arise.¹⁶⁹ On top of that, the transaction costs of issuing an insurance policy have already been incurred in the negotiation of the contract between the investing and the non-investing parties.¹⁷⁰

An investing party as well as third-party insurers, in contrast, cannot know with anything near one-hundred percent certainty whether the other party will pull a hold-up. Market insurance, in particular, would be less effective because it would resemble more a liquidated damages clause than a penalty. Pursuant to the principle of indemnity, insurance companies cannot pay an amount exceeding the actual harm in case of an incident.¹⁷¹

Liquidated damages clauses might also work as an insurance policy against breach, but to a lesser degree than penalties.¹⁷² The parties to a contract might estimate and insure in advance the damages for breach taking into account the idiosyncratic value that the held-up party places on performance. At first sight, the difficulty of foreseeing idiosyncratic damages increases the likelihood that a court will uphold a liquidated damages clause. Nonetheless, if the forecast is not

¹⁶⁹ See Goetz & Scott, *supra* note 134, at 578-82, and Edlin & Schwartz, *supra* note 150, at 38, n.12.

¹⁷⁰ See Goetz & Scott, *supra* note 134, at 580.

¹⁷¹ See Rea, *supra* note 130, at 152; Goetz & Scott, *supra* note 134, at 583.

¹⁷² See generally MATTEI (COMPARATIVE), *supra* note 71, at 186 (stating that insurance for idiosyncratic values is not available in the United States).

just high but so high as to outweigh the challenges of an accurate estimation of damages, a court might hold that the estimation was unreasonable. If the damages forecast is too low, by contrast, the idiosyncratic loss will not be fully insured and, therefore, the hold-up problem will not be completely prevented. A penalty clause might insure all idiosyncratic losses with some margin. Furthermore, since the decision of a court about the enforceability of a liquidated damages clause that includes idiosyncratic values would be uncertain, at best, such a clause would not completely play the essential roles of insurance policies: to give information about the likelihood of a hold-up situation, to shift risk, and to persuade a potential held-up party to make a relationship-specific investment.

As a fourth feature, penalty clauses deter not only inefficient but also some efficient breaches.¹⁷³ While this might prevent some hold-up situations, it could be a drawback regarding the economic role of efficient breach. Perhaps this role is another reason why the U.S. law bans penalty clauses.¹⁷⁴ This line of reasoning, however, overlooks the fact that if penalty clauses are banned in idiosyncratic contracts, not only efficient breaches but also efficient levels of contracting would be precluded.¹⁷⁵ It also overlooks the fact that the discouragement of efficient breach through the provision of a penalty clause is usually a decision that the parties make in accordance with the principle of freedom of contract.¹⁷⁶

¹⁷³ See *Lake River Corp. v. Carborundum Co.*, 769 F.2d 1284, 1289 (7th Cir. 1985); POSNER, *supra* note 28, at 127-28. Penalty clauses also deter inefficient breaches, although compensatory damages are enough to play this role. See *Lake River Corp.*, 769 F.2d at 1289.

¹⁷⁴ See DiMatteo (Penalties), *supra* note 151, at 886-87 (“The ability for a breaching party to limit its liability to compensatory damages is what grounds efficient breach theory”); Clarkson, Miller & Muris, *supra* note 130, at 359. (“[Efficient breach] allows resources to flow freely to higher valued uses at the lowest possible cost”).

¹⁷⁵ See *Lake River Corp.*, 769 F.2d at 1289. (“[T]he willingness to agree to a penalty clause is a way to make a promise credible and, therefore, essential to inducing some value-maximizing contracts to be made”).

¹⁷⁶ See DiMatteo (Penalties), *supra* note 151, at 887.

On top of that, assuming that a penalty clause has been provided, efficient breach would not necessarily be precluded on several grounds. To begin with, the benefit that a would-be breacher might obtain by accepting an alternative trading opportunity might be greater than the amount of the penalty clause. Even if this condition does not hold, the promisor might persuade the promisee to renegotiate the penalty clause.¹⁷⁷ If renegotiation is successful, efficient breach will occur and its benefit will be divided between the two parties.¹⁷⁸ In addition, penalty clauses encourage rather than discourage efficient breach because knowing in advance the amount that a breacher must pay reduces the uncertainty about the amount of damages that the aggrieved party may request at a settlement stage or that an unpredictable jury may grant at trial.¹⁷⁹

As a fifth feature, penalty clauses, but not liquidated damages, are useful when the likelihood that a breach will be undetected is non-negligible.¹⁸⁰ Examples of breaches that are difficult to spot in hold-up situations are the delivery of low-quality goods (the quality being the non-verifiable information to a court), and a refusal to take delivery of the goods to be manufactured during the executory term of the contract when such refusal is disguised as a lawful termination (*e.g.*, a cancellation of the contract). As an illustration, if the likelihood of an undetected breach is fifty percent, then the promisee might bargain for a penalty clause whose

¹⁷⁷ See DiMatteo (Theory), *supra* note 132, at 690; Gerry De Geest, *Penalty Clauses and Liquidated Damages*, in 6 CONTRACT LAW & ECONOMICS, ENCYCLOPEDIA OF LAW & ECONOMICS 141, 148 (Gerrit De Geest ed., 2d ed. 2011).

¹⁷⁸ See Goetz & Scott, *supra* note 134, at 567-68 (suggesting that penalties allow parties to divide the gains resulting from efficient breach provided that transaction costs are below such gains).

¹⁷⁹ See Hatzis (Cake), *supra* note 155, at 168-69; *see also* DiMatteo (Theory), *supra* note 132, at 692 (“The greater the uncertainty of calculating compensatory damages, especially considering the vagaries of juries, the more troublesome becomes the efficient breach decision”).

¹⁸⁰ See POSNER, *supra* note 28, at 128. In strict sense, a penalty clause might be used when the likelihood that a breach will be undetected is positive; *see* Rea, *supra* note 130, at 155-56. However, if such likelihood is very low (*e.g.*, 1%), the transaction costs of negotiating the penalty clause are not worth its benefits.

amount is twice the anticipated harm.¹⁸¹ Since the value of the damages clause needs to be greater than the anticipated harm, liquidated damages cannot play this role.

As a sixth and final feature, a penalty clause providing a unique amount to be paid in case of any breach may avoid the transaction costs needed to provide a detailed liquidated damages clause estimating the losses that might arise in a wide range of circumstances. This strategy may be needed to avoid a court striking down a liquidated damages clause after categorizing it as a blunderbuss clause.¹⁸² For example, a buyer intending to use a liquidated damages clause to prevent the hold-up problem would need to estimate a sum of damages for late delivery and a different amount for delivery of low quality goods.¹⁸³ Conversely, a seller who is afraid that an early breach of a fixed-term contract will render its relationship-specific investment obsolete and partially unrecouped should avoid bargaining for liquidated damages whose amount is invariant to the executory term of the contract at the time of breach (and, therefore, to the gravity of the termination).

Stipulated damages may also have disadvantages if they are used to deter competition by retarding the entry of more efficient firms.¹⁸⁴ Professors Aghion and Bolton explain that a buyer

¹⁸¹ For a similar illustration, see Hatzis (Cake), *supra* note 155, at 168 n.67.

¹⁸² The so-called “‘shotgun’ or ‘blunderbuss’ clauses” estimate a single amount regardless of the kind of breach. See FARNSWORTH (CONTRACTS), *supra* note 116, at 816; see also Clarkson, Miller & Muris, *supra* note 130, at 382.

¹⁸³ See FARNSWORTH (CONTRACTS), *supra* note 116, at 818-19; De Geest, *supra* note 177, at 152; see also Constr. Contracting & Mgmt., Inc. v. McConnell, 815 P.2d 1161, 1167 (N.M. 1991) (holding that a liquidated delay damages should not be used as estimation of losses other than these due to late performance).

¹⁸⁴ See Philippe Aghion & Patrick Bolton, *Contracts as a Barrier to Entry*, 77 AM. ECON. REV. 388, 388 (1987). See also Edlin & Schwartz, *supra* note 150, at 35; BOLTON & DEWATRIPONT, *supra* note 67, at 608. As another disadvantage, the bargaining process and the estimation of the amount of a liquidated damages clause might force the promisee to reveal strategic information such as its cost structure or its profit margin. See Omri Ben-Shahar & Lisa Bernstein, *The Secrecy Interest in Contract Law*, 109 YALE L.J. 1885, 1902-04 (2000). A stipulated damages clause might also give an incentive to the promisee to induce a breach. See, e.g., Schwartz & Scott, *supra* note 29, at 617 n.165; Edlin & Schwartz, *supra* note 150, at 37, 52. It seems unlikely, however, that stipulated damages would incentive a held-up party to induce a breach. The larger the amount of the clause, the larger the incentive to induce a

who has entered an exclusive dealing contract with an incumbent seller that contains a stipulated damages clause, will purchase goods only from potential entrant sellers charging prices lower than the incumbent's price minus the stipulated damages that it has to pay due to the breach of contract.¹⁸⁵ In this scenario, the stipulated damages clause works as an entry fee that the entrant must pay to the incumbent seller. Conversely, a potential competitor will not enter the market if its marginal costs are higher than the price that it must charge to cover the stipulated damages clause.¹⁸⁶

In practice, a bright-line rule or standard determining when a stipulated damages clause is used legally to deter opportunistic behavior and increase the level of idiosyncratic investments versus when it is used illegally to dissuade the entrance of more efficient competitors is very difficult to enact.¹⁸⁷ It is also possible that both reasons are present. In any event, this dissertation does not focus on the antitrust effects of stipulated damages clauses.¹⁸⁸

In sum, four possibilities exist regarding stipulated damages clauses. First, a legal system may establish that stipulated damages clauses are always invalid. This kind of legal system is possible in theory but it does not exist in practice. Second, a legal system may establish that stipulated damages are completely valid, without exceptions. This was the case of the

breach but, at the same time, the larger the likelihood that the inducement of breach will be detected and that a court would find the clause unreasonable and, therefore, unenforceable. *See* Schwartz (Myth), *supra* note 155, at 393 (“[T]he strategy of attempting to induce breach is least likely to pay off when it is most desirable to pursue—when the liquidated damages would be large”).

¹⁸⁵ *See* Aghion & Bolton, *supra* note 184, at 389.

¹⁸⁶ Of course, this statement assumes that entrants can only make products that already obligated buyers would want to buy. Further clarifications are not included because antitrust issues are only an ancillary topic of this dissertation.

¹⁸⁷ *See* Schwartz & Scott, *supra* note 29, 617 n.165; *see also* Edlin & Schwartz, *supra* note 150, at 37, 52; DiMatteo (Penalties), *supra* note 151, at 900; Hatzis (Cake), *supra* note 155, at 175-76.

¹⁸⁸ *See supra* § II.A.

Napoleonic Code in the nineteenth century.¹⁸⁹ Third, a legal system may establish that stipulated damages are valid but courts may reduce its amount on equity grounds. This is the model that many civil law countries follow.¹⁹⁰ Fourth, a legal system may establish that it is uncertain whether or not stipulated damages are valid, which is the case of the U.S. law. In such a case, parties need to devise expensive strategies to deal with this uncertainty and with its main consequence in the realm of the hold-up problem: investments under efficient levels. Some scholars have made some proposals to reduce this uncertainty, moving the U.S. law from the fourth group to the third or the second one.

Professors Alan Schwartz & Robert E. Scott, for example, contend that courts should ban only inefficient penalty clauses.¹⁹¹ Penalties intended to prevent the hold-up problem are efficient and, therefore, could be enforceable if their proposal were accepted. The current legal rule is that both dickered and boilerplate penalty clauses have the same chances of being struck down.¹⁹² In contrast with this generalization, Judge Posner claims that penalties that large companies negotiate should be presumed enforceable.¹⁹³ This proposal, of course, would encompass hold-up situations, in which the parties are usually sophisticated companies.

Professors Charles J. Goetz and Robert E. Scott argue that stipulated damages clauses should not be an exception to the rule by which courts do not review the reasonableness of

¹⁸⁹ See MATTEI (COMPARATIVE), *supra* note 71, at 186-87.

¹⁹⁰ See *id.* at 190-91. See also § IV.B.2 *supra* at 133.

¹⁹¹ See Schwartz & Scott, *supra* note 29, at 541.

¹⁹² See DiMatteo (Penalties), *supra* note 151, at 913. Dickered terms are provisions resulting from specific assent. Boilerplate terms, by contrast, are associated with blanket assent or with no assent at all. See KARL N. LLEWELLYN, THE COMMON LAW TRADITION: DECIDING APPEALS 370 (1960).

¹⁹³ See XCO Int'l Inc. v. Pac. Scientific Co., 369 F.3d 998, 1001 (7th Cir. 2004); see also Lake River Corp. v. Carborundum Co., 769 F.2d 1284, 1289 (7th Cir. 1985) (“[R]efusal to enforce penalty clauses is (at best) paternalistic—and it seems odd that courts should display parental solicitude for large corporations.”).

contracts.¹⁹⁴ In other words, the general causes that might invalidate a contract, such as unconscionability,¹⁹⁵ or mutual mistake,¹⁹⁶ should be enough to police stipulated damages clauses.

Unfortunately, the chances that such proposals will be adopted in the short term are low. As Judge Posner put it: “[t]he slow pace at which the common law changes makes it inevitable that some common law rules will be vestigial, even fossilized.”¹⁹⁷ Until new legal rules on penalty clauses are enacted, parties making idiosyncratic investments should accept the limited role of liquidated damages clauses to prevent the hold-up problem or resort to other protections against extorted modifications.

d. Conclusions

Stipulated damages might prevent the hold-up problem. Not all stipulated damages, however, address this problem in the same manner. From an economic standpoint, penalty clauses are a better protection in comparison with liquidated damages. Penalties might either avoid or solve the hold-up problem in the best scenario and mitigate it in the worst case (*e.g.*, when its amount is low). Liquidated damages clauses, in contrast, may mitigate but do not avoid or solve the hold-up problem. The distinction between penalty clauses and liquidated damages clauses is not only

¹⁹⁴ See Goetz & Scott, *supra* note 134, at 578; see also DiMatteo (Penalties), *supra* note 151, at 886, 889, 916; Schwartz (Myth), *supra* note 155, at 383-84.

¹⁹⁵ See FARNSWORTH (CONTRACTS), *supra* note 116, at 812 (stating that the doctrine of unconscionability makes it difficult to justify the distinction between liquidated damages and penalties); see also § UCC 2-302. On a related note, a clearly under-liquidated damages clause might be unconscionable. See UCC § 2-718(1), cmt. (1); FARNSWORTH (CONTRACTS), *supra* note 116, at 811. The law, however, is silent about whether a clearly overliquidated damages clause might be unconscionable. In any event, it seems unlikely that a contract between sophisticated parties, as happens in hold-up situations, would be unconscionable.

¹⁹⁶ Mutual mistake would arise if both the seller and the buyer overestimate the amount of damages. See Rea, *supra* note 130, p. 160-62. Mutual mistake, however, seems an unlikely outcome in hold-up situations, which usually involve highly informed parties as well as protracted and detailed negotiations.

¹⁹⁷ *XCO Int'l Inc.* 369 F.3d at 1002.

economical but also legal. As a general rule, penalty clauses are unenforceable in the United States. Therefore, parties are allowed to provide only liquidated damages clauses. If the limited protection of this kind of stipulated damages clauses is not enough to persuade a party to make an idiosyncratic investment, other safeguards should be analyzed, such as reputation bonds, which is the next topic.

3. Reputation Bonds

a. Introduction

Section III.B.3 discusses reputation bonds as the third private safeguard that parties may use to avoid, solve, or mitigate the hold-up problem. Since reputation bonds are a subset of non-legal sanctions,¹⁹⁸ their role in preventing the hold-up problem does not significantly depend on the laws of the United States or any other country.¹⁹⁹ Such role, however, does depend on the particularities of the industries where the hold-up problem might arise.²⁰⁰ As a result, while reputation bonds might be useful to protect relationship-specific investments from a theoretical standpoint, their real efficacy in preventing the hold-up problem can be determined only on a case-by-case basis.

¹⁹⁸ See Barak D. Richman, *Firms, Courts, and Reputation Mechanisms: Towards a Positive Theory of Private Ordering*, 104 COL. L. REV. 2328, 2238, 2239 n.34 (2004); see also Gillian K. Hadfield, *Privatizing Commercial Law*, 24 REGULATION 40, 43 (2001) [hereinafter Hadfield (Regulation)] (reminding that the law does not have the monopoly to induce contractual parties to perform).

¹⁹⁹ However, neither reputation nor any other non-legal sanction is completely independent of the legal rules. See Gillian K. Hadfield, *The Public and the Private in the Provision of Law for Global Transactions*, in CONTRACTUAL CERTAINTY IN INTERNATIONAL TRADE: EMPIRICAL STUDIES AND THEORETICAL DEBATES ON INSTITUTIONAL SUPPORT FOR GLOBAL ECONOMIC EXCHANGES 239, 253 (2009) [hereinafter Hadfield (Public)].

²⁰⁰ For instance, the characteristics of the diamond industry are favorable for the efficacy of reputation bonds. See Lisa Bernstein, *Opting out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. LEGAL STUD. 115, 135 (1992) [hereinafter Bernstein (Diamond)].

b. The Role of Reputation Bonds in the Prevention of the Hold-up Problem

Reputation may be described as a bond that a promisor posts at the formation stage of a contract.²⁰¹ This bond amounts to the present value of future business profits that would vanish if a promisor breaks its promise.²⁰² If the non-investing party breaches, the value of its reputation bond would be impaired or even destroyed since it would lose many valuable business opportunities. In other words, and assuming that legal remedies are zero or negligible, a rational promisor would honor a contract if the value of its reputation bond outweighs the gains resulting from breach.²⁰³ In such a case, a threat to breach would be less credible and the likelihood that the hold-up problem arises would be diminished. In any event, asymmetrical information may reduce the role of reputation bonds in the prevention of the hold-up problem. After all, the non-investing party knows better than the held-up party the potential damage to its reputation arising out a breach.²⁰⁴ Thus, even if the reputation losses outweighs the gains resulting from breach, the held-up party might underestimate the amount of such losses, consider that the threat to breach is credible and, as a result, yield to the demand for a contract renegotiation.

If the condition indicated above does not hold (reputation losses greater than gains from breach) or if asymmetrical information reduces the role of a reputation bond, reputation alone

²⁰¹ See David Charny, *Non-legal Sanctions in Commercial Relationships*, 104 HARV. L. REV. 373, 392 (1990); see also *supra* § II.C.

²⁰² See Bernstein (Diamond), *supra* note 200, at 138; Schwartz & Scott, *supra* note 29, at 546; see also MacLeod, *supra* note 37, at 603 (defining reputation as “an asset whose value is destroyed [or at least reduced] when a seller or buyer breaches their obligation”).

²⁰³ See Charny, *supra* note 201, at 401 n.98; SCOTT & STEPHAN, *supra* note 16, at 68; Gillian K Hadfield, *Privatizing Commercial Law: Lessons from ICANN*, 6 J. SMALL & EMERGING BUS. L. 257, 265 (2002); Robert E. Scott, *Theory of Self-Enforcing Indefinite Agreements*, 103 COL. L. REV. 1641, 1646 (2003) [hereinafter Scott (Self-Enforcing)]; See also L.G. Telser, *A Theory of Self-Enforcing Agreements*, 53 J. BUS. 27, 27(1980) (“A self-enforcing agreement . . . remains in force as long as each party believes himself to be better off by continuing the agreement than he would be by ending it.”).

²⁰⁴ See Charny, *supra* note 201, at 393-94.

may not be enough to deter breach and, therefore, to prevent the hold-up problem. For instance, keeping the assumption of zero legal remedies, a breach will be efficient for a non-investing buyer if the gains from replacing a held-up seller with a new company are \$100 while the reputational loss is \$60. The assumption of zero legal remedies is, of course, unrealistic. Legal remedies work in tandem with reputation in the deterrence of breach and, consequently, in the prevention of the hold-up problem.²⁰⁵ In the example indicated above, a threat to breach will be empty if the expected value of legal remedies is at least \$40. Put differently, reputation bonds may avoid the negative consequences of the undercompensatory nature of legal remedies.²⁰⁶

A key difference between legal remedies and reputation bonds exist, though. Legal remedies, regardless of the amount, entail both a payment in favor of the aggrieved party and a cost that the breaching party bears. Reputation losses also entail a cost for the breacher but, in contrast with legal remedies, not a benefit for the aggrieved party.²⁰⁷ Surprisingly, this feature makes a reputation bond a good hostage: it is valuable for the hostage-giver (the non-investing party, who does not want to lose its bond) but not for the hostage-taker (the held-up party, who does not have an incentive to appropriate the bond).²⁰⁸

²⁰⁵ See Klein, *supra* note 51, at 449 (“[A]s long as the relationship remains within the self-enforcing range where each transactor’s hold-up potential gain is less than the private sanction, a hold-up will not take place”). For a particular industry where non-legal sanctions supplements legal remedies inducing performance, see Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation through Rules, Norms, and Institutions*, 99 MICH. L. REV. 1724, 1756–58, 1786–87 (2000) [hereinafter Bernstein (Cotton)].

²⁰⁶ See Charny, *supra* note 201, at 394 (suggesting that non-legal sanctions play a key role when legal sanctions are not enough to induce parties to honor their contracts); David V. Snyder, *Private Lawmaking*, 64 OHIO STATE L. J. 371, 432 (2003) [hereinafter Snyder (Private)] (“Reputation is particularly important in contracting contexts, since the legal remedy is undercompensatory.”) As to the undercompensatory nature of remedies, see *infra* § III.C.4.

²⁰⁷ See Charny, *supra* note 201, at 401.

²⁰⁸ See *id.* at 406; Bernstein (Diamond), *supra* note 200, at 145. See generally COOTER & ULEN, *supra* note 67, at 221 (“In general, a good hostage is something that the hostage-giver values highly and the hostage-taker values little. Asymmetrical valuation makes a good hostage.”); WILLIAMSON (1985), *supra* note 7, at 177 (“[A] king who is known to cherish two daughters equally and is asked . . . to put a hostage is better advised to offer the ugly one

The vanished business opportunities resulting from reputational losses are of two kinds: vanished profits from future contracts with the aggrieved party²⁰⁹ and losses of future business with third-parties. As to the first kind, it seems unlikely that the prospect of losses with the held-up party would deter a non-investing party from making a modification proposal under threat to breach or from carrying out this threat. After all, potential parties intending to make a relationship-specific investment usually bargain for a single contract providing a term long enough to recoup their sunk costs. Thus, repeated transactions or successive short-term contracts between the same parties, the ones that allow this kind of self-remedy, should be rare in hold-up situations.²¹⁰

In spite of the absence of repeated transactions between the held-up party and the non-investing party, both of them may be part of big multinational conglomerates rather than isolated companies. Thus, a non-investing party intending to breach a contract must take into account the likelihood that either the holding company of the held-up party or any of its subsidiaries punishes such breach by refusing to deal either with the non-investing party or with any of its affiliated companies.

The second kind of business opportunities that a breach threatens are those derived from future contracts with third-parties.²¹¹ The amount of these opportunities depends on whether the

[because the risk of appropriation is lower].” A reputation bond is the ugly daughter.). For an analysis of hostages as governance structures, see *supra* § II.B.

²⁰⁹ See Daniel Keating, *Measuring Sales Law against Sales Practice: A Reality Check*, 17 J. LAW AND COMMERCE 99, 102, 127 (1997) (stating that the most common strategy of aggrieved parties is to stop dealing with the breacher rather than suing it); see also Charny, *supra* note 201, at 392-93.

²¹⁰ See Scott (Conflict), *supra* note 71, at 2010-11 (mentioning that a series of short-term contracts do not work because the investing party may be vulnerable to the demands of the other party at each time the contract term is extended).

²¹¹ See Scott (Self-Enforcing), *supra* note 203, at 1646.

information about the breach is public knowledge. Reputation bond works well when outsiders to the hold-up situation may learn that the contract was not performed,²¹² why the promisor did not honor its contract,²¹³ and the consequences of the broken promise.²¹⁴

In perfect markets, parties may acquire complete information about a breach at zero cost. Perfect markets, however, do not exist. The issue, therefore, is not whether parties can acquire information about a breach. The real issue is two-fold: first, whether the information that parties acquire about a breach is close to what really happened; and second, whether market participants can learn about a breach at low cost (or at least, at a cost lower than the value of the information).²¹⁵ The more imperfect or incomplete the information, the more unlikely it is that reputation alone will deter a party from breaching its contract.²¹⁶ The degree of incompleteness and the cost of acquisition of the information depend on the contractual promise that was broken, on the one hand, and on the industry where the hold-up problem arose, on the other.

As to broken promises, the idiosyncratic nature of hold-up situations does not contribute to a cheap and complete flow of information.²¹⁷ Suppose that a non-investing seller breached a contract after its held-up buyer rejected a price increase. The seller might have breached, for instance, by refusing to deliver the goods. In such a case, third parties might mistakenly believe

²¹² See Hadfield (Public), *supra* note 199, at 253 (“The essence of a reputation mechanism is the communication of information about default to others not involved in the original transaction”).

²¹³ See Scott (Self-Enforcing), *supra* note 203, at 1644.

²¹⁴ See WILLIAMSON (1985), *supra* note 7, at 395-96.

²¹⁵ See Charny, *supra* note 201, at 403. See also Bernstein (Diamond), *supra* note 200, at 132, 38 (explaining that non-legal sanctions work in the diamond industry because the costs of obtaining information about dealers’ reputation is minimized).

²¹⁶ See Jolls, *supra* note 95, at 231.

²¹⁷ See WILLIAMSON (1985), *supra* note 7, at 406 (“Idiosyncratic experience between buyer and seller that is known only to the immediate parties plainly poses a serious impediment [to the efficacy of reputation].”). See generally WILLIAMSON (1996), *supra* note 34, at 153-54 (stating that the effect of reputation is limited when a promisee cannot accurately and cheaply communicate to third-parties that it suffered a breach).

that the absence of delivery was not intentional but due to unforeseeable circumstances. On the other hand, if the buyer accepted the new price to avoid breach, third parties may lack the incentives to invest money and time to know whether the change was a good-faith amendment or just the result of a hold-up situation.²¹⁸

As noted above, the degree of incompleteness and the cost of acquisition of the information are also very industry-specific.²¹⁹ More particularly, efficient acquisition of information about contractual performance depends on at least two factors: the size and diversity of an industry, and the role of trade associations. As to the first factor, reputation usually thrives in small and homogeneous communities such as the diamond, cotton, and grain industries that Lisa Bernstein describes in her studies.²²⁰ The efficacy of reputation bonds in these communities may be due to their locations in small geographical zones,²²¹ the limited number of members,²²² the fact that members belong to the same ethnicity,²²³ or the effect of frequent face-to-face dealings on an adequate and cheap flow of information.²²⁴

²¹⁸ See Klein, Crawford & Alchian, *supra* note 15, at 297. Similarly, third-parties may not be able to distinguish between a case in which a buyer refuses to pay the price of the goods to a held-up seller because its demand for a lower price was rejected and another case in which the refusal to pay was justified due to the low-quality of the goods.

²¹⁹ See *supra* p. 57.

²²⁰ See Bernstein (Diamond), *supra* note 200, at 197 (analyzing the diamond industry); Bernstein (Cotton), *supra* note 205, at 1724 (studying the cotton industry); Bernstein (Grain), *supra* note 40, at 1765 (examining the grain industry).

²²¹ See Bernstein (Diamond), *supra* note 200, at 140; Hadfield (Regulation), *supra* note 198, at 42.

²²² See Snyder (Private), *supra* note 206, at 432; Scott (Self-Enforcing), *supra* note 203, at 1646 n.18.

²²³ See SCOTT & STEPHAN, *supra* note 16, at 68; Schwartz & Scott, *supra* note 29, at 557.

²²⁴ See Charny, *supra* note 201, at 418-19.

Small and homogenous communities, however, are more the exception than the rule in a globalized world.²²⁵ Nowadays, most commercial transactions, and most hold-up situations,²²⁶ take place not only within countries that are far from being homogeneous but also beyond national borders. Multinational companies are almost everywhere; the number of participants in global markets is high; top executives are not always friends, or at least do not belong to the same communities of their partners, who might be in the antipodean; and multinational companies rarely refrain from efficiently breaching a contract just to avoid losing social status or friendship ties within a community.²²⁷

Two reasons, however, attenuate the difference between small and homogeneous communities and globalized markets regarding the efficacy of reputation. First, parties planning to make multi-billion dollar investments are usually sophisticated companies with the time and money to research the contractual behavior of their potential partners in the past. Second, and perhaps more important, globalized markets, even lacking the advantages that small and homogeneous communities have to transmit information, can find alternative methods to perform this function. Nowadays, technology facilitates the supply of low-cost information about

²²⁵ See *id.* at 418-19. See also Snyder (Private), *supra* note 206, at 431-32 (categorizing small and homogeneous communities as the equivalent in the commercial world of British private gardens: green urban spaces that only the owners or the surrounding townhouses can enjoy. Both are beautiful, but rare and exclusive.)

²²⁶ This is not to say that hold-up situations cannot arise in small trading communities. For instance, regarding the industries that Lisa Bernstein analyzes, a mill that makes a relationship-specific investment to process cotton for a specific client, a company that invests in a new customized silo for a supplier of grain, or a diamond's dealer that invests in a new technology to discover flaws in stones purchased from a particular seller, might be held-up as a consequence of their investments. See Bernstein (Diamond), *supra* note 200, at 115; Bernstein (Cotton), *supra* note 205, at 1724; Bernstein (Grain), *supra* note 40, at 1765.

²²⁷ See Richman, *supra* note 198, at 2344-45. See generally Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55, 68-69 (1963) (suggesting that personal relationships incentive contractual performance).

contractual performance to the affiliates or subscribers of commercial databases.²²⁸ Trademarks may also perform a similar role, especially if non-investing buyers intending to efficiently breach a contract are also sellers in a consumer market.²²⁹ The degree to which technological systems and trademarks can strengthen the role of reputation in a given market is, however, an empirical question.

As to the second factor related to a cheap flow of information, reputation bonds work better when the breaching party belongs to a trade association. Trade associations, by acting as a collective memory of its members' behavior,²³⁰ disseminate information about breaches at low cost.²³¹ Needless to say, if not only the breaching party (*e.g.*, a non-investing buyer), but also the aggrieved party (*e.g.*, a held-up seller) belong to the same trade association, the efficacy of reputation is enhanced.

The role of trade associations regarding reputation does not stop there. In addition to disseminating information, the threat to suspend or expel breachers increases the value of the reputation bond that the association's members post at the beginning of their contracts.²³² Still, a threat to suspend or expel may not work well if the information about breach is non-verifiable for a trade association,²³³ as may happen in multinational trade associations with a large number of members entering into complex contracts.

²²⁸ See Charny, *supra* note 201, at 418-19, and Bernstein (Diamond), *supra* note 200, at 140.

²²⁹ See Charny, *supra* note 201, at 392-93.

²³⁰ See Schwartz & Scott, *supra* note 29 at 557; Scott (Self-Enforcing), *supra* note 203, at 68.

²³¹ See Bernstein (Cotton), *supra* note 205, at 1765.

²³² See *id.* at 1769 n.183.

²³³ Even if the degree of non-verifiability is lower for such association, whose members are industry experts, than for a court. See Charny, *supra* note 201, at 404.

c. Conclusions

Two conclusions result from the analysis of reputation bonds. First, while reputation, in theory, prevents the hold-up problem by reducing the incentives that the non-investing party has to breach a contract; its practical efficacy will depend on the characteristics of the industry where the hold-up situation arises and, in particular, on whether the information about a breach can be transmitted adequately and at a low cost to third parties.²³⁴ Since generalizations are not possible, the effect of reputation on the hold-up problem in a particular industry is an empirical question.²³⁵ While the works of Lisa Bernstein have been very useful to understand the role of reputation in the diamond,²³⁶ the cotton,²³⁷ and the grain industries,²³⁸ an extension of this empirical work to heterogeneous industries,²³⁹ where the hold-up problem usually arises, is lacking.

Even if generalizations cannot be made, the role of reputation bonds in the prevention of the hold-up problem should not be understated. Regardless of the market where the hold-up problem might arise,²⁴⁰ the role of reputation as a complement of legal sanctions is non-negligible.²⁴¹ Thus, reputation bonds, as a cost on top of the legal remedies that a promisor must assume, might

²³⁴ See WILLIAMSON (1996), *supra* note 34, at 265 (“To be sure, some markets are better able to support reputation effects than others”).

²³⁵ See Richman, *supra* note 198, at 2232 (“To be sure, private ordering systems are richly varied, and ultimately, any successful self-enforcing contractual regime must rely on many details that are not easily generalizable or captured in a parsimonious model.”).

²³⁶ See Bernstein (Diamond), *supra* note 200, at 115.

²³⁷ See Bernstein (Cotton), *supra* note 205, at 1724.

²³⁸ See Bernstein (Grain), *supra* note 40, at 1765.

²³⁹ See Richman, *supra* note 198, at 2238.

²⁴⁰ See Bernstein (Diamond), *supra* note 200, at 138 (“In practice, a significant portion of most commercial contracts are backed, at least in part, by a reputation bond.”).

²⁴¹ See Bernstein (Cotton), *supra* note 205, at 1786-87; Charny, *supra* note 201, at 394; *see also* Marc Galanter, *Justice in Many Rooms: Courts, Private Ordering, and Indigenous Law*, 19 J. LEGAL PLURALISM 1, 23-24 (1981) (reiterating that private ordering and legal sanctions are not mutually exclusive); Klein, *supra* note 51, at 455 (mentioning that a surge in private enforcement increases the marginal product of court enforcement and vice versa).

make breach unprofitable for a non-investing party and, therefore, make its threat to the potentially held-up party an empty one. This is the second conclusion.

Section III.C – Public Attempts to Prevent the Hold-up Problem: Closing the Path to Extorted Modifications and Breach at the Performance of the Contract

1. The Right to Demand Adequate Assurances of Due Performance

a. Introduction

Section III.C.1 analyzes whether the legal rules on the right to demand adequate assurances of due performance prevent the hold-up problem. This section concludes that the effect of these legal rules is two-fold.²⁴² On the negative side, a non-investing party may opportunistically take advantage of the legal rules on the right to demand adequate assurances to extort a modification.²⁴³ On the positive side, a non-investing party's offer of modification under threat to breach may entitle the held-up party to request assurances of due performance, or, under some circumstances, to consider the contract as repudiated. The non-investing party, anticipating this possibility, might refrain from demanding a modification under threat to breach.²⁴⁴ If the positive effect prevails over the negative effect, the rules on the right to demand adequate assurances prevent the hold-up problem, at least to some extent. At first sight, however, the negative effect seems to outweigh the positive effect and, as a result, the legal rules on the right to demand adequate assurances of due performance aggravates the hold-up problem, although this hypothesis can only be experimentally tested.

²⁴² See Garvin, *supra* note 17, at 93.

²⁴³ See *id.* at 93.

²⁴⁴ See *id.* at 93.

b. The U.S. Laws on the Right to Demand Adequate Assurances of Due Performance

The structure of UCC § 2-609, which provides the circumstances entitling a promisee to request adequate assurances of due performance to its promisor, contains five parts.²⁴⁵ First, a promisee must determine whether reasonable grounds for insecurity as to the promisor's performance have arisen.²⁴⁶ Examples of reasonable grounds for insecurity are a buyer who fails to pay on time or a seller who delivers defective goods to other buyers with similar requirements.²⁴⁷ The grounds for insecurity may arise either from the contract itself or from an exogenous cause.²⁴⁸ In any event, the reasonable grounds for insecurity must have arisen after the making of the contract or, at least, the promisee must have been ignorant of its existence at such time.²⁴⁹ Otherwise, the insecurity of a promisor's non-performance will be a risk allocated to the promisee in consideration for part of the contract price.²⁵⁰

²⁴⁵ See Michael J. Borden, *The Promissory Character of Adequate Assurances of Performance*, 76 BROOK. L. REV. 167, 175–76 (2010). Since the right to demand adequate assurances of due performance also exists in contracts other than sale of goods, some cases based on the common law are mentioned in this Section as persuasive authority. See RESTATEMENT (SECOND) OF CONTRACTS § 251.

²⁴⁶ See UCC § 2-609(1); see also Garvin, *supra* note 17, at 172-74 (proposing the three following factors to determine whether reasonable grounds for insecurity have arisen: (1) the more obvious the risk of non-performance at the making of the contract, the less reasonable the grounds for insecurity (*e.g.*, a risk that had arisen in the course of dealing between the same parties); (2) the greater the chances that the promisee had to estimate the risks of non-performance, the weaker the case for finding reasonable grounds; and, more important in the context of hold-up situations; and (3) adequate assurances should not be allowed when the promisee demands them opportunistically).

²⁴⁷ See UCC § 2-609 cmt. 2. For courts holding that promisees had reasonable grounds for insecurity, see, *e.g.*, Louisiana Power & Light Co. v. Alleghany Ludlum Indus., Inc., 517 F. Supp. 1319, 1319 (E.D. La. 1981) (holding that seller's unwillingness to perform due to rising costs created reasonable grounds for insecurity).

²⁴⁸ See UCC § 2-609 cmt. 3. See also Garvin, *supra* note 17, at 100.

²⁴⁹ See *Field v. Golden Triangle Broad., Inc.*, 305 A.2d 689, 703 (Pa. 1973); FARNSWORTH (CONTRACTS), *supra* note 116, at 614-15; Garvin, *supra* note 17, at 104.

²⁵⁰ See FARNSWORTH (CONTRACTS), *supra* note 116, at 614-15.

Second, if reasonable grounds for insecurity have arisen, the promisee may demand assurances of due performance in writing.²⁵¹ Third, the assurances must be adequate.²⁵² Adequate assurances make the promisee as secure as it was at the execution of the contract, when the reasonable grounds for insecurity had not yet arisen.²⁵³ Fourth, a promisee may suspend its own performance for a commercially reasonable time until receiving the adequate assurances that were demanded (*e.g.*, a seller may suspend delivery).²⁵⁴ Nonetheless, a promisee that suspends its own performance after demanding more than adequate assurances breaches the contract.²⁵⁵ Fifth, if the promisor does not provide adequate assurances “within a reasonable time not exceeding thirty days,” the promisee is entitled to consider that the promisor has repudiated the contract.²⁵⁶ In such a case, the promisee may “for a commercially reasonable time await performance by the repudiating party,”²⁵⁷ or “resort to any remedy for breach,”²⁵⁸ and in either case suspend his own performance.²⁵⁹

The legal rules on the right to demand adequate assurances are the ideal companion to the rules on anticipatory repudiation,²⁶⁰ which occurs when a promisor’s words or conduct before

²⁵¹ See UCC § 2-609(1). Although the UCC requires the demand to be in writing, some courts have waived this requirement. See, *e.g.*, *AMF Inc. v. McDonald’s Corp.*, 536 F.2d 1167, 1170-71 (7th Cir. 1976). But see, *e.g.*, *Continental Grain Co. v. McFarland*, 628 F.2d 1348 (4th Cir. 1980).

²⁵² See UCC § 2-609(1); see also UCC § 2-609(2) (“Between merchants [which is the usual case in hold-up situations] . . . the adequacy of any assurance offered shall be determined according to commercial standards.”); *Top of Iowa Coop. v. Sime Farms, Inc.*, 608 N.W.2d 454, 454 (Iowa 2000).

²⁵³ See Garvin, *supra* note 17, at 104-05, 174.

²⁵⁴ See UCC § 2-609(1).

²⁵⁵ See *WHITE & SUMMERS*, *supra* note 129, at 199.

²⁵⁶ UCC § 2-609(4); *Creusot-Loire Int’l, Inc. v. Coppus Eng’g Corp.*, 585 F. Supp. 45, 50 (S.D.N.Y. 1983); Garvin, *supra* note 17, at 101.

²⁵⁷ UCC § 2-610(a).

²⁵⁸ *Id.* § 2-610(b).

²⁵⁹ *Id.* § 2-610(c).

²⁶⁰ See Garvin, *supra* note 17, at 77; Gregory S. Crespi, *The Adequate Assurances Doctrine After U.C.C. § 2-609: A Test of the Efficiency of the Common Law*, 38 VILL. L. REV. 179, 181 n.9 (1993).

performance clearly indicate to the promisee that the contract will not be honored.²⁶¹ But promisors' words or conduct about their willingness to perform the contract are rarely as unequivocal as an anticipatory repudiation requires.²⁶² As a result, a promisee that is unsure about whether its promisor's words or conduct amount to repudiation faces a dilemma.²⁶³ On the one hand, the promisee might continue preparing performance. If the promisor performs as agreed, the promisee would have chosen the right track. If the promisor repudiates, however, the promisee would have wasted the money invested in performance and the time needed to mitigate damages.²⁶⁴ On the other hand, the promisee might assume that the promisor has repudiated the contract, suspend performance, and sue for breach of contract.²⁶⁵ This avenue would be wise if the promisor effectively has repudiated the contract. If the promisee, however, misunderstood the promisor's words or actions and, as a result, the promisor performed, a court might hold that the promisee, and not the promisor, breached the contract.²⁶⁶

The legal rules on the right to demand adequate assurances solve the dilemma indicated above.²⁶⁷ A promisee who has received signals indicating that its promisor will not perform, but who is not completely sure about this prediction, may demand adequate assurances of due performance.²⁶⁸ If the promisor provides the assurances, the promisee will know that it can

²⁶¹ See UCC § 2-610 cmt. 1; Crespi, *supra* note 260, at 182-83.

²⁶² See *Dingley v. Oler*, 117 U.S. 490, 503 (1886); Dena DeNooyer, *Remedying Anticipatory Repudiation—Past, Present, and Future*, 52 SMU L. REV. 1787, 1789-90 (1999).

²⁶³ See *Norcon Power Partners, L.P. v. Niagara Mohawk Power Corp.*, 705 N.E.2d 656, 661 (N.Y. 1998); Crespi, *supra* note 260, at 183; Garvin, *supra* note 13, at 112; WHITE & SUMMERS, *supra* note 129, at 197.

²⁶⁴ See Crespi, *supra* note 260, at 183, and Garvin, *supra* note 17, at 112.

²⁶⁵ See UCC § 2-610(c), Crespi, *supra* note 260, at 183; Garvin, *supra* note 17, at 112.

²⁶⁶ See Borden, *supra* note 245, at 168, 174.

²⁶⁷ See Crespi, *supra* note 260, at 183.

²⁶⁸ See *Norcon Power Partners, L.P. v. Niagara Mohawk Power Corp.*, 705 N.E.2d 656, 656 (N.Y. 1998); Borden, *supra* note 245, at 169; DeNooyer, *supra* note 262, at 1790; WHITE & SUMMERS, *supra* note 129, at 197; *see also*

neither cancel the contract nor sue for breach.²⁶⁹ Conversely, if the promisor refuses to provide the assurances “within reasonable time not exceeding thirty days”,²⁷⁰ the promisee will know with certainty that the contract was repudiated.²⁷¹

c. The Role of the Legal Rules on the Right to Demand Adequate Assurances of Due Performance in the Prevention of the Hold-up Problem

This section discusses, first, whether a non-investing party might opportunistically use the right to demand adequate assurances to obtain a favorable modification and, second, whether the investing party might use the same right to demand adequate assurances to prevent the hold-up problem.

A modification obtained through a demand of assurances will rarely be a price change, at least in nominal terms, since such a change would not assuage the promisee’s grounds for insecurity. Other modifications increasing the contract surplus of the non-investing party and correlatively decreasing the benefit of the held-up party might be obtained through a demand of adequate assurances. For instance, a non-investing seller who had originally agreed to sell on credit to a held-up buyer might request payment in cash upon delivery of the goods on the grounds of some contrived rumors about the buyer’s insolvency.²⁷² This contract modification, while not a price change in nominal terms, entails a higher price in real terms considering the time value of money.

FARNSWORTH (CONTRACTS), *supra* note 116, at 614 (stating that a promisee breaches a contract when, after suspecting that its promisor will repudiate, suspends its performance without requesting assurances).

²⁶⁹ See UCC § 2-106(4).

²⁷⁰ *Id.* § 2-609(4).

²⁷¹ See Crespi, *supra* note 260, at 184.

²⁷² See UCC § 2-702 (1); *Rock-Ola Mfg. Corp. v. Leopold*, 98 F.2d 196 (5th Cir. 1938); FARNSWORTH (CONTRACTS), *supra* note 116, at 613; *see also* Garvin, *supra* note 17, at 103 (indicating that suspected insolvency is usually a reasonable grounds for insecurity even if the suspicious turns false).

Assume that the original present value (*PV*) is calculated at the making of the contract, that the parties had originally agreed that the price of the goods will be paid ninety days after delivery (the deadline – *n*), that the contract price was \$1,000,000 (the future value – “*FV*”), and that the interest rate applicable is 10% per year (the interest rate – “*i*”). The original present value of the contract price can be then calculated through equation 1:

$$\text{Original Present Value (OPV)} = \frac{(FV)}{(1 + i)^n} \quad \text{Equation 1}$$

Substituting numbers for the algebraic terms:

$$\text{Original Present Value (OPV)} = \frac{(\$1,000,000)}{(1 + 10\%)^{\left(\frac{90}{360}\right)}}$$

Making some calculations:

$$\text{Original Present Value (OPV)} = \$976,454$$

If the seller, however, requests payment upon delivery, the new present value of the price is \$1,000,000.²⁷³ The price increase in real terms, therefore, is the difference between the new present value (\$1,000,000) and the original present value (\$976,454), which amounts to \$23,546 (is 2.35% of the original price). While the difference seems low in percentage, it might not be negligible in contracts whose amounts are several millions of dollars. Indeed, such a change might turn in some cases a profitable contract for the held-up party into a losing contract, or at least, prevent this company for meeting its bottom line’s budget.

²⁷³ *New Present Value (NPV)* = $\frac{(FV)}{(1 + i)^n} = \frac{(\$1,000,000)}{(1 + 10\%)^{\left(\frac{0}{360}\right)}} = \$1,000,000.$

A non-investing party may also request other kinds of assurances or modifications, such as the issuance or extension of a personal guarantee by any of the promisor's managers or owners,²⁷⁴ a letter of credit,²⁷⁵ a warranty of the goods to be delivered,²⁷⁶ or the assignment of buyer's receivables to the seller.²⁷⁷

After receiving the demand for adequate assurances, a held-up party has at least two choices. One, the held-up party may provide the assurances which, in practical terms, means acceding to the contract modification that the non-investing party requested.²⁷⁸ In other words, and since the assurances come into the form of contract modification, the held-up party cannot provide assurances without acceding to the requested change. The held-up party might regret its decision and challenge the forced modification before a court on the grounds that the non-investing party obtained it on bad faith or through economic duress.²⁷⁹ This lawsuit, however, might be an unwise financial decision if the litigation expenses outweigh the costs of providing the demanded assurances.²⁸⁰ In any event, these expenses may be reduced if a far-sighted held-up party had bargained for a clause in the original contract providing that the losing party should pay all judgment costs, including attorney fees.²⁸¹

Two, the held-up party may refuse to provide the assurances. In such a case, the non-investing party might respond to this refusal through a carrot-and-stick strategy. The stick is a

²⁷⁴ See Borden, *supra* note 245, at 169.

²⁷⁵ See *Creusot-Loire Int'l, Inc. v. Coppus Eng'g Corp.*, 585 F. Supp. 45 (S.D.N.Y. 1983).

²⁷⁶ In this case, the seller would be the held-up party and, while the price would not be modified, the costs of providing the warranty will reduce the seller's contract surplus.

²⁷⁷ See *Erwin Weller Co. v. Talon, Inc.*, 295 N.W.2d 172, 172 (S.D. 1980).

²⁷⁸ A third option is to offer assurances but not the ones demanded. See Garvin, *supra* note 17, at 105.

²⁷⁹ See Garvin, *supra* note 17, at 123 ("One problem . . . is the bad faith use of adequate assurance itself – to threaten, rather than to parry.").

²⁸⁰ See *id.* at 123, 140 (categorizing adequate assurances as "an almost oxymoronic lawful duress"). Regarding duress in the context of contract modifications, see *infra* § III.C.3.

²⁸¹ FED. R. CIV. P. 54(d)(2).

threat to sue the held-up party for an anticipatory repudiation. Naturally, the held-up party might contend that it did not repudiate the contract because the requested assurances were unreasonable. The carrot is an offer to refrain from bringing suit if the held-up party accedes to the assurances originally demanded or to any other contract modification.²⁸² The held-up party, of course, might claim that it refused to provide the assurances because they were more than adequate,²⁸³ and therefore, that it has not repudiated the contract.²⁸⁴ Proving that the non-investing party demanded assurances that were more than adequate in a complex contract for the sale of idiosyncratic goods might be impossible, in the worst scenario, and very expensive and with an uncertain outcome, in the best scenario.

To decide between the two choices indicated above, a held-up party will compare the value of the assurances that the non-investing party demanded based on not very reasonable grounds for insecurity (the cost of the first choice) with the losses resulting from a court holding, adjusted by its likelihood, that a refusal to give the assurances amounted to a repudiation (the cost of the second choice).²⁸⁵

As an illustration of this analysis, suppose that a non-investing buyer falsely claims to be insecure and demands its seller issue an additional warranty about the quality of the goods to be delivered. This assurance would entail additional costs for the seller adding up to \$50,000. If the seller rejects this demand, assume that the likelihood of the buyer canceling the contract on the grounds of an alleged seller's repudiation is 40%.²⁸⁶ Under this scenario, the seller would need to

²⁸² See UCC §§ 2-609(4), 2-610(b).

²⁸³ See Garvin, *supra* note 17, at 106.

²⁸⁴ See WHITE & SUMMERS, *supra* note 129, at 199, 202.

²⁸⁵ See Garvin, *supra* note 17, at 127-29.

²⁸⁶ See UCC §§ 2-610(b), 2-711(1).

bring suit to prove that the buyer was not entitled to cancel the contract. Even if the seller prevails on trial, it would not be able to recover some losses because remedies are undercompensatory. If, on the contrary, the seller loses at trial, its investment will be scrap. Suppose also that the expected loss of the decision to sue the buyer after it cancelled the contract, considering the odds of prevailing in litigation, is \$200,000. Such losses, multiplied by the likelihood that the buyer cancels the contract if the seller does not provide the demanded assurances (40%) amounts to \$80,000. Since the expected cost of refusing to provide assurances (\$80,000) is higher than the cost of the assurances (\$50,000), the dominant seller's strategy is to grant the warranty.²⁸⁷

As indicated above, the legal rules on the right to demand adequate assurances has both a negative and a positive side in relation to the hold-up problem. The negative side was already mentioned. On the positive side, the legal rules on adequate assurances might prevent the hold-up problem by making a non-investing party's demand for a modification under threat to breach more expensive.²⁸⁸ Thus, a held-up party receiving such an offer might reasonably feel insecure and demand assurances.²⁸⁹ If the threat to breach was empty (*e.g.*, the non-investing party does not have an opportunity for efficiently breaching the contract), it would not only have failed to

²⁸⁷ At first glance, a held-up party may prevent this opportunistic behavior by, in the original contract, bargaining around the right to demand adequate assurances of due performance or, at least, by providing the factors that will be considered as reasonable grounds for insecurity. None of these strategies, however, seems realistic because the parties will be unable not only to take advantage of UCC § 2-609 in an opportunistic form but also to apply this legal rule in case real and reasonable grounds for insecurity arise. On top of that, the bargaining of such provisions may signal that the held-up party does not intend to honor the contract.

²⁸⁸ See Garvin, *supra* note 17, at 103 (indicating that a threat not to perform may trigger insecurity, especially when it is coupled with a demand for a modification); see also *Kaiser-Francis Oil Co. v. Producer's Gas Co.*, 870 F.2d 563, 568-69 (10th Cir. 1989).

²⁸⁹ See Garvin, *supra* note 17, at 122.

obtain a modification but will also have to assume the costs of the assurances.²⁹⁰ If the demanded assurances are not granted, the held-up party might consider the contract as repudiated and threaten to bring suit.²⁹¹

The case law confirms that a promisee may have reasonable grounds for insecurity where the other party demands a modification of a material term. In *Louisiana Power & Light Co. v. Alleghany Ludlum Indus., Inc.*, for example, a seller of condenser tubing demanded a price increase on the grounds of rising production costs.²⁹² The buyer declined the request and demanded adequate assurances of due performance, which the seller did not provide.²⁹³ Because of the seller's refusal, the buyer considered that the seller had repudiated the contract.²⁹⁴ A court, applying New York law, held that the demand for a price increase gave the buyer a reasonable basis for feeling insecure and that seller's failure to give adequate assurances amounted to a repudiation of the contract.²⁹⁵

²⁹⁰ *See id.* at 122-23.

²⁹¹ This threat would be empty because a suit for anticipatory repudiation will not make better off the held-up party than performance of the contract.

²⁹² *See* *La. Power & Light Co. v. Alleghany Ludlum Indus., Inc.*, 517 F. Supp. 1319, 1321 (E.D. La. 1981).

²⁹³ *See id.* at 1321-22.

²⁹⁴ *See id.* at 1319, 1322.

²⁹⁵ *See id.* at 1319, 1322-23. Similarly, in *Kaiser-Francis Oil Co. v. Producer's Gas Co.*, a buyer of natural gas in a falling market requested from its seller a price modification of a take-or-pay provision. After the seller rejected the request and demanded adequate assurances of due performance, the buyer clearly asserted that it would not take or pay for any gas until the seller acceded to the price modification. The buyer based its conditional refusal to take or pay for the gas on several grounds, such as that the natural gas did not meet quality specifications regarding the content of water vapor. A court of appeals, applying Oklahoma law, rejected all the buyer's excuses, and held that the seller of natural gas had reasonable grounds for insecurity after its buyer clearly refused to perform unless a contract modification was accepted. *See Kaiser-Francis Oil Co.*, 870 F.2d at 568-69. In a third case, the seller's threatened to stop deliveries of goods under an installment contract unless the buyer paid immediately for goods recently delivered and whose price was not due until the following month. *Ellis Mfg. Co. v. Brant*, 480 S.W.2d 301, 301 (Tex. Civ. App. 1972). The court, applying Texas law, held that the buyer had reasonable grounds for insecurity, and, therefore, the right to demand adequate assurances. *See id.*

d. Conclusion

This section explained that the legal rules on the right to demand adequate assurances have both a positive and a negative effect on the prevention of the hold-up problem.²⁹⁶ On the one hand, a non-investing party might opportunistically apply these legal rules by falsely claiming grounds for insecurity and demanding more than adequate assurances (whose right value, if the grounds for insecurity are absent, is zero).

While the modification under the guise of assurances that a non-investing party demands is rarely a nominal price change, it might amount to a price adjustment in real terms or to a functional equivalent of a price modification (*i.e.*, a mighty sophisticated hold-up). The former case arises when a seller, who had originally agreed to deliver on credit, requests immediate payment. The latter and more general case, in turn, arises when the demanded assurances increase the held-up party's costs and, therefore, decreases its contract profit (*e.g.*, a seller that provides an extended warranty or a letter of credit).

On the other hand, a held-up party might claim that the proposal for a modification triggered reasonable grounds for insecurity and, as a result, might demand adequate assurances. If the assurances are not granted, the held-up party might consider the contract as repudiated. A non-investing party, foreseeing this expensive outcome, might refrain from demanding a modification with the subsequent prevention of the hold-up problem. While, in theory, the negative effect seems to outweigh the positive one, empirical research will have the last say about the validity of this assumption.

²⁹⁶ See Garvin, *supra* note 17, at 170 (indicating that the doctrine of adequate assurances has both advantages, such as the abstract justice of it, and drawbacks, such as the potential for its opportunistic use).

2. Good faith Modifications

a. Introduction

Section III.C.2 discusses whether legal rules providing that only good faith modifications are enforceable prevent the hold-up problem and concludes that these legal rules mitigate the hold-up problem but neither completely avoid nor solve it. The hold-up problem is mitigated because some held-up parties might successfully contest bad-faith modifications accepted under threat to breach. Similarly, some non-investing parties, those anticipating a significant likelihood of a court overturning a modification,²⁹⁷ might refrain from requesting a contractual change under threat to breach.

The duty of good faith in the modification context neither completely avoids nor solves the hold-up problem because, first, some held-up parties might fail to overturn a modification accepted under threat to breach; second, other held-up parties might refrain from bringing suit due to a significant likelihood of not prevailing in court; and third, some non-investing parties will not be deterred from requesting a modification under threat to breach if the gains from such change outweigh the losses resulting from a judgment overturning the modification adjusted by its likelihood.

b. The Legal Rules on Good Faith in the Modification Context

The key issue in the modification context – which changes should be enforceable and which ones should be struck down²⁹⁸ – is quite complicated because the party seeking the

²⁹⁷ A non-investing party will estimate a threshold from which the likelihood of a court overturning a modification does not justify attempting to extort this change. This threshold will depend on the degree of risk-aversion of the non-investing party. For the notion of risk-aversion, see *supra* § II.B.

²⁹⁸ See *Snyder (Modification)*, *supra* note 22, at 622-23; *WHITE & SUMMERS*, *supra* note 129, at 52-53.

enforcement of a modification usually claims that it resulted from changed circumstances and fair negotiations²⁹⁹ while the other party often argues that the modification was extorted.³⁰⁰

Three legal rules refer to the duty of good faith. First, UCC § 2-209(1) provides that a modification “needs no consideration to be binding.”³⁰¹ This legal rule, rather surprisingly, does not provide a duty of good faith in modifications. Comment 2 to § 2-209 fills the gap by stating that modifications “must meet the test of good faith.”³⁰² Second, UCC § 1-304, provides that the duty of good faith arises in the performance and enforcement of contracts.³⁰³ Comment 1 supplements this rule by stating that bad faith amounts to breach of contract.³⁰⁴ While a modification is neither the voluntary nor the compelled fulfillment of a promise,³⁰⁵ courts have held that the duty of good faith applies to modifications of contracts for sale of goods.³⁰⁶ Third, UCC § 2-103(b) defines good faith as “honesty in fact and the observance of reasonable

²⁹⁹ See Robert A. Hillman, *Contract Modification and Self-Help Specific Performance: A Reaction to Professor Narasimhan*, 75 CORNELL L. REV. 62, 78 (1989) [hereinafter Hillman (Self-Help)] (contending that few parties seeking an extorted modification would admit that their conduct is wrongful).

³⁰⁰ See Robert A. Hillman, *Policing Contract Modification Under the U.C.C.: Good Faith and the Doctrine of Economic Duress*, 64 IOWA L. REV. 849, 855 (1979) [hereinafter Hillman (Policing)]; and Jason Scott Johnston, *Default Rules/Mandatory Principles: A Game Theoretic Analysis of Good Faith and the Contract Modification Problem*, 3 S. CAL. INTERDIS. L.J. 337, 375 (1993); see also Irma S. Russell, *Reinventing the Deal: A Sequential Approach to Analyzing Claims for Enforcement of Modified Sales Contracts*, 53 FLA. L. REV. 49, 53 (2001). (stating that cases where facts are favorable for both parties arise more often than easy cases where the facts clearly establish either legitimate reasons for a modification or a basis for extortion).

³⁰¹ UCC § 2-209(1).

³⁰² *Id.* § 2-209(1) cmt. 2.

³⁰³ See *id.* § 1-304.

³⁰⁴ See *id.* § 1-304 cmt. 1.

³⁰⁵ See Russell, *supra* note 300, at 51 n.2 (indicating that a modification might be a formation process); Snyder (Modification), *supra* note 22, at 623 n.75 (“[M]odification to a contract is neither the performance nor the enforcement of that contract.”). *But see* Graham & Peirce, *supra* note 12, at 17 n.46 (arguing that modifications are part of the performance of contracts).

³⁰⁶ See, e.g., *T&S Brass & Bronze Works, Inc. v. Pic-Air, Inc.*, 790 F.2d 1098, 1100-01 (4th Cir. 1986). See also Hillman (Policing), *supra* note 300, at 855 (stating he was unable to find reported cases holding that a modification is neither performance nor enforcement).

commercial standards of fair dealing in the trade.”³⁰⁷ The court in *Roth Steel Prods. v. Sharon Steel Corp.* rephrased this definition as a two-prong test.³⁰⁸ The objective prong³⁰⁹ is “whether the party's conduct is consistent with ‘reasonable commercial standards of fair dealing in the trade.’”³¹⁰ The subjective prong,³¹¹ is “whether the parties were in fact motivated to seek the modification by an honest desire to compensate for commercial exigencies.”³¹²

The objective prong requires that the contract change resulted from a factor causing “an ordinary merchant to seek a modification of the contract,”³¹³ or that is “outside the control of the party seeking the modification.”³¹⁴ Factors that may be commercially legitimate reasons to seek a modification are diverse and include rising costs,³¹⁵ costs that are steady but above the contract price due to the optimistic forecast of an expert seller,³¹⁶ a demand for goods falling below projected levels,³¹⁷ or even a market shift making performance a losing business for one of the parties.³¹⁸ As a general rule, difficulties in manufacturing and delivering the goods are more

³⁰⁷ UCC § 2-103(b); *see also* Russell, *supra* note 300, at 51; Snyder (Modification), *supra* note 22, at 623 n.76.

³⁰⁸ *See* Roth Steel Prods. v. Sharon Steel Corp., 705 F.2d 134, 146 (6th Cir. 1983).

³⁰⁹ *See* Jeffrey M. Dressler, *Good Faith Rejection of Goods in A Falling Market*, 42 CONN. L. REV. 611, 626-27 (2009); Graham & Peirce, *supra* note 12, at 17; Hillman (Policing), *supra* note 300, at 858.

³¹⁰ Roth Steel Prods. v. Sharon Steel Corp., 705 F.2d 134, 146 (6th Cir. 1983).

³¹¹ *See* Dressler, *supra* note 309, at 626-27.

³¹² *Roth Steel Prods.*, 705 F.2d at 146.

³¹³ *Id.* at 146; *see also* FARNSWORTH (CONTRACTS), *supra* note 116, at 282-83; WHITE & SUMMERS, *supra* note 129, at 59.

³¹⁴ T&S Brass & Bronze Works, Inc. v. Pic-Air, Inc., 790 F.2d 1098, 1105 (4th Cir. 1986).

³¹⁵ *See* Lumber Enters. v. Hansen, 846 P.2d 1046, 1046 (1993); U. S. for Use & Benefit of Crane Co. v. Progressive Enters., Inc., 418 F. Supp. 662, 664 (E.D. Va. 1976). Not only risen actual costs but also increased opportunity costs (*i.e.*, an opportunity for efficient breach) may be a legitimate commercial reason to seek a modification. *See* Russell, *supra* note 300, at 54-55.

³¹⁶ *See* Lumber Enters. 846 P.2d 1050-51.

³¹⁷ *See* Am. Exploration Co. v. Columbia Gas Transmission Corp., 779 F.2d 310, 313-14 (6th Cir. 1985).

³¹⁸ *See* UCC § 2-209(1) cmt. 2. The case law has accepted that substantial market shifts may be a legitimate commercial reason to seek a modification. *See, e.g.*, Weisberg v. Handy & Harman, 747 F.2d 416, 420-21 (7th Cir. 1984) (“A precipitous change in market prices satisfies the requirement of good faith found in section 2-209”).

frequent than difficulties in paying the agreed upon price; sellers therefore usually have more legitimate commercial reasons to seek a change than buyers.³¹⁹

The second and subjective prong examines whether the party seeking the modification “was, in fact, motivated by a legitimate commercial reason . . . not offered merely as a pretext . . . to obtain a modification by extortion or overreaching.”³²⁰ Needless to say, this subjective prong is more complex than the objective one because it focuses on the intention of the party seeking the modification.³²¹

c. The Role of Good Faith in the Prevention of the Hold-up Problem

This section will first explain why the U.S. legal rules mitigate the hold-up problem and, later on, why this problem is neither solved nor avoided. Both the UCC and the case law about modification of contracts for sale of goods mitigate the hold-up problem by creating two barriers to non-investing parties seeking a contract modification in bad faith and allowing held-up parties to employ two strategies.

The barriers are the two prongs of the good faith test.³²² As a first barrier, the non-investing party must have a legitimate commercial reason to seek the modification.³²³ Thus, if no objective factor exists, the non-investing party might face great difficulties in conjuring up a reason to seek a modification. Indeed, absent a legitimate commercial reason, a sophisticated non-investing party might anticipate that the likelihood of a court overturning the modification is high and, therefore, might refrain from requesting any change. Even if this modification is

³¹⁹ See Russell, *supra* note 300, at 58.

³²⁰ Roth Steel Prods. v. Sharon Steel Corp., 705 F.2d 146 (6th Cir. 1983).

³²¹ See *id.* at 146.

³²² *But see* Hillman (Policing), *supra* note 300, at 876 (stating that the notion of good faith is so confusing that it is not useful in the modification context).

³²³ See UCC § 2-103(b).

demanded in spite of the lack of legitimate commercial reasons, a held-up party might reject the contractual change after estimating a high likelihood of a court striking down it.

The second barrier is the “honesty in fact” requirement imposed on modifications.³²⁴ A non-investing party demanding a modification under threat to breach, even if legitimate commercial reasons exists, would probably fail the subjective prong of the good faith modification test, at least if such party has the burden of proof. The leading case, *Roth Steel Prods. v. Sharon Steel Corp.*, is illustrative in this respect. In *Roth Steel Prods.*, a seller of steel seeking to enforce a price increase met the objective part of the good faith test due to a substantial growth of its inputs costs.³²⁵ The seller, however, failed the honesty requirement by explicitly threatening not to perform under the original terms.³²⁶ The buyers accepted the modification because of the impossibility of purchasing steel from other suppliers, who were operating almost at full capacity in a market with a rising demand (*i.e.*, the buyers were held-up).³²⁷

On top of those two barriers, a held-up party may employ two strategies. The first one is to bargain for some clauses in the original contract detailing the meaning of good faith, enumerating the legitimate commercial reasons that entitle the parties to seek a modification, providing that other reasons, such as significant market shifts, rising costs, or a declining demand

³²⁴ *Id.*

³²⁵ *See Roth Steel Prods.*, 705 F.2d at 148.

³²⁶ *See id.* at 145-48.

³²⁷ *See id.*

for the buyer's goods are explicitly allocated risks, and agreeing that a demand for a modification under threat to breach is in bad faith.³²⁸

A second and more controversial strategy consists of the held-up party accepting the modification that the non-investing party proposes under threat to breach and, after both parties have performed, challenging it before a court. Professor Suba Narasimhan refers to this strategy as the self-help specific performance remedy.³²⁹ For instance, suppose that a held-up buyer accepts a price increase that its seller proposes, takes delivery of the goods, pays the increased price and, then, requests before a court the reimbursement of the additional price claiming that the modification is unenforceable.³³⁰

The issue here is whether a held-up party that accepts a modification under threat to breach without protesting it or, even worse, planning to contest the change after performance acts in bad faith. Both the case law and scholarly writings have different views about this issue. In *U.S. for Use & Benefit of Crane Co. v. Progressive Enterprises, Inc.*, the court held that a buyer of a machine failed the honesty in fact requirement of the good faith test by secretly intending not to pay the increased price.³³¹ The court also reasoned that a party who plans to challenge a modification must display some protest in order “to put the seller on notice that the modification

³²⁸ See Ian Ayres, *Empire or Residue: Competing Visions of the Contractual Canon*, 26 FLA. ST. U. L. REV. 897, 902 (1999) (“[M]any prophylactic rules that are initially characterized as mandatory often can be modified to give even more protection to one of the contracting parties. For example, the mandatory duty of good faith can be contracted around to enhance a promisor’s fiduciary duties.”); Russell, *supra* note 300, at 69 (“[P]arties may add specific content to the meaning of good faith used in their contract”); see also Scott Johnston, *supra* note 300, at 338 (reminding that UCC § 2-209(1) is one of the few provisions of this code that is mandatory); Keith A. Rowley, *A Brief History of Anticipatory Repudiation in American Contract Law*, 69 U. CIN. L. REV. 565, 620 n.310 (2001) (reminding that parties cannot exclude the duty of good faith).

³²⁹ See Subha Narasimhan, *Modification: The Self-Help Specific Performance Remedy*, 97 YALE L.J. 61, 61 (1987).

³³⁰ Conversely, assume that a held-up seller accepts a price reduction, delivers the goods, receives the price, and, later on, challenges the modification before a court and demands the payment of the difference between the original and the modified price.

³³¹ See *U.S. for Use & Benefit of Crane Co. v. Progressive Enters., Inc.*, 418 F. Supp. 662, 664 (E.D. Va. 1976).

is not freely entered into.”³³² In *T&S Brass & Bronze Works, Inc. v. Pic-Air, Inc.*, the flip side of the case law, the court refused to follow the rationale of *U.S. for Use & Benefit of Crane Co.* and held instead that failing to protest a request to pay the air freight of some goods as a condition for their timely delivery did not preclude the plaintiff from contesting this modification.³³³

The scholars’ views are not more consistent than the case law. On one side of the camp, Professor Hillman states that the duty of good faith precludes parties from accepting a modification without intention to live up to its terms.³³⁴ Professor Narasimhan, on the other hand, argues that the legal rules do not restrict the power of a party to accept a modification with the secret intention of contesting it before a court.³³⁵

In any event, whether a held-up party accepting a modification with the secret plan of contesting acts in bad faith is a fact-specific issue. For example, bad faith might be difficult to prove in the case of a held-up buyer who needs the goods from a non-investing seller as inputs in a customized manufacturing process whose final product will be sold to a major customer during the next years. A finding of bad faith will be even less likely if this buyer must pay liquidated delay damages to its customer due to a late delivery, or even worse, if a seller’s breach may entail the buyer’s bankruptcy.³³⁶ Conversely, bad faith might be more easily proved if the final product indicated above, while key for a business branch, amounts to only five percent of the buyer’s sales.

³³² See *id.* at 663-64.

³³³ *T&S Brass & Bronze Works, Inc. v. Pic-Air, Inc.*, 790 F.2d 1098, 1105-06 (4th Cir. 1986).

³³⁴ See Hillman (Self-Help), *supra* note 299, at 70-71.

³³⁵ See Narasimhan, *supra* note 329, at 74-75. Similarly, Professor Russell contends that only the good faith of the party seeking the enforcement of the modification is relevant. See Russell, *supra* note 300, at 72-73.

³³⁶ For a similar example, see Narasimhan, *supra* note 329, at 67.

Irrespective of whether accepting a modification with the secret intention of challenging it is bad faith, a held-up party planning to employ this strategy should be aware of its costs. First, the expenses of contesting the modification might be high while the likelihood of prevailing in court might be low.³³⁷ Second, if the held-up party delays any litigation until the end of its relationship with the non-investing party, or at least until recouping its investment, a suit before a court might fall outside the statute of limitations.³³⁸

While the duty of good faith mitigates the hold-up problem, it does not avoid or solve this problem on two grounds. First, the vagueness of the notion of good faith is not propitious for the predictability of litigation about contract modifications.³³⁹ As Professor Hillman, in a quote from more than thirty years ago that remains apt put it: “no court, as of yet, has made a major effort to unravel the meaning of good faith in the context of Code modification cases.”³⁴⁰ In practice, the lack of a clear definition of good faith in the modification context may lead courts to err in its application.³⁴¹ Some courts, for instance, might enforce modifications not based on any legitimate commercial reason or obtained using implicit threats to breach. After all, sophisticated non-investing parties will usually be careful to disguise or soften their threat to breach to avoid a

³³⁷ See Hillman (Self-Help), *supra* note 299 at 63, 68-69, 80 (stating that courts often look without suspicion changes to contracts for sale of goods but with distrust challenges to such adjustments, which rarely succeed).

³³⁸ Four years for sale of goods computed from the date of breach, which is the time when the non-investing party allegedly breached the duty of good faith and extorted a modification. See UCC § 2-725.

³³⁹ See Russell, *supra* note 300, at 55, 71, 100, 105 (stating that good faith is an amorphous concept that cannot be defined without context); see also Snyder (Modification), *supra* note 22, at 623. For some attempts to delineate the notion of good faith (or its antonym, bad faith), see, Robert S. Summers, *The General Duty of Good Faith – Its Recognition and Conceptualization*, 67 CORNELL L. REV. 810, 818-19 (1981) (considering good faith as an excluder ruling out diverse forms of bad faith).

³⁴⁰ Hillman (Policing), *supra* note 300, at 875; see also Russell, *supra* note 300, at 88.

³⁴¹ See Hillman (Self-help), *supra* note 299, at 67; Johnston, *supra* note 300, at 366.

holding similar to *Roth Steel Prods.*³⁴² Unfortunately, the lack of predictability coupled with a non-negligible likelihood of a court making a mistake might encourage a non-investing party to obtain a modification in bad faith while refraining a held-up party from challenging it.³⁴³

The second ground by which the legal rules on good faith fail to avoid or solve the hold-up problem is the uncertainty about whether the burden of proof lies on the party seeking the enforcement of the modification (the non-investing party) or on the party contesting it (the held-up party). The UCC rules on contract modification are silent about this issue.³⁴⁴ Nonetheless, comment 2 to § 2-209, providing that “[t]he test of ‘good faith’ . . . may in some situations require an objectively *demonstrable reason* for seeking a modification,”³⁴⁵ suggests that the burden of proof lies on the non-investing party, at least regarding the objective prong. The case law goes both ways.³⁴⁶

Procedural rules are also contradictory.³⁴⁷ For instance, the plaintiff usually bears the burden of proof.³⁴⁸ In hold-up situations, however, the plaintiff may be either the non-investing party seeking the enforcement of the modification or the held-up party asking a court to strike down it.

³⁴² See *Roth Steel Prods. v. Sharon Steel Corp.*, 705 F.2d 134, 145-48 (6th Cir. 1983) (holding that a threat not to perform the contract unless a modification was agreed was un rebutted evidence of dishonesty). Similarly, other courts might strike down freely assented modifications based on justified reasons. See Johnston, *supra* note 300, at 366.

³⁴³ See Russell, *supra* note 300, at 88 (highlighting the “wide variety” of court approaches to the good faith test in modifications); Johnston, *supra* note 300, at 366 (reminding that information about legitimate commercial reasons to seek a modification may be non-verifiable).

³⁴⁴ See Hillman (Policing), *supra* note 300, at 861; Russell, *supra* note 300, at 53.

³⁴⁵ UCC § 2-209 cmt. 2 (emphasis added). See also Hillman (Policing), *supra* note 300, at 861; Russell, *supra* note 300, at 83; Johnston, *supra* note 300, at 376.

³⁴⁶ For cases placing the burden of proof on the party seeking the enforcement of a modification, see, e.g., *Lumber Enters. v. Hansen*, 846 P.2d 1046, 1051 (1993). For cases placing the burden of proof on the party resisting the modification, see, e.g., *Erie County Water Auth. v. Hen-Gar Const. Corp.*, 473 F. Supp. 1310, 1313 (W.D.N.Y. 1979).

³⁴⁷ See Hillman (Self-Help), *supra* note 299, at 67-68, 68 n.32.

³⁴⁸ See FED. R. CIV. P. 301; see also Russell, *supra* note 300, at 54.

The principle that the party asserting a breach bears the burden of proof also leads to an unclear result because the non-investing party might claim that the held-up party breached the modified contract while the latter might argue that the former breached its duty of good faith,³⁴⁹ and therefore, the original contract.³⁵⁰

Admittedly, uncertainty about the burden of proof is preferable than a clear rule placing such burden on the held-up party. This uncertainty, however, is inferior to a clear rule placing the burden of proof on the non-investing party, at least in hold-up situations.³⁵¹ Thus, a held-up party might refrain from challenging a modification after anticipating that meeting the burden of proof will be very expensive in the best scenario, even after adjusting by the likelihood of carrying such burden, while impossible in the worst scenario, in which bad faith is non-verifiable for a court.³⁵² A non-investing party predicting this held-up party's behavior will have an incentive to obtain a modification in bad faith.

An analysis of the two prongs of the good faith test explains in more detail this line of reasoning. A held-up party might face great challenges demonstrating that legitimate commercial reasons to seek a modification did not exist because proving a negative fact is more challenging than proving a positive one.³⁵³ Assuming that these reasons arose, proving that the non-investing party did not meet the "honesty in fact" requirement might be even more difficult, since that

³⁴⁹ See Russell, *supra* note 300, at 54.

³⁵⁰ See UCC § 1-304 cmt. 1.

³⁵¹ Undeniable, in contexts other than hold-up situations or, more generally, extorted modifications, this rule may discourage redistributive but fair modifications due to changed circumstances.

³⁵² See Russell, *supra* note 300, at 79 ("A party who knows that considerable uncertainty surrounds the issue of whether the initiating or capitulating party bears the burden of proof at trial may be emboldened to demand changes.").

³⁵³ This might be a reason to place the burden on non-investing parties.

evidence requires an inquiry about the motives that the non-investing party had to seek a modification.³⁵⁴

d. Conclusion

Section II.C.2 concludes that the success of the legal rules on good faith modification in the prevention of the hold-up problem is mixed. On the one hand, these rules mitigate the hold-up problem by allowing courts to strike some modifications that a non-investing party has extorted from a held-up party. In the long-term, if the case law is consistent, non-investing parties would not bother requesting modifications under threat to breach after anticipating a significant likelihood of a court striking down them. The duty of good faith, on the other hand, neither avoids nor solves the hold-up problem on two grounds. First, good faith is an open notion, susceptible to wide interpretations, which may lead courts to err in their effort to prevent bad-faith modifications.³⁵⁵ Second, it is unclear whether the burden of proof is on the party seeking the enforcement of the modification (the non-investing party) or on the other party (the held-up party). Unfortunately, a good faith test might not be perfect regardless of whether the legal rules are improved. In the words of Professor Hillman, “the strength of the Code’s obligation of good faith performance [its breadth] is also its weakness.”³⁵⁶ As a result, other options to police extorted modifications are needed. One of them, the doctrine of economic duress, is discussed in the next section.

³⁵⁴ See generally Hillman (Policing), *supra* note 300, at 859 .

³⁵⁵ See Johnston, *supra* note 300, at 366 (indicating that courts are prone to err in the distinction between good faith and bad faith modifications).

³⁵⁶ Hillman (Policing), *supra* note 300, at 877.

3. Economic Duress

a. Introduction

Section III.C.3 analyzes whether the U.S. legal rules on economic duress prevent the hold-up problem.³⁵⁷ Economic duress is a kind of coercion that a powerful market participant, such as a non-investing party in a hold-up situation, imposes on a weaker market participant, such as a held-up party.³⁵⁸ Economic duress may be understood as either a monopoly or a monopsony. In hold-up situations, a non-investing seller is the monopolist and its held-up buyer a customer lacking any other sources of supply. By contrast, a non-investing buyer is the monopsonist and its held-up party is a supplier lacking any other customer.³⁵⁹ This section, in any event, focuses on cases in which the victim is either a seller whose buyer threatens not to take delivery or a buyer who desperately needs the goods to meet tight deadlines with its customers. The remaining case, when a seller desperately needs the proceeds of its sale, will be omitted considering that a sophisticated seller usually have alternative ways to obtain funds in the capital markets.³⁶⁰

³⁵⁷ This Section, however, does not analyze the doctrine of necessity, which, like duress, applies when a promisor is in dire conditions. See COOTER & ULEN, *supra* note 67, at 264. In duress, a party threatens to harm by an action (*e.g.*, by breaching a contract) while, in necessity, a party threatens to harm by an omission (*e.g.*, by not selling gas to a driver in an isolated highway). As another difference, the party exerting duress causes the dire circumstances of the threatened party. In necessity, by contrast, one party takes advantage of another due to its bad judgment (*e.g.*, driving without enough gas through a deserted highway); an unexpected event (*e.g.*, driving in the same highway with a tank that begins to leak in the middle of the road); or a third-party's action (a person secretly puncturing the tank when it was filled). See COOTER & ULEN, *supra* note 67, at 206-07, 64. Since a promisor is not the cause of necessity, it does not arise in hold-up situations.

³⁵⁸ See Oren Bar-Gill & Omri Ben-Shahar, *Credible Coercion*, 83 TEX. L. REV. 717, 757 (2005) [hereinafter Bar-Gill & Ben-Shahar (Credible Coercion)].

³⁵⁹ See POSNER, *supra* note 28, at 115 (“Duress is a synonym for monopoly.”). In contexts other than contracts for sale of goods, *Alaska Packers’ Ass’n v. Domenico* is the classic case of labor monopoly. See 117 F. 99, 99 (9th Cir. 1902).

³⁶⁰ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 175 cmt. b (“Since alternative sources of funds are ordinarily available, a refusal to pay money is not duress, absent a showing of peculiar necessity.”).

Coercion, which is different from duress, occurs when a party threatens to do some harm to another party if a proposal is rejected.³⁶¹ Not every threat is wrongful nor is every coerced act duress.³⁶² “[T]here is compulsion in all contracts”³⁶³ (e.g., when one party threatens not to deliver a book to the other party unless it pays \$10).³⁶⁴

Section III.C.3 concludes that the U.S. legal rules on economic duress partially protect parties who make relationship-specific investments and, therefore, mitigate the hold-up problem. Due to some shortcomings of these laws, however, the hold-up problem is neither solved nor avoided. Under a pessimistic view, any test applied to extorted modifications will always be over-inclusive or under-inclusive and, therefore, even if the current legal rules are amended, the hold-up problem might neither be avoided nor solved without unintended consequences in other areas of contract law.³⁶⁵

At one extreme of the spectrum, a too-stringent test will enforce all or most modifications, either based on unforeseen circumstances or opportunistic ones, which would not solve the hold-up problem. Under a too-lenient test, at the other end of the spectrum, non-investing parties anticipating that opportunistic modifications will be struck down would not bother to demand them and breach the contract, at least if an alternative trading opportunity exist. A lenient test will also deter parties from modifying their contracts when unforeseen

³⁶¹ See Henry Mather, *Contract Modification Under Duress*, 33 S.C.L. REV. 615, 625, n.33 (1982); Bar-Gill & Ben-Shahar (Credible Coercion), *supra* note 358, at 718.

³⁶² See Mather, *supra* note 361, at 625 n.33 (“Duress is a subspecies of coercion”).

³⁶³ ROBERT L. HALE, *FREEDOM THROUGH LAW* 550 (1952). See also RESTATEMENT (SECOND) OF CONTRACTS (1981) § 176 cmt. a (“An ordinary offer to make a contract commonly involves an implied threat by one party, the offeror, not to make the contract unless his terms are accepted by the other party, the offeree.”); Snyder (Modification), *supra* note 22, at 678-79 (reminding that some compulsion in contracts is encouraged).

³⁶⁴ See John Dalzell, *Duress by Economic Pressure I*, 20 N.C. L. REV. 237, 238–39 (1941) (reminding that parties usually enters into a contract to avoid a less attractive alternative).

³⁶⁵ See ALAN WERTHEIMER, *COERCION* 23 (1990).

circumstances arises or even from entering into them anticipating that they will be prisoners of their deals.³⁶⁶

b. The U.S. Legal Rules on Economic Duress

The key issue regarding economic duress is where to draw the line dividing offers or even legal threats,³⁶⁷ and wrongful threats.³⁶⁸ Put differently, the challenge of the law is to establish the threshold where tough but legal bargaining ends and economic duress or blackmail begins.³⁶⁹ This, needless to say, is a hard task.³⁷⁰

The UCC is silent on how this issue is addressed. As a result, the rules on duress of the Restatement (Second) are applicable to sale of goods via UCC § 1-103.³⁷¹ Section 174 of the Restatement (Second) provides that a contract, or a modification, entered under duress “is not effective as a manifestation of assent.”³⁷² Section 175 of the same Restatement, in turn, provides a two-prong test for establishing duress by threat.³⁷³

As to the first or proposal prong,³⁷⁴ the threat must be improper,³⁷⁵ or wrongful.³⁷⁶ Fortunately for held-up parties, not only explicit but also implicit threats may be improper or

³⁶⁶ See FARNSWORTH (CONTRACTS), *supra* note 116, at 268.

³⁶⁷ See *id.* at 264 (“A threat is a manifestation of an intent to inflict some loss or harm on another.”).

³⁶⁸ See Péter Cserne, *Duress in Contracts: an Economic Analysis*, in 6 CONTRACT LAW & ECONOMICS, ENCYCLOPEDIA OF LAW & ECONOMICS 62 (Gerrit De Geest ed., 2d ed. 2011); COOTER & ULEN, *supra* note 67, at 261.

³⁶⁹ Bar-Gill & Ben-Shahar (Credible Coercion), *supra* note 358, at 759.

³⁷⁰ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 176 cmt. f; Graham & Peirce, *supra* note 12, at 10; WHITE & SUMMERS, *supra* note 129, at 58.

³⁷¹ This legal rule provides that the common law, including the legal rules related to duress and coercion, is applicable to sale of goods unless displaced by particular provisions of the UCC. See UCC § 1-103.

³⁷² RESTATEMENT (SECOND) OF CONTRACTS (1981) § 174.

³⁷³ *Id.* § 175 (1).

³⁷⁴ See Wertheimer, *supra* note 365, at 30.

³⁷⁵ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 175(1).

³⁷⁶ See *Wolf v. Marlton Corp.*, 154 A.2d 625, 633 (N.J. Super. Ct. App. Div. 1959).

wrongful. A “threat must be induced from words or other conduct.”³⁷⁷ If only explicit threats amounted to economic duress, sophisticated non-investing parties might minimize any legal risk by avoiding blatant statements.³⁷⁸

Also fortunately for held-up parties, threats “to do something that is not otherwise illegal” may be wrong.³⁷⁹ The proposal prong of the economic duress test relies more on a moral view of impropriety than on a legal view.³⁸⁰ Professor Alan Wertheimer explains this intersection between legal and moral analysis through a three-point statement: (i) an offer to do something illegal is wrong; (ii) an offer to exercise a legal right is not wrong; and, more importantly, (iii) there are exceptions to the two first points.³⁸¹

One of the exceptions to point (ii), at least under some circumstances, is a threat to breach a contract. Under the view that a contract is a promise either to perform or to pay damages,³⁸² a

³⁷⁷ RESTATEMENT (SECOND) OF CONTRACTS (1981) § 175 cmt. A; *see also* Bar-Gill & Ben-Shahar (Credible Coercion), *supra* note 358, at 753 (“[U]ncontested is the understanding that economic duress does not have to exhibit itself through explicit extortion or threat.”); FARNSWORTH (CONTRACTS), *supra* note 116, at 264 (“It [a threat] need not be expressed in words but may be inferred from words or other conduct.”). *But see* Hillman (Policing), *supra* note 300, at 894 (“The absence of a ‘take it or leave it’ approach should defeat the claim of duress.”). An example of a “take it or leave it” offer is “If you don’t like it, sue me.” *Id.* at 894 n.203.

³⁷⁸ In any event, an implicit improper threat to breach will entail a lower likelihood of prevailing in trial since the extorted party might fail to rebut the other party’s claim that it was willing to perform the contract even if the offer would have been rejected. *See* Hillman (Policing), *supra* note 300, at 894 (stating that the manner in which the offer—or the threat—is presented is an important factor).

³⁷⁹ Wertheimer, *supra* note 365, at 31.

³⁸⁰ *See id.* at 31.

³⁸¹ *See also* Centric Corp. v. Morrison-Knudsen Co., 731 P.2d 411, 419 (Okla. 1986); FARNSWORTH (CONTRACTS), *supra* note 116, at 266.

³⁸² *See* Oliver W. Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 462 (1897) (“The duty to keep a contract at common law means a prediction that you must pay damages if you do not keep it—and nothing else.”); Hillman (Policing), *supra* note 300, at 894 (“A contracting party has the power to choose between two alternatives under an executory contract: to perform the contract or to breach and pay damages.”); *see also* Johnston, *supra* note 300, at 384 (“It is beyond dispute that the threat to breach if a contract is not modified is not itself the sort of improper threat required to find duress”).

breach, in strict sense, is neither illegal,³⁸³ nor, using the words of the Restatement (Second) “of itself improper.”³⁸⁴ Since this legal rule uses the words “of itself,” some threats to breach a contract might be improper. In fact, the Restatement (Second) provides that a threat to breach is improper when it is a “breach of the duty of good faith and fair dealing”,³⁸⁵ or it “is not on fair terms,”³⁸⁶ provided that, among other situations, “what is threatened is otherwise a use of power for illegitimate ends.”³⁸⁷ Thus, a threat to breach a contract, although legal in itself,³⁸⁸ may be an abuse of rights if used to extort a modification.³⁸⁹

In the same vein as the Restatement (Second), some courts have held that a threat to do something legal may be wrong.³⁹⁰ In *Kelsey-Hayes Co. v. Galtaco Redlaw Castings Corp.*, for instance, the court reiterated that an “act does not need to be unlawful” to meet the proposal prong of the economic duress test.³⁹¹ Scholars also agree that an opportunistic threat to breach a contract may meet the proposal prong of the economic duress test. To take one example,

³⁸³ See Richard R. W. Brooks, *The Efficient Performance Hypothesis*, 116 YALE L.J. 568, 568 (2006) (“The efficient breach hypothesis supposes that the promisor has the legal right—not merely the power—to choose to perform or pay damages”).

³⁸⁴ RESTATEMENT (SECOND) OF CONTRACTS (1981) § 176 cmt. E; see also *Hartsville Oil Mill v. United States*, 271 U.S. 43, 49 (1926) (“[A] threat to break a contract does not in itself constitute duress”).

³⁸⁵ RESTATEMENT (SECOND) OF CONTRACTS (1981) § 176(1)(d). Regarding good faith in modification of contracts, see *infra* § III.C.2..

³⁸⁶ RESTATEMENT (SECOND) OF CONTRACTS (1981) § 176(2).

³⁸⁷ *Id.* at § 176(2)(c).

³⁸⁸ See Holmes, *supra* note 82, at 462.

³⁸⁹ See Restatement (Second) of Contracts (1981) § 176(2).

³⁹⁰ The old case law held that only a threat to do something illegal was wrong. See *Hackley v. Headley*, 8 N.W. 511, 511 (Mich. 1881). This case law, however, no longer appears to be mandatory. See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 176 cmt. a; *Kelsey-Hayes Co. v. Galtaco Redlaw Castings Corp.*, 749 F. Supp. 794, 797, 797 n. 5 (E.D. Mich. 1990); Wertheimer, *supra* note 365, at 41.

³⁹¹ *Kelsey-Hayes Co.* 749 F. Supp. at 797 n.5, 797-98. Regarding other cases with similar holdings, see *Rubenstein v. Rubenstein*, 120 A.2d 11, 11 (N.J. 1956) (reminding that “means in themselves lawful” shall not be used for illegal ends or in an oppressive manner); *Wolf v. Marlton Corp.*, 154 A.2d 625, 630 (N.J. Super. Ct. App. Div. 1959) (“[A] threat may be wrongful although the act threatened is lawful.”); *Miller v. Eisele*, 168 A. 426, 433 (N.J. 1933) (observing that violations of contractual duties are not the only acts that may amount to economic duress in contract cases).

Professor Hillman states that a “quasi-fiduciary relationship” between the parties to a contract prevents any of them from threatening a breach “merely to obtain concessions” from the other party.³⁹² The rationale does not stop there. Professor Hillman contends that a threat to breach a contract when the promisee does not have market alternatives, as happens in hold-up situations, may lead to a finding of economic duress because the promisor would be abusing its right to breach.³⁹³

Even if a threat to breach a contract meets the proposal prong, it will amount to economic duress only if the remedy is inadequate,³⁹⁴ and therefore, meets the second or choice prong.³⁹⁵ According to this prong, economic duress arises when the threatened party does not have a reasonable alternative to surrender to the threat.³⁹⁶ To take two examples, a reasonable alternative may be a cover transaction,³⁹⁷ which is not an option in hold-up situations,³⁹⁸ or a “legal remedy.”³⁹⁹

Sometimes, however, a legal remedy “will not afford effective relief” to the victim. This situation arose in *Austin Instrument, Inc. v. Loral Corp.*, the classic case of economic duress.⁴⁰⁰ In that case, the U.S. Navy awarded Loral a contract to manufacture radar sets to be used in the

³⁹² Hillman (Policing), *supra* note 300, at 894.

³⁹³ *See id.* at 894. The opinions of other scholars are similar. *See, e.g.*, John Dalzell, *Duress by Economic Pressure II*, 20 N.C. L. REV. 341, 364 (1941) [hereinafter Dalzell (II)] (categorizing as wrongful a threat to exert a right that is legal by “technical standards” but not needed to achieve its natural ends); FARNSWORTH (CONTRACTS), *supra* note 116, at 269 (arguing that a modification obtained through a threat to exercise a right for illegitimate ends is suspicious).

³⁹⁴ *See* Wertheimer, *supra* note 365, at 44.

³⁹⁵ *See id.* at 30.

³⁹⁶ *See* RESTATEMENT (SECOND) OF CONTRACTS (1981) § 175(1).

³⁹⁷ *See* Hillman (Policing), *supra* note 300, at 894. A cover transaction for a buyer is any “contract to purchase goods in substitution for those due from the seller.” UCC § 2-712(1). For a seller, a cover transaction is a resale of the goods. *See* UCC § 2-706(1).

³⁹⁸ *See* *Austin Instrument, Inc. v. Loral Corp.*, 272 N.E.2d 535 (N.Y. 1971).

³⁹⁹ Restatement (Second) of Contracts (1981) § 175 cmt. b.

⁴⁰⁰ *See* *Austin Instrument, Inc.*, 272 N.E.2d at 534-35.

Vietnam war. The contract provided a tight schedule for deliveries and a liquidated damages clause. Loral requested bids for forty precision gear components and awarded twenty-three of them to Austin. The U.S. Navy, later on, awarded a second contract to Loral for the production of additional radar sets. As in the first contract, Loral requested bids for forty gear components and informed Austin that it will be awarded orders only for the items in which it was the lowest bidder. Austin refused to accept an order of less than forty components and threaten to stop deliveries under the first sub-contract if the price of it was not raised and Austin was not awarded the forty parts in the second sub-contract. Lacking alternative sources of supply to timely meet the tight delivery schedule of its contract with the U.S. Navy, Loral surrendered to Austin's threat.⁴⁰¹

Loral, however, sued Austin after taking delivery of the last installment.⁴⁰² A court of appeals admitted that Loral had the *technical* option of rejecting the modification, defaulting under its contract with the U.S. Navy, and suing Austin for breach of contract.⁴⁰³ Due to the lack of alternative sources of supply under the tight deadlines that the contracts with the U.S. Navy provided, and to the fact that the monetary damages for breach of contract would not have compensated Loral for all the losses it would incur if it breached its promises to the U.S. Navy, the court held that any legal remedy would have been inadequate and, as a result, that litigation was not a *real* option.⁴⁰⁴ In the words of the court, Loral "actually had no choice . . . except to

⁴⁰¹ See *id.* at 534-35.

⁴⁰² See *id.* at 535-36.

⁴⁰³ See *id.* at 537.

⁴⁰⁴ See *id.* at 537 ("It is hardly necessary to add that Loral's normal legal remedy of accepting Austin's breach of the contract and then suing for damages would have been inadequate under the circumstances"); see also Wertheimer, *supra* note 365, at 35.

take the gears at the ‘coerced’ prices and then sue to get the excess back.”⁴⁰⁵ Thus, in *Austin Instrument, Inc. v. Loral Corp.*, the court seemed to have approved the so-called self-help specific performance strategy (surrender now and sue later on).⁴⁰⁶

c. The Role of the U.S. Legal Rules on Economic Duress on the Prevention of the Hold-up Problem

This section will first describe why the U.S. legal rules on economic duress mitigate the hold-up problem; second, why such rules do not either solve or avoid such problem; and third, describe a strategy that a held-up party may employ to avoid being the victim of economic duress.

The U.S. legal rules on economic duress mitigate the hold-up problem because a threat to breach a contract in hold-up situations may meet the two-prong test of economic duress. As to the proposal prong, the Restatement (Second) admits that a threat is improper when a seller requests a price increase under a threat to stop delivery of goods that a buyer lacking alternative

⁴⁰⁵ See *Austin Instrument, Inc.*, 272 N.E.2d at 537. This case also shows that a finding of economic duress may depend on the industry to which the parties belong. For instance, the automobile industry uses just-in time inventories to minimize production costs. See *Kelsey-Hayes Co. v. Galtaco Redlaw Castings Corp.*, 749 F. Supp. 794, 798 n.7 (E.D. Mich. 1990). Thus, a buyer with tight commitments to its customers in this industry may suffer significant reputational losses and other kinds of unrecoverable damages and, as a result, be more vulnerable to extortion by a seller of key components. See *id.* at 798 n.7 (“[A]breach of contract in the automotive industry may be more coercive than in other industries”).

⁴⁰⁶ These cases, however, are not the only ones sanctioning this strategy. In *Kelsey-Hayes Co. v. Galtaco Redlaw Castings Corp.*, a case about a three-year requirement contract for the supply of casting to manufacture brake parts, Kelsey-Hayes, the buyer, assembled and sold the parts to car makers such as Ford and Chrysler, whose lines of manufacturing depended on them. Galtaco, a seller suffering heavy losses, threatened to shut down its casting plant if the price was not increased by thirty percent. After the buyer accepted this demand, the seller demanded another thirty percent increase, which was also accepted. Kelsey-Hayes, however, refused to pay the difference between the modified and the original price after receiving delivery of the parts. The court’s rationale was that the buyer lacked alternative suppliers of castings to timely deliver assembled brake parts to its customers, with the subsequent and irreparable loss of reputation. See *Kelsey-Hayes Co.*, 749 F. Supp. at 798. In another case, *Rose v. Vulcan Materials Co.*, the court held that there was no choice other than accepting the modification because a seller of stone from a quarry was the only supplier and the buyer had immediate need for the stone not only to service its customers in the cement business but also to avoid going out of business. See *Rose v. Vulcan Materials Co.*, 194 S.E.2d 521, 528 (N.C. 1973).

sources of supply needs very soon.⁴⁰⁷ By the same token, a buyer's threat not to take delivery of the goods unless its price is reduced would be improper.

Regarding the choice prong, on first impression, a held-up party has the reasonable alternative of rejecting the offer of modification and, if breach occurs, bringing suit against the non-investing party. In words of the Arkansas Supreme Court, “[o]ne cannot be heard to say that he had the law with him, but feared to meet his adversary in court. It is only when he has no chance to be heard that he can pay under protest and afterwards recover.”⁴⁰⁸

Legal remedies, however, are usually not a reasonable alternative in hold-up situations.⁴⁰⁹ After all, although remedies are undercompensatory in all contracts, the degree of undercompensation is much greater for a party who has made a relationship specific investment. Courts are not necessarily unsympathetic to this point. The majority in *Austin Instrument, Inc. v. Loral Corp.* recognized that the key damages the held-up party would suffer from breach were loss of “future contracts” with the U.S. government. Although the court did not say so explicitly, it seemed to rely on the rule that such damages cannot be generally proved with reasonable certainty when it held that “suing for damages would have been inadequate under the circumstances.”⁴¹⁰

Thus, the two roads that a held-up party has (surrendering to the extortion and rejecting the demand for a modification) are, in practice, very different.⁴¹¹ Indeed, one of the roads is not a

⁴⁰⁷ See RESTATEMENT (SECOND) OF CONTRACTS § 176 Illustration 5. *But see* Snyder (Modification), *supra* note 22, at 675 (stating that some courts have adopted a tougher approach than the RESTATEMENT SECOND OF CONTRACTS).

⁴⁰⁸ *Vick v. Shinn*, 4 S.W. 60, 60 (Ark. 1887).

⁴⁰⁹ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 175 Illustration 5.

⁴¹⁰ *Austin Instrument, Inc.*, 272 N.E.2d at 537.

⁴¹¹ See *Union Pac. R.R. Co. v. Pub. Serv. Comm'n of Mo.*, 248 U.S. 67, 70 (1931) (J. Holmes) (“It is always in the interest of a party under duress to choose the least of two evils.”).

road at all, or at least not a drivable road. Rejecting the threat and spending significant amounts of money in litigation to recover only a fraction of the damages some years after the breach may amount to financial ruin for a held-up party. Financial ruin, needless to say, is never a reasonable road. Thus, the only reasonable option for a held-up party would be, first, to surrender in order to receive performance, and, second, to seek compensation for the difference between the original and the modified contract.⁴¹² As a result, a threat to breach may meet the choice prong.

Since an extorted modification may meet the economic duress test, some non-investing parties will anticipate that an extorted modification might be contested with a non-negligible likelihood of success for the held-up party. Hence, these non-investing parties, especially if they are risk-averse and prefer to avoid litigation expenses,⁴¹³ might refrain from demanding a modification. Even if the non-investing party demands a contract change under threat to breach, a held-up party, anticipating that the odds of a court overturning this modification are significant, might follow a self-help specific performance strategy by first accepting the proposal and then contesting it before a court.

Unfortunately for held-up parties, the U.S. legal rules mitigate the hold-up problem but neither avoid or solve it on several grounds. First, regarding the proposal prong, if the non-investing party has an opportunity for efficiently breaching the contract, a court's finding of an improper threat and, therefore, of economic duress would be unlikely.⁴¹⁴ After all, when breach

⁴¹² See *Austin Instrument, Inc.*, 29 N.Y.2d at 537; *Kelsey-Hayes Co. v. Galtaco Redlaw Castings Corp.*, 749 F. Supp. 794, 798 (E.D. Mich. 1990).

⁴¹³ Regarding the notion of risk-aversion, see *supra* § II.B.

⁴¹⁴ See *Mather*, *supra* note 361, at 621 (reminding that a threat to breach is “wrongful in the absence of circumstances justifying the threat.” An alternative trading opportunity would be such a circumstance).

is efficient, the non-investing party's conduct will not be abusive because it would just be giving the held-up party an opportunity to match the third-party's offer.

Second, related also to the proposal prong, the non-investing party is usually a sophisticated company whose seasoned managers and legal advisors may know how to make a subtle threat to breach if the contract is not modified. Though a subtle threat may meet the proposal prong, proving that this threat existed may be difficult and expensive for the held-up party at best and impossible at worst. Thus, a shrewd non-investing party will likely claim that it was willing to perform even if its demand for a modification would not have been accepted, which "may result in a swearing contest at trial."⁴¹⁵

Third, while some courts have held that litigation is not a reasonable alternative when the extorted party cannot make a timely cover transaction,⁴¹⁶ a held-up party cannot predict, with complete certainty, that a court hearing its case will follow this rationale.⁴¹⁷ Even *Austin Instrument, Inc. v. Lorol Corp.*, the casebook example of economic duress, was a close decision (three votes against two in the court of appeals, perhaps the most important court with respect to contracts issues, and a Lorol's defeat both in the trial court and in the appellate division).⁴¹⁸

Fourth, any suit on grounds of economic duress may sour the relationship between the held-up party and the non-investing party, especially if the contract term has many years left. As

⁴¹⁵ Hillman (Policing), *supra* note 300, at 895.

⁴¹⁶ See *Austin Instrument, Inc.* 272 N.E.2d at 537; *Kelsey-Hayes Co.* 749 F. Supp. at 798.

⁴¹⁷ See Wertheimer, *supra* note 365, at 28-29 ("Some courts are more conservative (or economic libertarian) and less likely to find duress"); see also Snyder (Modification), *supra* note 22, at 675 ("Some . . . courts have shown a tougher attitude than the Second Restatement. A number of cases still see the world of contract as a rugged place where participants in the market must expect rough play"). As to such courts, see, e.g., *Business Incentives Co., Inc. v. Sony Corp. of America*, 397 F. Supp. 63, 69 (S.D.N.Y. 1975); *Jamestown Farmers Elevator, Inc. v. General Mills, Inc.*, 552 F.2d 1285, 1290 (8th Cir. 1977).

⁴¹⁸ See *Austin Instrument, Inc.* 29 N.Y.2d at 535-38; Hillman (Self-Help), *supra* note 299, at 69 n.35.

a result, the held-up party might be dissuaded from contesting the extorted modification or, in the best scenario, might refrain to begin litigation before the end of the contractual term. Even if at this time the statute of limitations does not prevent the held-up party from bringing suit,⁴¹⁹ the financial cost of the delay will be greater and the likelihood of prevailing at trial will be lower because the evidence about the non-investing party's threat may be more difficult to obtain (e.g., documents and e-mails might have been destroyed or deleted while witnesses may have forgotten some facts).

Fifth, the burden of proving duress usually lies on the held-up party,⁴²⁰ who might fail to meet it or meet it at a high cost. “[D]uress is sometimes [or even most times] too hard to prove directly,”⁴²¹ even using circumstantial evidence, such as gross disparity in the contractual duties.⁴²² As a result, a favorable judgment for a held-up party might be a pyrrhic victory if the costs of the trial outweigh the difference between the modified and the original price.⁴²³ Perhaps this heavy burden of proof explains why contract cases in which courts have found economic duress are scarce.

⁴¹⁹ See UCC § 2-725; *Austin Instrument, Inc.*, 272 N.E.2d at 534-36.

⁴²⁰ The rationale to place the burden of proof on the victim may be based on an analogy between criminal cases and economic duress cases. In the former, it is preferable to acquit a guilty person (false negatives) than to find guilty an innocent individual (false positives). In the latter, likewise, it is better to validate some extorted agreements than to invalidate some fair contracts. See Wertheimer, *supra* note 365, at 45.

⁴²¹ Cserne, *supra* note 368, at 14; see also RESTATEMENT (SECOND) OF CONTRACTS (1981) § 175 cmt. c (“[C]ircumstantial evidence may be useful in determining whether a threat did in fact induce assent.”).

⁴²² See *United States v. Stump Home Specialties Mfg.*, 905 F.2d 1117, 1122 (7th Cir. 1990) (“Slight consideration is consistent with coercion.”); see also POSNER, *supra* note 28, at 101 (“Inadequacy of consideration is always potentially relevant as circumstantial evidence of duress.”).

⁴²³ For courts holding that the burden of proving economic duress lies on the promisor, see, e.g., *Agroindustrias Vezel, S.A. de C.V. v. H.P. Schmid, Inc.*, 15 F.3d 1082, 1085 (9th Cir. 1994) (concluding that the alleged victim failed to establish duress); *Austin Instrument, Inc.*, 272 N.E.2d at 536-38 (stating that a buyer claiming duress had the burden of proving lack of alternative sources of similar goods). Regarding scholars, see, e.g., FARNSWORTH (CONTRACTS), *supra* note 116, at 272.

Finally, as the third and final topic of this section, a held-up party may follow a strategy already mentioned in this dissertation: to accept a modification under threat to breach, to perform the contract as modified and, later on, to contest the modification on grounds of economic duress.⁴²⁴ Courts and scholars do not agree on whether this strategy is legitimate. On one hand, it has been regarded as unfair that a victim of economic duress may pick the best time to begin the legal fight by considering inadequate or cumbersome an action for breach of contract when the threat is made but finding it reasonable to institute an action to strike down a modification after the contract has been performed.⁴²⁵ On the other hand, some courts have held that this strategy is the only reasonable action for a victim of economic duress lacking alternative trading parties.⁴²⁶

Regardless of whether the self-help specific performance strategy is legitimate, a held-up party intending to employ it with significant chances of prevailing at trial should explicitly protest the modification,⁴²⁷ and bring suit seeking a declaratory judgment that the modification is not enforceable without too much delay.

Both the case law and scholars contends that at least some protest is needed to claim duress.⁴²⁸ Even if the case law and doctrine were the other way, a prudent held-up party should

⁴²⁴ In strict sense, a held-up party may act either as a plaintiff contesting the extorted modification or as a defendant in a suit for breach of contract (*e.g.*, a seller sues a held-up buyer who did not pay the additional price). See FARNSWORTH (CONTRACTS), *supra* note 116, at 272.

⁴²⁵ See, *e.g.*, *W. Park Ave., Inc. v. Ocean Tp.*, 224 A.2d 1, 1 (N.J. 1966); *Dalzell (II)*, *supra* note 393, at 382.

⁴²⁶ See, *e.g.*, *Austin Instrument, Inc.* 272 N.E.2d at 537.

⁴²⁷ See *Cserne*, *supra* note 368, at 57.

⁴²⁸ As to the case law, see, *e.g.*, *Kelsey-Hayes Co. v. Galtaco Redlaw Castings Corp.*, 749 F. Supp. 794, 798 (E.D. Mich. 1990) (holding that that a victim of duress must display some protest in order to give the threatening party notice that the contract change is extorted); *Rose v. Vulcan Materials Co.*, 282 N.C. 643, 666 (N.C. 1973) (“[P]rotest is additional evidence of duress.”); *U. S. for Use & Benefit of Crane Co. v. Progressive Enterprises, Inc.*, 418 F. Supp. 662, 664 (E.D. Va. 1976) (rejecting a buyer’s claim that a modification was agreed under duress because evidence of protest to the seller was lacking). Regarding scholars, see Richard Nathan, *Grappling with the Pre-existing Duty Rule: A Proposal for a Statutory Amendment*, 23 AM. BUS. L.J. 509, 539-40 (1986) (arguing that protest is needed in order to claim duress on two grounds. First, UCC § 1-308(a) provides an opportunity to pay or

only accept the modification under protest; it would not bring harm and, by contrast, would minimize legal risks. This statement is especially relevant in borderline cases when the threat to breach is implicit,⁴²⁹ as happens in many hold-up situations between sophisticated parties with ready access to top-notch legal advice.

A held-up party, however, might not protest a modification because the non-investing party's threat required an acceptance without any indication of reluctance as a condition not to breach the contract. Put more simply, the non-investing party might say: "If you protest, I will breach."⁴³⁰ In this case, of course, the held-up party's case will not be irremediably lost because the lack of protest was attributable to the non-investing party.⁴³¹

In addition to protest, the manner in which the communication accepting the extorted modification is accepted is key. A sophisticated held-up party and its attorneys should carefully draft this response. A model to follow is the letter that Loral sent to Austin surrendering to its threat. In this communication, which paved the way for the final finding of economic duress, Loral shrewdly wrote: "We have feverishly surveyed other sources of supply and find that . . .

perform a contract "under protest" or "without reservation of all rights." UCC § 1-308(a). Second, the case law of contracts for sale of goods should follow the case law of other contracts, which take into account protest as one factor in the finding of duress). Cserne, *supra* note 368, at 57 (arguing that whether a modification was accepted without any complaint is a factor to consider to establish economic duress); Dalzell (II) *supra* note 393, at 382 (mentioning that an explicit protest strengthen the case for duress).

⁴²⁹ Rarely a threat to breach is so blatant as in the case of an extortionist who says: "Accept a price increase right now or I will stop manufacturing your goods, and you can sue me if you want." WHITE & SUMMERS, *supra* note 129, at 57-58. For two cases in which a blatant threat was made, see *Hackley v. Headley*, 8 N.W. 511, 515-16 (Mich. 1881) ("You can sue me if you please"); *Jamestown Farmers Elevator, Inc. v. General Mills, Inc.*, 552 F.2d 1285, 1289 (8th Cir. 1977) ("We're General Mills; and if you don't deliver this grain to us, why we'll have a battery of lawyers in there tomorrow morning to visit you, and then we are going to the North Dakota Public Service (Commission); we're going to the Minneapolis Grain Exchange and we're going to the people in Montana and there will be no more Mutschler Grain Company. We're going to take your license.").

⁴³⁰ See Dalzell (II), *supra* note 393, at 382 ("[T]he same pressure which forces payment or promise may also force the withdrawal or omission of an express protest.").

⁴³¹ Cserne, *supra* note 368, at 57.

they could not even remotely begin to deliver on time Accordingly, we are left with no choice or alternative but to meet your conditions.”⁴³²

As to the time to challenge the modification, the sooner a held-up party brings suit the greater the likelihood of a favorable outcome at trial.⁴³³ By contrast, if a held-up party waits too long, its conduct “could be construed as a waiver of the duress claim.”⁴³⁴ The held-up party, however, will hamstring itself if it brings suit against the non-investing party before the contract term lapses. Fortunately for held-up parties, the court in *Austin Instrument, Inc. v. Loral Corp.* approved the strategy of not bringing suit before the threatening party has completely performed its contractual duties (*i.e.*, delivered all the installments).⁴³⁵ A held-up party, however, should not be overconfident about other courts, at least those from states other than New York, following the rationale of *Austin*.⁴³⁶

⁴³² *Austin Instrument, Inc. v. Loral Corp.*, 272 N.E.2d 534-35 (1971).

⁴³³ *See Or. Pac. R.R. v. Forrest*, 28 N. E. 137, 137 (1891); *Dalzell (II)*, *supra* note 393, at 382-83 (“[D]elay raises the possibility of laches as defense.”).

⁴³⁴ *Hillman (Policing)*, *supra* note 300, at 889 n.217; FARNSWORTH (CONTRACTS), *supra* note 116, at 272. As to the case law, see, e.g., *Palmer Barge Line, Inc., v. S. Petroleum Trading Co.*, 776 F.2d 502, 506 (5th Cir.1985) (“[D]elay in raising a claim of duress in addition to the existence of a negotiated agreement between parties represented by counsel [as usually happen in hold-up situations] is compelling evidence that there was in fact no duress.”); *Pirrone v. Monarch Wine Co. of Georgia*, 497 F.2d 25, 29 (5th Cir. 1974) (“Several Georgia cases do suggest that even when duress exists, one . . . who continues to accept benefits under an agreement tainted with it after the duress is removed may not later raise it.”).

⁴³⁵ *See Austin Instrument, Inc.*, 272 N.E.2d at 537 (“In this case, Loral delayed making its demand for a refund until three days after Austin’s last delivery on the second subcontract. Loral’s reason-for waiting until that time-is that it feared another stoppage of deliveries which would again put it in an untenable situation. Considering Austin’s conduct in the past, this was perfectly reasonable”).

⁴³⁶ *See also Hillman (Self-Help)*, *supra* note 299, at 69 n.35. In *Austin*, the fact that the threat to breach the first subcontract was partially related to the second subcontract might have strengthened the Loral’s case. *See* RESTATEMENT (SECOND) OF CONTRACTS (1981) § 176 cmt. e (stating that “a threat to non-performance made for same purpose unrelated to the contract, such as to induce the recipient to make an entirely separate contract, is ordinarily improper”). In contrast, in hold-up situations, the non-investing party usually threatens to breach if the other party does not accept a change in the same contract.

d. Conclusions

Although the present legal rules on economic duress are not ideal, there is reason to be pessimistic about the existence of much room for improvement. To be sure, the present rules might be amended, at least in the context of modification of contracts for sale of goods, to more strongly discourage hold-ups.⁴³⁷ These broader new rules might deal more efficiently with the hold-up problem since they would deter non-investing parties from demanding changes under threat to breach or, at least, encourage held-up parties to reject such demands. The new rules, however, may trigger unintended consequences in contexts other than hold-up situations because a too-lenient test of duress might chill not only opportunistic modifications but also fair and equitable ones, even if they result from rough play. “Hard bargaining between experienced adversaries ought not to be discouraged.”⁴³⁸ In the long run, therefore, parties might be reluctant to enter contracts because of the fear of “stepping into a trap.”⁴³⁹ Thus, the trade-off of new legal rules may lead to a negative net outcome. Perhaps the ideal legal rules on economic duress are just that: ideal but not workable in real businesses.⁴⁴⁰

⁴³⁷ See generally Snyder (Modification), *supra* note 22, at 677 (“At bottom, . . . neither the duress standard, nor the pre-existing duty rule, nor the Second Restatement does an adequate job of preventing coerced modifications”).

⁴³⁸ RESTATEMENT (SECOND) OF CONTRACTS (1981) § 176 cmt. f. See also FARNSWORTH (CONTRACTS), *supra* note 116, at 269.

⁴³⁹ Selmer Co. v. Blakeslee-Midwest Co., 704 F.2d 924, 927(7th Cir. 1983).

⁴⁴⁰ See Oren Bar-Gill & Omri Ben-Shahar, *The Law of Duress and The Economics of Credible Threats*, 33 J. LEGAL STUD. 391, 392 (2004) [hereinafter (Bar-Gill & Ben-Shahar (Duress))] (“For centuries, contract law has been searching for a unifying principle that will determine when such threats should be considered “improper,” rendering the resulting agreement unenforceable on the grounds of duress. Thus far, such a general criterion has failed to emerge”; Bar-Gill & Ben-Shahar (Credible Coercion), *supra* note 358, at 779 (“Despite efforts, legal doctrine has failed in drawing the line between legal offers and coercive threats.”).

4. Remedies for Breach of Contract

a. Introduction

In contrast with the previous sections of this chapter, section III.C.4 assumes that the non-investing party has carried out its threat and breached the contract and that the held-up party will attempt to recoup at least part of its idiosyncratic investment by suing for breach of contract.

This section also assumes that the breach is not an anticipatory repudiation; that is, that breach occurs after the seller has begun manufacturing the goods but before delivering them. This assumption is made due to the uncertainty as to when to measure the damages resulting from an anticipatory breach. Such time may be the time of the anticipatory repudiation, a reasonable time after the repudiation, or the time when performance was due.⁴⁴¹ Anticipatory repudiation raises undue complications because U.S. law is unsettled on precisely how to measure damages in such situations. Although many hold-up situations are likely to occur as anticipatory repudiations, for now the dissertation will pretermite the issue in order to avoid a three-way damages calculations. When necessary, of course, these calculations can be made, but they are unlikely to have significant impact on the analysis.⁴⁴²

⁴⁴¹ See WHITE & SUMMERS, *supra* note 129, at 237; see also DeNooyer, *supra* note 262, at 1788, 1805 (arguing that the determination of the time to measure damages resulting from anticipatory repudiation is “one of the most confusing interpretative problems in the U.C.C”). For some case law, see, e.g., *Cargill, Inc. v. Stafford*, 553 F.2d 1222, 1225 (10th Cir. 1977) (concluding that the time to measure damages in an anticipatory repudiation is the time of due performance); *Cosden Oil & Chemical Co. v. Karl O. Helm Aktiengesellschaft*, 736 F.2d 1064, 1071 (1984) (holding that the time to measure damages is a reasonable time after the aggrieved party learned of the repudiation); *Trinidad Bean & Elevator Co. v. Frosh*, 494 N.W.2d 347, 351-53 (Neb. App. 1992) (finding that damages should be measured at the time of repudiation).

⁴⁴² This Section also makes other assumptions. First, it assumes that an aggrieved held-up buyer cannot mitigate damages. See UCC § 2-703, 2-704, 2-706, and 2-712, RESTATEMENT (SECOND) OF CONTRACTS § 350 (1). Indeed, mitigation is rare in hold-up situations because a held-up party, by definition, cannot make a cover transaction. Second, that the aggrieved held-up party is entitled to expectation damages; therefore, any possible undercompensation nature of reliance and restitution damages is not analyzed. While expectation damages are the usual remedy for breach of contract, a court may grant reliance damages when damages are too speculative. See

Under these assumptions, § III.C.4 examines whether legal remedies wholly or partially compensate the held-up party for breach of contract and, therefore, prevent the hold-up problem. Legal remedies, incidentally, mean those remedies that the law supplies in the absence of valid contractually stated remedies (*i.e.*, liquidated damages clauses).

While legal remedies are undercompensatory in all contracts,⁴⁴³ the degree of undercompensation is not always the same. Contracts that can be enforced without too much delay and at a low cost lie at one end of the spectrum; the degree of undercompensation is minimum. Suppose, for instance, that two parties enter a spot contract for the sale of a commodity; in case of breach, the market price and the price of a cover transaction might easily be determined. Suppose also that the nature of the transaction, which is standardized, makes the length of trial, or even of a settlement, very short. Hold-up situations, in turn, lie close to the other end of the spectrum; their degree of undercompensation might be significant. After all, a significant part of the damages that an aggrieved held-up party suffers might be uncertain and unforeseeable; thereby, not recoverable under legal remedies. The degree of undercompensation

RESTATEMENT (SECOND) OF CONTRACTS (1981) § 344, 347, 349, 352. For a case where a court granted reliance damages because expectation damages were inadequate, see *Mistletoe Export Service of Oklahoma*. Third, the effect of fault on the amount of remedies is omitted not only taking into account that U.S. contract law is a law of strict liability but also because breaches in hold-up situations are usually a revenge for the rejection of the offer to modification and, as a result, willful. As an exception to this rule, a court may take into account whether a breach was willful in order to require “a lesser degree of certainty of some damages.” RESTATEMENT (SECOND) OF CONTRACTS (1981) § 352 cmt. a. See also FARNSWORTH (CONTRACTS), *supra* note 116, at 787-88, 840. In contrast with U.S. law, the concept of fault is highly important in Colombian law. See *infra* § IV.C.4. Fourth, the fact that held-up parties to the contracts within the scope of this dissertation are usually sophisticated makes unnecessary any discussion about subjective or moral losses such as emotional distress. See, *e.g.*, RESTATEMENT (SECOND) OF CONTRACTS (1981) § 353, *Jankowski v. Mazzotta*, 152 N.W.2d 49, 52 (Mich. Ct. App 1967); FARNSWORTH (CONTRACTS), *supra* note 116, at 838-40. Fifth, this Section assumes that the non-investing party breaches before accepting the goods (or at least, that this acceptance is revoked). Therefore, neither damages for breach of warranties nor the remedy of replevin are analyzed. Regarding these topics, see UCC § 2-714 and § 2-716(3).

⁴⁴³ That legal remedies for breach of contract are inherently undercompensatory is a statement that triggers minimum debate nowadays. The scholars contending that remedies for breach of contract are undercompensatory are legion. See, *e.g.*, Goetz & Scott, *supra* note 134, at 558 n.19; Hillman (Policing), *supra* note 300, at 78; Alan Schwartz, *The Case for Specific Performance*, 89 YALE L.J. 271, 277 (1979) [hereinafter Schwartz (Case)].

might be even higher considering that part of the information needed to prove the certain and foreseeable damages may be unverifiable for a court, and that litigation may be very expensive and lengthy.⁴⁴⁴

The undercompensatory nature of legal remedies is the reason why held-up parties are usually better off accepting the offer to modify rather than rejecting it and suing for breach of contract.⁴⁴⁵ In accordance with this pessimistic view, contract law neither avoids nor solves the hold-up problem. To be sure, remedies could avoid or solve the hold-up problem if they were punitive.⁴⁴⁶ But punitive damages are not allowed in contract law.⁴⁴⁷ The role of legal remedies for breach of contract, therefore, is limited to the mitigation of the hold-up problem by minimizing its degree of undercompensation. The degree of undercompensation, however, cannot be reduced below some threshold without triggering undesirable effects,⁴⁴⁸ such as deterring some efficient breaches,⁴⁴⁹ chilling some efficient contracts if the prospect of a too high level of legal remedies dissuades some risk-averse promisors from entering into contracts,⁴⁵⁰

⁴⁴⁴ See COOTER & ULEN, *supra* note 67, at 295 (“In general, the error in the court’s estimation of expectation damages decreases as the ease of substitution increases for the promised performance”).

⁴⁴⁵ See, e.g., Hillman (Policing), *supra* note 300, at 891 n.190; Johnston, *supra* note 300, at 338; see generally Dressler, *supra* note 309, at 639 (“For businessmen, even a case that is won in litigation generally represents [at best] an unwanted annoyance.”).

⁴⁴⁶ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 355 (“Punitive damages are not recoverable for a breach of contract unless the conduct constituting the breach is also a tort.”); Hillman (Policing), *supra* note 300, at 892 n.190 (“The availability of punitive damages would put some teeth into contract remedies”).

⁴⁴⁷ See *supra* § III.B.2.

⁴⁴⁸ Economists have coined the acronym NAIRU which stands for Non-Accelerating Inflation Rate of Unemployment. This term means that unemployment cannot be reduced below some threshold, which varies among countries, without triggering an undesirable rise in the inflation rate. See Milton Friedman, *The Role of Monetary Policy*, 58 AM. ECON. REV. 1, 9 (1968). The acronym in the case of remedies might be NADEU (Non-Accelerating Detrimental Effects of Undercompensation).

⁴⁴⁹ See Richard Craswell, *Contract Remedies, Renegotiation, and the Theory of Efficient Breach*, 61 S. CAL. L. REV. 629, 669 (1988); Ronald J. Scalise, *Why No “Efficient Breach” in the Civil Law?: A Comparative Assessment of the Doctrine of Efficient Breach of Contract*, 55 AM. J. COMP. L. 721, 739 (2007); Steven Shavell, *Damage Measures for Breach of Contract*, 11(2) BELL J. ECON. 466, 472 (1980) [hereinafter Shavell (Damages)].

⁴⁵⁰ See Craswell, *supra* note 449, at 669.

triggering higher contract prices intended to compensate for the higher level of legal remedies,⁴⁵¹ and leading promisees to overinvest.⁴⁵²

b. The U.S. Legal Rules on Remedies for Breach of Contract and Their Role on the Prevention of the Hold-up Problem

The legal rules on remedies depend on whether the aggrieved party is either the seller or the buyer. In the former case, three traditional remedies are not available for a held-up party. First, the remedy of entering into a cover transaction and recovering “the difference between the resale price and the contract price” plus incidental damages⁴⁵³ but less expenses saved due to the breach⁴⁵⁴ is not available because a held-up party, by definition, cannot cover.⁴⁵⁵ Second, a held-up seller may claim that “the difference between the market price . . . and the unpaid contract price” plus incidental damages but less expenses saved due to the breach⁴⁵⁶ fails to put it in as

⁴⁵¹ See *id.*; Schwartz (Myth), *supra* note 155, at 370.

⁴⁵² See Craswell, *supra* note 449, at 669; Shavell (Damages), *supra* note 449, at 472.

⁴⁵³ See UCC § 2-710 (providing that incidental damages include expenses such as transportation, and care and custody of the goods after the buyer’s breach).

⁴⁵⁴ UCC § 2-706(1).

⁴⁵⁵ See *supra* § II.B. Incidentally, a held-up party is unable to cover not only if the goods lack any substitute but also when similar goods cannot be used due to the delay in making a contract with another supplier, plus the time incurred in their manufacture and delivery. See RESTATEMENT (SECOND) OF CONTRACTS § 360 cmt. c; Melvin A. Eisenberg, *Actual and Virtual Specific Performance, the Theory of Efficient Breach, and the Indifference Principle in Contract Law*, 93 CAL. L. REV. 975, 1042 (2005). In the case of an aggrieved held-up seller, by contrast, the analysis of mitigation is also related to whether the seller may reasonably continue manufacturing the goods after receiving notice of the buyer’s breach. See RESTATEMENT (SECOND) OF CONTRACTS § 350 cmt. g; FARNSWORTH (CONTRACTS), *supra* note 116, at 808-09. The issue of whether cover is possible, however, is not as simple as it may appear. A breaching non-investing party, even knowing that cover is not possible, may claim the contrary as a tactic intended to delay the process and increase the litigation expenses. See UCC § 2-712 cmt. 2. Furthermore, a breaching party using this tactic may take advantage of the problems that a court (or even worse, a jury) will face attempting to understand and verify the held-up party’s claim that the idiosyncratic goods do not have any substitute. See WHITE & SUMMERS, *supra* note 129, at 263-64. Finally, in the worst-case scenario a court may consider that the offer to modify was an available cover transaction. See RESTATEMENT (SECOND) OF CONTRACTS § 350 cmt. c (“If the party in breach offers to perform the contract for a different price, this may amount to a suitable alternative.”).

⁴⁵⁶ UCC § 2-708(1).

good position as if the contract would have been performed.⁴⁵⁷ Third, damages amounting to “the profit (including reasonable overhead) which the seller would have made from full performance” plus incidental losses⁴⁵⁸ are not adequate because a held-up party, whose goods are only useful for one buyer, is not a lost-volume seller.⁴⁵⁹ Due to the lack of adequacy of the remedies indicated above, an aggrieved held-up seller might be entitled to an action for the price.⁴⁶⁰

On the other hand, an aggrieved held-up buyer is unable to cover and, therefore, the remedy amounting to the difference between the cost of cover and the contract price plus incidental and consequential damages but less expenses saved due to the breach is not available.⁴⁶¹ Because of that, the issue is whether a held-up buyer would be entitled to specific

⁴⁵⁷ *See id.* § 2-708(2).

⁴⁵⁸ *Id.* § 2-708(2). This profit is usually the price minus the manufacturing cost; *see id.* § 2-708(2) cmt. 2.

⁴⁵⁹ A lost-volume seller is a party who sold the goods related to the broken contract to another party but who lost one sale because of a buyer’s breach. *See* RESTATEMENT (SECOND) OF CONTRACTS § 350 cmt. f.

⁴⁶⁰ *See* UCC § 2-709. *See also* WHITE & SUMMERS, *supra* note 129, at 255-56. An aggrieved held-up seller, however, should not be over-optimistic about this possibility since an action for a price is restricted to “goods identified to the contract.” UCC § 2-709. Goods are identified when they already exist before the making of the contract, which is not the case of hold-up situations involving contracts for the manufacture and sale of goods; or, if the goods are manufactured after the making of the contract, when they have been “shipped, marked or otherwise designated by the seller as goods to which the contract refers.” The latter usually does not occur when a non-investing buyer breaches before the seller has finished its manufacturing process. UCC § 2-501(1). To illustrate this second possibility, suppose a five-year contract for the manufacture and sale of idiosyncratic goods whose installments are every three months (*i.e.*, a total of twenty installments). Assume also that the buyer breached at the end of the second year, when the seller has already manufactured and designated “as goods to which the contract refers” the merchandise that will be delivered in the next installment, *i.e.*, at the end of the first trimester of the third year. In such a scenario, the aggrieved seller might have an action for the price regarding the goods manufactured and not yet delivered (one installment) but not an action for the price as to the goods not yet manufactured (eleven installments). This seller, needless to say, might need the price of the remaining twelve installments to recoup the investment made at the beginning of the contract. *See* WHITE & SUMMERS, *supra* note 129, at 255-56, 262-64. UCC § 2-501(1), however, is a default rule and, therefore, a seller might bargain for a clause providing that all the goods to be manufactured have already been identified. UCC § 2-501(1) (“In the absence of explicit agreement identification occurs.”).

⁴⁶¹ *See* UCC § 2-712(2). Incidental damages arise directly out of the breach. For example, reasonable expenses in inspection, transportation, and custody of the goods are incidental damages. Assuming that the breaching seller did not deliver the goods and that cover is not possible, the amount of incidental damages would be negligible or even zero in hold-up situations. Consequential damages, in turn, are collateral losses that the “seller at the time of contracting had reason to know.” For instance, damages that the buyer shall pay to its customers for failing to deliver in time due to the delay in the seller’s shipment. *See* UCC § 2-715. *See also* *Petroleo Brasileiro, S. A., Petrobras v. Ameropan Oil Corp.*, 372 F. Supp. 503, 508 (E.D.N.Y. 1974) (“[C]onsequential damages [in contrast

performance; *i.e.*, to a decree by which a court orders to a seller the manufacturing and delivery of the goods.⁴⁶²

Some reasons lead to an affirmative answer to this issue. To begin with, the UCC has a “more liberal attitude” to specific performance than the Restatement (Second).⁴⁶³ Perhaps for this reason, UCC § 2-716 comment 1 provides that “output and requirements contracts involving a particular or peculiarly available source or market present today the typical specific performance situation.”⁴⁶⁴ Some hold-up situations may be either output contracts, such as the sale to a next-door buyer of the entire production of timber that is not attractive to other buyers due to transportation costs, or requirements contracts, such as a deal by which a company operating a natural gas well promises to meet all the needs of an adjacent power plant.⁴⁶⁵

Second, UCC § 2-716 comment 1 also states that “inability to cover,” present in all hold-up situations,⁴⁶⁶ “is strong evidence of other proper circumstances,”⁴⁶⁷ which, besides uniqueness of the goods, may entitle a buyer to a decree of specific performance.⁴⁶⁸ Third, a held-up buyer

with incidental damages] do not arise within the scope of the immediate buyer-seller transaction, but rather stem from losses incurred by the non-breaching party in its dealings, often with third parties.”)

⁴⁶² See UCC § 2-716(1) (“Specific performance “may be decreed where the goods are unique or in other proper circumstances.”).

⁴⁶³ See UCC § 2-716 cmt. 1, *Mich. Sugar Co. v. Falkenhagen*, 220 N.W. 760, 760 (Mich. 1928), FARNSWORTH (CONTRACTS), *supra* note 116, at 773-74; Narasimhan, *supra* note 329, at 72; Paul G. Mahoney, *Contract Remedies and Options Pricing*, 24 J. LEGAL STUD. 139, 157 (1995).

⁴⁶⁴ UCC § 2-716 cmt. 2; see also RESTATEMENT (SECOND) OF CONTRACTS (1981) § 360 cmt. a (“The breach of a requirements contract may cut off a vital supply of raw materials. In such situations equitable relief [*i.e.*, specific performance] is often appropriate.”); Mahoney, *supra* note 463, at 156, 58 (“Courts applying the Uniform Commercial Code have frequently awarded specific performance in cases involving long-term requirements contracts”).

⁴⁶⁵ Specific performance, however, might not be useful in output contracts where a non-investing seller facing rising costs decides to manufacture a minimal quantity of the goods. See *Shavell (Contractual)*, *supra* note 2, at 860.

⁴⁶⁶ See *supra* § II.A.

⁴⁶⁷ UCC § 2-716 cmt. 2.

⁴⁶⁸ See UCC § 2-716(1); RESTATEMENT (SECOND) OF CONTRACTS (1981) § 360 cmt. c; see also *Bomberger v. McKelvey*, 220 P.2d 729, 738 (Cal. 1950) (holding that an aggrieved party who cannot obtain the promised performance elsewhere is entitled to specific performance), *Kaiser Trading Co. v. Associated Metals & Minerals*

might claim that monetary damages are inadequate to protect its expectancy interest because some damages, such as lost profits in collateral transactions, are difficult to prove;⁴⁶⁹ procuring substitute goods at a reasonable cost and without too much delay is hard;⁴⁷⁰ or, a monetary judgment might be difficult to collect due to the precarious financial situation of the non-investing seller.⁴⁷¹

Fourth, a court may decree specific performance for public policy reasons even though the burden of supervising or enforcing such performance is too high.⁴⁷² This may happen, for instance, in the case of a power plant held-up by its supplier of the natural gas necessary to generate and sell electricity to some nearby manufacturing companies without access to alternative sources of energy and employing most of the population of the area.⁴⁷³

Other reasons may lead to a negative answer of the issue of whether a held-up buyer may be granted specific performance.⁴⁷⁴ To begin with, “specific performance is intended to produce

Corp., 321 F. Supp. 923, 932-33 (1970) (concluding that specific performance is available when the goods cannot be covered); Narasimhan, *supra* note 329, at 83 (stating that an aggrieved buyer needing specialized parts without any equivalent goods is entitled to specific performance).

⁴⁶⁹ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 360(a); FARNSWORTH (CONTRACTS), *supra* note 116, at 774.

⁴⁷⁰ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 360(b). For some case law, see, e.g., *Colorado-Ute Electric Ass’n v. Envirotech Corp.*, 524 F. Supp. 1152, 1152 (D. Colo. 1981) (decreeing specific performance of a contract for sale of an equipment used for pollution control at a coal-burning power plant on the grounds that the goods were unique and that the authorities might not allow the plant to continue operating if the goal of keeping pollution below some threshold was not achieved).

⁴⁷¹ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 360(c). *But see* Narasimhan, *supra* note 329, at 66 (“The inadequacy of the damage remedy will not always justify an award of specific performance”). Moreover, that damages are undercompensatory does not entail that they are always legally inadequate). See *id.* at 71.

⁴⁷² See RESTATEMENT (SECOND) OF CONTRACTS § 365, § 366 cmt. a. For some case law, see, e.g., *Laclede Gas Co. v. Amoco Oil Co.*, 522 F.2d 33 (8th Cir. 1975).

⁴⁷³ *But see N. Ind. Pub. Serv. Co. v. Carbon County Coal Co.*, 799 F.2d 265, 279 (7th Cir. 1986) (denying specific performance of a contract for sale of coal in spite of the fact that this remedy might have avoided the closing of the coal mine, the subsequent layoff of the miners, and the possible bankruptcy of some mine’s suppliers).

⁴⁷⁴ See FARNSWORTH (CONTRACTS), *supra* note 116, at 777 (“Specific performance remains the exception rather than the rule”).

almost the same effect that the performance due under a broken promise.”⁴⁷⁵ Since hold-up situations involve contracts for the sale of idiosyncratic goods, a court might not be able to force a breaching seller to manufacture the goods in accordance with the quality and specifications that the contract provided.⁴⁷⁶ In other words, a seller disgruntled with its former business partner may produce goods of poor quality and deliver them with significant delay,⁴⁷⁷ a behavior that may trigger further litigation.⁴⁷⁸ This issue may also lead a court to deny specific performance on the grounds that its enforcement or supervision would impose judicial burdens over a long period of time that outweigh the gains from this remedy.⁴⁷⁹ On balance, whether a court will grant specific performance to an aggrieved held-up buyer is a question highly dependent on the facts of each case and on the judicial philosophy and discretion of each court.⁴⁸⁰

In any event, specific performance is not a complete solution to the issue of undercompensatory remedies and, therefore, to the prevention of the hold-up problem.⁴⁸¹ For example, specific performance may only be obtained with some delay and with a quality lower

⁴⁷⁵ RESTATEMENT (SECOND) OF CONTRACTS (1981) § 357 cmt. a.

⁴⁷⁶ See Narasimhan, *supra* note 329, at 86 (reporting that courts usually refuse to award specific performance of contracts “that require subjective judgments as to the quality of the performance”); Schwartz (Case), *supra* note 443, at 277 (categorizing specific performance as an “unattractive” remedy when the promisor is reluctant to honor the contract, the performance is complex, and the defects in the goods are hard to verify).

⁴⁷⁷ See WHITE & SUMMERS, *supra* note 129, at 235-36.

⁴⁷⁸ See *Yonan v. Oak Park Federal Sav. and Loan Ass’n*, 326 N.E.2d 773, 779 (Ill. App. Ct. 1975) (“[If specific performance is granted] further supplemental proceedings would be necessary and protracted litigation would be further extended”). See generally *Facebook, Inc. v. Pac. Nw. Software, Inc.*, 640 F.3d 1034, 1042 (9th Cir. 2011) (“At some point, litigation must come to an end.”).

⁴⁷⁹ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 365 cmt. c, § 366; FARNSWORTH, *supra* note 116, at 769, 780; Schwartz (Case), *supra* note 443, at 293. As to case law, see, e.g., *Yonan*, 326 N.E.2d at 779 (denying specific performance because performance was due “over a prolonged period of time” and entailed “special skill, judgment and discretion”). *But see* RESTATEMENT (SECOND) OF CONTRACTS (1981) § 366 cmt. a (highlighting that experience shows that the burdens of supervision and enforcement are not always realized); Schwartz (Myth), *supra* note 155, at 304 (mentioning cases in which courts have decreed specific performance although it requires detailed supervision). For some case law, see, e.g., *Laclede Gas Co. v. Amoco Oil Co.*, 522 F.2d 33 (8th Cir. 1975).

⁴⁸⁰ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 357 cmt. c; FARNSWORTH, *supra* note 116, at 831; Narasimhan, *supra* note 329, at 89-90.

⁴⁸¹ See Narasimhan, *supra* note 329, at 70.

than the agreed in the contract. Additionally, specific performance does not compensate the good will losses and the opportunity costs resulting from the late delivery of the goods.⁴⁸² As a third example, the expenses required to obtain specific performance may be significant.⁴⁸³ Indeed, these expenses might be higher than when a buyer claims other remedies because in the former case an aggrieved buyer must prove that monetary damages are inadequate.⁴⁸⁴ In sum, “even specific performance at the end of some months of litigation may involve the purchaser in a heavy loss.”⁴⁸⁵

If specific performance is not available, the monetary damages will amount to the difference between the market price of the goods at the time of breach and the contract price plus incidental and consequential damages but less expenses saved due to the breach.⁴⁸⁶ Admittedly, since the buyer was held-up and the goods are idiosyncratic, a market price might not exist.⁴⁸⁷ The market price of similar goods or even expert opinions about the value of the idiosyncratic goods may be used.⁴⁸⁸

c. An Example of Undercompensation in Hold-up Situations

This dissertation will explain why the legal rules on remedies mitigate but neither avoid nor solve the hold-up problem through a numerical example. A held-up buyer, instead of a held-up seller, is chosen for this illustration because the undercompensatory nature of remedies is more acute in the former than in the latter case. Undercompensation risk is more acute for buyers

⁴⁸² *See id.* at 68-69.

⁴⁸³ *See id.*

⁴⁸⁴ *See id.*

⁴⁸⁵ Dalzell (I), *supra* note 364, at 260.

⁴⁸⁶ *See* UCC § 2-713(1).

⁴⁸⁷ *See id.* § 2-713(2).

⁴⁸⁸ *See id.* § 2-713(2) cmt. 3.

than sellers because, first, limitations on unforeseeable damages are infrequently a problem when the seller is the aggrieved party.⁴⁸⁹ Indeed, sellers' consequential damages are rare.⁴⁹⁰ In contrast, an aggrieved held-up buyer may have failed to meet commitments with its customers downstream and, therefore, have suffered significant damages, some of which its seller may have not foreseen. Second, limitations on uncertain or speculative losses are usually less problematic for a seller than for a buyer.⁴⁹¹ For a seller, even assuming that cover were not possible, a court is not likely to face great difficulties in estimating the difference between the contract price and the costs and other expenses saved due to the breach.⁴⁹² These difficulties are almost nonexistent if a seller is entitled to the contract price.⁴⁹³ Finally, a held-up seller who has received part or the full amount of the price before delivering the goods is less vulnerable to extorted modifications than a held-up buyer who has paid part or the full amount of the price before taking delivery of the goods.

On the other hand, this dissertation assumes that the aggrieved buyer is not a reseller of the goods but a manufacturer; *i.e.*, the buyer uses the idiosyncratic goods as an input to produce and sell goods downstream. This assumption is made because the limitations on unforeseeable

⁴⁸⁹ See FARNSWORTH (CONTRACTS), *supra* note 116, at 826-27 (stating that an aggrieved seller is not entitled to recover consequential damages resulting from its inability to pay some money to its creditors on the grounds that such money is available in the capital markets, unless there is a credit crunch).

⁴⁹⁰ See WHITE & SUMMERS, *supra* note 129, at 301. Sellers' consequential damages are not completely inexistent, though. See *Nobs Chem., U.S.A., Inc. v. Koppers Co.*, 616 F.2d 212, 213, 216 (5th Cir. 1980) (categorizing as consequential damages the quantity discount that a seller was unable to obtain from its supplier due to its buyer's breach but refusing to grant compensation for such losses on the grounds that the UCC Article 2 is silent regarding the recovery of sellers' consequential damages); see also WHITE & SUMMERS, *supra* note 129, at 301 (criticizing this holding).

⁴⁹¹ See FARNSWORTH (CONTRACTS), *supra* note 116, at 830-33; see also RESTATEMENT (SECOND) OF CONTRACTS (1981) § 352 cmt. b ("[P]roof of [seller's] lost profit will ordinarily not be difficult. If, however, it is the buyer who claims lost profit on the ground that the seller's breach has caused him loss in other transactions, the task of proof is harder.").

⁴⁹² See FARNSWORTH (CONTRACTS), *supra* note 116, at 830.

⁴⁹³ See UCC § 2-709; see also FARNSWORTH (CONTRACTS), *supra* note 116, at 796.

and uncertain losses and, therefore, the likelihood of the hold-up problem arising, are usually greater in the latter case.⁴⁹⁴

For the sake of clarity in the example, the restrictions to legal remedies for breach of contract are divided into three categories: (1) limitations preventing the aggrieved party from recovering its entire losses, (2) expenses needed to recover at least part of such losses, and (3) other unrecoverable losses.⁴⁹⁵

The facts of the example are as follows. A buyer, Buyco, and a seller, Selco, entered into a contract for the supply of one unit of bauxite at a price of \$3000. Bauxite is an indispensable input in the production of aluminum,⁴⁹⁶ which Buyco sell to its customers downstream.⁴⁹⁷ Selco breached the contract and stopped supply of the bauxite after Buyco rejected its demand for a price increase; at this time Buyco had paid \$1000 out of the total price (\$3000). Buyco was unable to timely find any other sources of bauxite at competitive prices to honor some contracts for the sale of aluminum with its customers, who refused to take delivery of the aluminum because time was of the essence. The expected profit of these transactions was \$1500. Buyco, moreover, will need to pay these aggrieved customers \$1000 pursuant to some liquidated damages clauses. The bad news for Buyco did not stop there. One company decided to cease doing business with Buyco, who had made a relationship-specific investment only to manufacture a special kind of aluminum for this customer. The unrecouped value of this investment, after taking into account its value as scrap, is \$2700. Furthermore, Buyco suffered

⁴⁹⁴ See FARNSWORTH (CONTRACTS), *supra* note 116, at 831.

⁴⁹⁵ See Tess Wilkinson-Ryan & David A. Hoffman, *Breach Is For Suckers*, 63 VAND. L. REV. 1003, 1006 (2010).

⁴⁹⁶ See MINERALS ZONE (Nov. 19, 20130, <http://www.mineralszone.com/minerals/bauxite.html>).

⁴⁹⁷ For similar facts, see *Kaiser Trading Co. v. Associated Metals & Minerals Corp.*, 321 F. Supp. 923, 923 (1970).

good will losses estimated at \$700 on top of the lost opportunities with new customers, which are valued at \$2300. Indeed, Buyco needed to stop its operations during a considerable time and some participants in the market guessed (incorrectly, as it turns out) that this company might file for bankruptcy. This crisis led to some Buyco's employees to quit their jobs and to accept offers from some competitors. The expenses needed to train similar employees amounted to \$300. Other assumptions are the following ones. First, Buyco may sue Selco for breach of contract with an 80% likelihood of obtaining a favorable verdict; in other words, Selco might persuade the court that it was entitled to stop delivery of the bauxite and that, therefore, it did not breach the contract with a 20% likelihood. Second, the estimated litigation expenses amount to \$500 (including the cost of enforcing a favorable judgment); these expenses are attorney fees (\$300) and other judgment costs (\$200). Third, the time needed to reach and enforce a final judgment is six years. Fourth, it is 10% likely that Selco will be insolvent or judgment proof when Buyco intends to enforce a favorable judgment. Straightforward math indicates that total damages amount to \$10,000.

As a first limitation to remedies, unforeseeable losses are usually not recoverable.⁴⁹⁸ More particularly, consequential damages are only foreseeable and, therefore, recoverable if they result from any loss "which the seller at the time of contracting had reason to know and which could not reasonably be prevented by cover or otherwise."⁴⁹⁹

⁴⁹⁸ See generally FARNSWORTH (CONTRACTS), *supra* note 116, at 826-27.

⁴⁹⁹ UCC § 2-715(1). This legal rule is partially based on the old but still valid landmark case *Hadley v. Baxendale*. 9 Exch. 341, 156 Eng. Rep. 145 (1854). The second rule of this case states that consequential damages are limited to losses that "may reasonably be supposed to have been in the contemplation of both parties, at the time they made the contract, as the probable result of the breach of it." *Id.*, 156 Eng. Rep. at 151.. See also FARNSWORTH (CONTRACTS), *supra* note 116, at 786, and WHITE & SUMMERS, *supra* note 129, at 224-25.

Three scenarios may arise regarding consequential damages. First, the seller might have bargained for a clause excluding consequential damages.⁵⁰⁰ This dissertation assumes that the buyer did not accept this offer. Second, the buyer might have bargained for a clause providing that the seller was liable for all consequential damages.⁵⁰¹ Since this clause might generate a huge legal liability, this dissertation assumes that the seller did not accept such offer. Third, as this dissertation assumes, the contract was silent regarding consequential damages; thereby, UCC § 2-715(1) is applicable. This assumption is not unusual, considering that parties usually prefer default rules to its alternative provisions.⁵⁰²

In the example, Buyco may claim as damages the paid price (\$1000).⁵⁰³ In turn, Buyco's expected profit from sales to their customers was \$1500. The parties would likely disagree about the nature of these losses. Selco might claim that these are consequential damages, which would not be recoverable. After all, Selco would argue, Buyco's profit depended on the contracts with its customers and not on the contract with Selco.⁵⁰⁴ Buyco, however, would refute this argument, claiming that the \$1500 losses are direct damages because they were its expected benefit of the bargain.⁵⁰⁵ Otherwise, Buyco would claim, aggrieved buyers would be never entitled to direct

⁵⁰⁰ See UCC § 2-719(3); WHITE & SUMMERS, *supra* note 129, at 224; see also FARNSWORTH (CONTRACTS), *supra* note 116, at 827-28 (“[T]he question of foreseeability arises less frequently than might be supposed because sellers and other suppliers frequently provide that consequential damages are not recoverable.”).

⁵⁰¹ See FARNSWORTH (CONTRACTS), *supra* note 116, at 850.

⁵⁰² Russell B. Korobkin, *The Status Quo Bias and Contract Default Rules*, 83 CORNELL L. REV. 608, 611-12 (1998) [hereinafter Korobkin (Status Quo)].

⁵⁰³ That Buyco is entitled to recover the paid price (\$1000) does not mean that it is receiving either reliance or restitution damages instead of its expectation interest. It means that restitution of the paid price is necessary for Buyco to obtain the reasonable profit that it would have got if the contract would have been performed.

⁵⁰⁴ See generally FARNSWORTH (CONTRACTS), *supra* note 116, at 827-28 (reminding that the buyer bears the burden of proving that the profits on collateral contracts was foreseeable).

⁵⁰⁵ See *Tractebel Energy Mktg., Inc. v. AEP Power Mktg., Inc.*, 487 F.3d 89, 109 (2d Cir. 2007) (“Lost profits are consequential damages when, as a result of the breach, the non-breaching party suffers loss of profits on collateral business arrangements.”).

damages. In any event, assume that either a court or a jury would find that these losses are general damages but that they should be limited to the reasonable amount of \$1000.⁵⁰⁶ The remaining amount, \$500, would not be recoverable. This uncompensated damage equals the 5% of the total damages.

Recall also that Buyco paid their customers \$1000 for either not delivering the aluminum at all or for delivering it late. These losses are clearly consequential damages. Selco might successfully argue that Buyco did not mention this contingency at the time of making the contract,⁵⁰⁷ rendering it unlikely that either a court or a jury would award these damages. Furthermore, neither the expenses (\$300) needed to train the personnel who replaced the employees that changed jobs or the un-recouped relationship-specific investment (\$2700) are recoverable consequential damages. Adding it all up, the unrecoverable consequential damages equal \$4000 (the 40% of the total damages).

A second limitation to legal remedies are uncertain or speculative losses.⁵⁰⁸ Lost profits are usually too speculative to be compensated.⁵⁰⁹ The following factors, whose weight depends

⁵⁰⁶ See *Nyquist v. Randall*, 819 F.2d 1014, 1014 (11th Cir. 1987) (“[L]ost profits may indeed be the quintessential example of ‘consequential damages.’”); *WHITE & SUMMERS, supra* note 129, at 226 (reminding that courts have granted damages resulting from interruptions of buyers’ manufacturing processes). For these courts discussed by White and Summers, see, e.g., *Hawthorne Industries, Inc. v. Balfour Maclaine Int’l, Ltd.*, 676 F.2d 1385, 1385 (11th Cir. 1982).

⁵⁰⁷ Perhaps, Buyco omitted this information because the contracts with its customers were executed shortly afterwards the making of the contract with Selco.

⁵⁰⁸ See *Cent. Coal & Coke Co. v. Hartman*, 111 F. 96, 96 (8th Cir. 1901) (“Speculative, remote or contingent damages cannot form the basis of a lawful judgment.”); *Kenford Co., Inc. v. Erie County*, 493 N.E.2d 234, 236 (1986) (“[D]espite the massive quantity of expert proof . . . the ultimate conclusions are still projections Quite simply, the multitude of assumptions required to establish projections of profitability over the life of this contract requires speculation and conjecture, making it beyond the capability of even the most sophisticated procedures to satisfy the legal requirement of proof with reasonable certainty.”). *But see* UCC § 2-175 cmt. 4 (providing that damages do not need to be estimated “with mathematical accuracy”); Eisenberg, *supra* note 455, at 903 (criticizing the Kenford holding because the expected value of lost profits based on several scenarios, for example, 50% likelihood of lost profits of \$10, 30% likelihood of lost profits of \$8, and 20% likelihood of lost profits of \$5, is not

both on the facts of each case and on the judicial philosophy of the court,⁵¹⁰ are useful to determine if lost profits are sufficiently certain to be compensated. First, courts nowadays appear to be more receptive than in earlier days to accept expert opinions and economic analysis intended to prove lost profits with sufficient certainty.⁵¹¹ While this might give a held-up party the opportunity to prove its losses, it also might allow the non-investing party to submit its sophisticated analysis, which would result in a war between economists and a multiplicity of variables and scenarios.⁵¹²

A second factor relates to the traceable record of profits of the aggrieved party. Lost profits of established businesses are more likely to comply with the requirement of certainty than new businesses under the rationale that past profits may predict future gains.⁵¹³ In hold-up situations, this factor suggests that the later the breach occurs (*e.g.*, near to the end of the contract term), the likelier that future profits will *not* be rejected because of uncertainty.

A third factor counsels that the longer the executory contract term, the more uncertain the lost profits.⁵¹⁴ Fourth, the standard required to prove the existence of lost profits is higher than

contradictory with the requirement of reasonable certainty). For case law holding that damages do not need to be proved with mathematical precision, see, *e.g.*, *Ashland Mgmt. Inc. v. Janien*, 624 N.E.2d 1007, 1015 (N.Y. 1993).

⁵⁰⁹ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 352 cmt. a; FARNSWORTH (CONTRACTS), *supra* note 116, at 835.

⁵¹⁰ See FARNSWORTH (CONTRACTS), *supra* note 116, at 831.

⁵¹¹ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 352 cmts. a, b; *McDermott v. Middle East Carpet Co.*, 811 F.2d 1422, 1422 (11th Cir. 1987); FARNSWORTH (CONTRACTS), *supra* note 116, at 834.

⁵¹² See Matthew Milikowsky, *A Not Intractable Problem: Reasonable Certainty, Tractebel, and the Problem of Damages for Anticipatory Breach of A Long-Term Contract in A Thin Market*, 108 COLUM. L. REV. 452, 452 (2008).

⁵¹³ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 352 cmt. b; FARNSWORTH (CONTRACTS), *supra* note 116, at 831-32. For case law, see, *e.g.*, *Fredonia Broadcasting Corp. v. RCA Corp.*, 481 F.2d 781, 802-04 (5th Cir. 1973).

⁵¹⁴ See *Ctr. Chem. Co. v. Avril, Inc.*, 392 F.2d 289, 289-90 (5th Cir. 1968); FARNSWORTH (CONTRACTS), *supra* note 116, at 831-32; Milikowsky, *supra* note 512, at 444, 455-56; WHITE & SUMMERS, *supra* note 129, at 246.

the one necessary to prove their amount.⁵¹⁵ Last but not the least, if the preceding factors are not enough to determine whether lost profits are sufficiently certain, any question is resolved in favor of the aggrieved party (*i.e.*, the held-up party).⁵¹⁶

Returning to the example, assume that either a court or a jury would find, after analyzing these factors, that \$1800 out of the \$2300 damages in lost opportunities are too speculative to be granted. This unrecovered amount is the 18% of the total damages.

Good will losses are usually an unrecoverable kind of lost profits not only because they are unforeseeable but also because of their speculative nature.⁵¹⁷ The outlook, however, is not so bleak for a held-up party: the requirement of certainty is relaxed in respect of good will losses.⁵¹⁸ Thus, suppose that either a court or a jury awarded \$300 for good will losses rejecting the remaining \$400 (4% of the total damages) due to its speculative nature.

As an additional limitation to remedies, a judgment granting Buyco some monetary damages may not be worth more than the piece of paper on which it is written if Selco is bankrupt or “judgment-proof”⁵¹⁹ at the time of enforcement.⁵²⁰ Even if at this time Selco is not

⁵¹⁵ See, e.g., *Evergreen Amusement Corp. v. Milstead*, 112 A.2d 901, 901 (Md. 1955); *Tractebel Energy Mktg., Inc. v. AEP Power Mktg., Inc.*, 487 F.3d 89, 110 (2d Cir. 2007) (“A person violating his contract should not be permitted entirely to escape liability because the amount of the damage which he caused is uncertain.”); see also *Milikowsky*, *supra* note 505, at 466.

⁵¹⁶ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 352 cmt. a; *U.S. Naval Inst. v. Charter Commc’ns, Inc.*, 936 F.2d 692, 697 (2d Cir. 1991).

⁵¹⁷ See *WHITE & SUMMERS*, *supra* note 129, at 227 (“In theory, good will losses should be recoverable. In practice, lost good will may be hard to prove and even harder to quantify”). For cases rejecting good will losses as recoverable damages due to their speculative nature, see, e.g., *Argo Welded Prod., Inc. v. J. T. Ryerson Steel & Sons*, 528 F.Supp. 583, 588 (E.D. Pa. 1981). For cases granting good will losses, see, e.g., *Consolidated Data Terminals v. Applied Digital Data Systems, Inc.*, 708 F.2d 385, 394 (9th Cir. 1983).

⁵¹⁸ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 352 cmt. a; *Delano Growers’ Co-op. Winery v. Supreme Wine Co., Inc.*, 473 N.E.2d 1066, 1080 (Mass. 1985); *FARNSWORTH (CONTRACTS)*, *supra* note 116, at 830.

⁵¹⁹ *Bar-Gill & Ben-Shahar (Duress)*, *supra* note 440, at 429.

⁵²⁰ See *Eisenberg*, *supra* note 455, at 996 (reminding that an aggrieved party bears the risk of insolvency between the time when the contract is breached and the time when damages are paid).

bankrupt, enforcing a favorable judgment may entail some litigation expenses for Buyco (which are already included in the \$500 expenses mentioned in the example).

As to the second kind of restrictions to legal remedies, litigation costs are the main expenses needed to recover the losses resulting from breach of contract.⁵²¹ Attorney fees, in turn, are the most significant litigation costs. Under the so-called American rule, each party bears its attorneys' fees.⁵²² While this is a default rule that may be contracted around, this dissertation assumes that the non-investing party rejected this possibility.⁵²³ Even if it is assumed that the non-investing party initially agreed to pay the investing party's legal fees in case of the latter prevailing in trial, the investing party might be pressured to release the non-investing party from this obligation during the contract modification stage. Thus, in any event, Buyco will not be able to recover its attorney fees, amounting to \$300 (3% of the total damages).

In contrast with attorney fees, the party whose loses at trial shall bear the remaining judgment costs.⁵²⁴ Thus, a victorious held-up party may recover reasonable expenses in, for example, retaining experts and obtaining evidence. Therefore, Buyco might recover the judgment costs other than attorney fees (*i.e.*, \$200). Unfortunately, personnel time employed in litigation (*e.g.*, estimating the losses, attempting to reach a settlement, etc.) is very difficult to value in terms of money and, therefore, unlikely to be recovered.⁵²⁵

⁵²¹ See Bernstein (Grain), *supra* note 40, at 1790 (“[L]itigation is costly, prone to delay, and subject to judicial error”).

⁵²² See FED. R. CIV. P. 54(d)(2).

⁵²³ See Korobkin (Status Quo), *supra* note 502, at 611-12 (indicating that parties rarely contract around default rules).

⁵²⁴ See FED. R. CIV. P. 54(d)(1).

⁵²⁵ See Eisenberg, *supra* note 455, at 995 (stating that most costs needed to prevail in litigation are not included in expectation damages); Macaulay, *supra* note 227, at 70 (reminding that complex litigation usually entails diverting

Turning to the third category of restrictions to legal remedies (other unrecoverable losses), monetary damages are only obtained after considerable delay.⁵²⁶ Thus, if the value of monetary damages when a judgment is enforced is undercompensatory (the present value), the degree of undercompensation is even higher if such amount is not properly adjusted to take into account the time elapsed since the contract was breached (past value). In a strict sense, the losses that the buyer has suffered before the enforcement must be adjusted (*i.e.*, the past value must be converted into the present value) while the vanished future gains must be discounted (*i.e.*, the future value must be converted into present value). For the sake of simplicity, however, this dissertation assumes that all losses would have been accrued before enforcement; thereby, its value must be adjusted (past value converted into present value) instead of discounted (future value converted into present value).⁵²⁷

Under an ideal scenario, a court would adjust the damages at a reasonable market rate taking into account the time elapsed between breach and enforcement of the judgment.⁵²⁸ Such an ideal scenario lives up to its name: it simply does not exist. First, prejudgment interest is usually limited to the time between trial and final payment; thereby, the time between the breach of contract and the trial is not taken into account.⁵²⁹ Second, this pre-judgment interest is usually

key personnel from their normal and more productive activities); Narasimhan, *supra* note 329, at 65-66 (highlighting that most litigation costs are non-compensable).

⁵²⁶ See Dalzell (II), *supra* note 393, at 370 (“Usually months, and not uncommonly years, are consumed in getting a final judgment and enforcing it.”); WHITE & SUMMERS, *supra* note 129, at 248 (indicating that litigation might last more than five years due to overcrowded dockets and extensive discovery rules).

⁵²⁷ See generally WHITE & SUMMERS, *supra* note 129, at 246-53.

⁵²⁸ See Eisenberg, *supra* note 455, at 995-96.

⁵²⁹ See Narasimhan, *supra* note 329, at 65-66.

estimated at a very low rate,⁵³⁰ such as the interest rate on U.S. treasury bills.⁵³¹ Third, such interest is rarely compounded.⁵³² Fourth, prejudgment interest is awarded if breach amounts to a failure to pay a sum of money or to render a performance with an ascertainable value; otherwise, it is discretionary.⁵³³

In the example, the damages that Buyco may recover amount to \$3000 (\$1000 for the paid price, \$1000 for the expected profit of the transaction, \$300 for goodwill losses, \$500 for lost opportunities, and \$200 for judgment costs). Assume that the court would award pre-judgment interest equal to the six-month U.S. treasury bills rate (the legal interest – *li*), which is 0.14%,⁵³⁴ for the time between the trial and the enforcement of the judgment. This legal time – *lt* – is three years. Recall that the estimated time between breach and enforcement of the award is six years. This is the actual time or *at*. Suppose also that Buyco may borrow funds in the capital markets at 3% (market interest – *mi*).

The actual adjusted damages (AAD) are calculated as follows:

$$\begin{aligned}
 AAD &= \text{Damages awarded} * (1 + li)^{lt} && \text{Equation 2} \\
 &= \$3000 * (1.0014)^3 = \$3013
 \end{aligned}$$

The ideal adjusted damages (IAD) are calculated as follows:

⁵³⁰ See *id.*; see also Eisenberg, *supra* note 455, at 995-96 (suggesting that the interest should be the rate that the aggrieved party pays for borrowed funds); WHITE & SUMMERS, *supra* note 129, at 257 (contending that a “risk-free” rate is inappropriate in business disputes).

⁵³¹ See, e.g., *McCarran v. U.S. Lines, Inc.*, 803 F.2d 771, 774 (2d Cir. 1986) (using a six-month U.S. Treasury Bills interest rate); *Zim Israel Navigation Co. v. 3-D Imports, Inc.*, 29 F.Supp.2d 186, 193-94 (S.D.N.Y. 1998) (using also a six-month U.S. Treasury Bills rate). Regarding statutory law, see, e.g., Mich. Comp. Laws § 600.6013(8) (2004) (providing that the interest rate equals “to 1% plus the average interest rate paid at auctions of 5-year United States treasury notes”). See also WHITE & SUMMERS, *supra* note 129, at 256 n.5.

⁵³² See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 354 cmt. a; *Big Bear Properties, Inc. v. Gherman*, 157 Cal. Rptr. 443, 449 (Cal. Ct. App. 1979); Eisenberg, *supra* note 455, at 995-96.

⁵³³ See RESTATEMENT (SECOND) OF CONTRACTS (1981) § 354.

⁵³⁴ See *Daily Treasury Yield Curve Rates*, U.S. DEP’T OF THE TREASURY, <http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield> (last visited Nov. 19, 2013).

$$IAD = \text{Damages awarded} * (1 + mi)^{at} \quad \text{Equation 3}$$

$$= \$3000 * (1.0300)^6 = \$3582$$

The difference between the actual adjusted damages and the ideal adjusted damages amounts to \$569 (or 5.69% of the total damages measured in present value). This is the uncompensated loss that Buyco suffers due to the time value of money.

Additionally, a held-up buyer cannot be completely certain of prevailing in litigation.⁵³⁵ To a certain degree, litigation is a game of chance.⁵³⁶ While uncertainty is present in every lawsuit, its negative effect is more acute in hold-up situations because an unfavorable holding, even if it is very unlikely, might entail financial ruin for a held-up party.⁵³⁷ In contrast, in other situations, a loss at trial is expensive but not disastrous.⁵³⁸

In a negative scenario for Buyco, either a court or a jury would hold that Selco did not breach the contract for sale of goods but legally terminated it. This holding may arise either because the seller's case has some support in legal authority or because a court errs in its judgment.⁵³⁹ If Buyco loses at trial, moreover, it cannot recover its judgment costs (\$200) and may pay the judgment costs of Selco, which are assumed to equal \$200. Therefore, the example assumes that a court would award Buyco \$3000 in damages with an 80% likelihood and (-\$200) with a 20% likelihood; thereby, the expected value of remedies is not \$3000 but \$2360 (*i.e.*,

⁵³⁵ See Eisenberg, *supra* note 455, at 1008 (“[B]ecause of the vagaries of litigation, a promisee cannot be sure whether damages will be granted”).

⁵³⁶ See *United States v. Stump Home Specialties Mfg.*, 905 F.2d 1117, 1121-22 (7th Cir. 1990) (“[L]egal remedies are always costly and uncertain”).

⁵³⁷ See *supra* § II.A.

⁵³⁸ See Dalzell (II), *supra* note 393, at 372 (stating that uncertainty about litigation makes legal remedies inadequate when one of the parties has a much heavier risk of loss in comparison with the other party).

⁵³⁹ See Eisenberg, *supra* note 455, at 983 (“Litigation risks include the risk of errors by the law-finder or the fact-finder and the possibility that the promisor may successfully establish a defense to the promisee’s claim”).

\$3000 * 80% - \$200*20%). The difference between \$3000 and \$2360 (\$640) amounts to the 6.4% of the total damages.

Table 2 summarizes the main figures of the example.

Table 2 – Undercompensatory Nature of Legal Remedies in the United States

Concept	Damages	Compensated Value (CV)	Uncompensated Value (UV)	% UV
Paid price	1000	1000	0	0%
Other gen. damages	1500	1000	500	3%
Liq. dam. Clause	1000	0	1000	10%
Unrecouped inv.	2700	0	2700	27%
Good will losses	700	300	400	4%
Lost opportunities	2300	500	1800	18%
Training employees	300	0	300	3%
Litigation expenses	500	200	300	3%
Total	10,000	3000	7000	70%

Table 2, however, does not show the losses resulting from the time value of money (\$569) and of the uncertainty of litigation (\$600). Table 3 includes this information.

Table 3 – Effect of Time Value of Money and Uncertainty of Litigation

Concept	Damages	Compensated Value (CV)	Uncompensated Value (UV)	% UV
Total damages	10,000	3000	7000	70.00%
Time value of money	569	0	569	5.69%
Uncertainty litigation	640	0	640	6.40%
Grand total	11,209	3000	8209	82.09% ⁵⁴⁰

⁵⁴⁰ 81.69% is the percentage of uncompensated losses over the nominal value of damages (\$10,000). Such percentage is 73.23% over the adjusted value of damages (\$11,209).

Since perfectly compensatory or super-compensatory remedies would have harmful consequences in other realms of contract law, the legal rules on remedies cannot avoid or solve the hold-up problem but simply mitigate it. The degree of mitigation, however, is not indifferent. This dissertation contends that the hold-up problem is a matter of degree and, therefore, that the higher the extent of the undercompensatory nature of remedies, the more acute the hold-up problem and, therefore, the bigger the gap between the actual investments and its efficient level.⁵⁴¹ This section presents an example indicating why, from a theoretical standpoint, the degree of undercompensation matters.

In the example above, the unrecovered losses resulting from breach, without taking into account the time value of money and the uncertainty of the outcome of litigation, were \$7000 (recall that this figure already incorporates the lost expected profit of the transaction). Suppose that the likelihood of this scenario is 40%. In the alternative scenario, in which the hold-up problem does not arise and the non-investing seller timely delivers the goods, the expected unrecovered losses are, of course, \$0. The likelihood of this scenario is 60%. Therefore, the expected unrecovered losses of the transaction equals to \$2800 (*i.e.*, $\$7000 \times 40\% + \$0 \times 60\%$). \$2800 is the maximum price increase that a held-up buyer will accept if the hold-up problem arises because it puts this party in an indifferent situation between accepting the modification and rejecting it and suffering a breach (a higher amount will make breach preferable). In other words, a rational non-investing seller will demand, backed by a threat to breach, this price increase (and not either a lower or a higher one). It follows that the maximum new price is the original price (\$3000) plus this price increase (\$2800) for a total of \$5800.

⁵⁴¹ An experiment whose results are analyzed *infra* Chapter V tests this statement.

Now, suppose that unrecouped losses fall from \$7000 to its half, \$3500 due to an amendment on the rules on remedies for breach of contract, which makes some unforeseeable and uncertain damages recoverable. The other facts remain the same (*e.g.*, the profit of the transaction and likelihood of the hold-up problem). In this variant, the expected unrecovered losses equal \$1400 (*i.e.*, $\$3500 \times 40\% + \$0 \times 60\%$).⁵⁴² The maximum prices increase that the non-investing party will demand and that the held-up party will accept is \$1400. It follows that the maximum new price is the original price (\$3000) plus this price increase (\$1400) for a total of \$4400.

A party afraid of being held-up during the performance of a contract, therefore, will be willing to invest \$1400 more than in the original example. This is even more likely, given that this amount, \$1400, is lower than the expected profit of the transaction with the non-investing seller, which is \$1500). This example indicates that a reduction of the undercompensatory nature of remedies amounting to 50% (from \$7000 to \$3500) leads to a reduction of 50% of the impact of the hold-up problem (*i.e.*, the extent of the price modification).⁵⁴³

d. Conclusion

That legal remedies for breach of contract are inherently undercompensatory is a settled statement, so settled that it is almost a tautology. Indeed, remedies for breach of contracts cannot be fully compensatory unless some undesirable effects arise, such as deterring efficient breaches.⁵⁴⁴ Since completely avoiding or solving the hold-up problem is not possible, the role of

⁵⁴² If the chances of hold-up were 0%, both the expected unrecovered losses and the maximum price increase would be \$0.

⁵⁴³ Undeniably, the example does not measure the effect of remedies on the likelihood of the hold-up problem.

⁵⁴⁴ For other negative effects of raising remedies to a perfectly compensatory level, see *supra* p. 120.

legal remedies in the prevention of the hold-up problem is limited to mitigation. Despite this limitation, a high level of remedies may mitigate the hold-up problem to a greater extent than a low level. Specifically, high remedies may have a prophylactic effect on the hold-up problem by reducing or eliminating the credibility of the threat to breach the contract that a non-investing party makes.⁵⁴⁵ An experiment on the hold-up problem will test this statement.⁵⁴⁶

Section III.D Summary of Findings of Chapter III

Table 4 summarizes the analysis of this chapter.

⁵⁴⁵ See Bar-Gill & Ben-Shahar (Credible Coercion), *supra* note 358, at 735 (“The more severe the remedies that the threatening party expects to bear in case of breach, the less credible his threat.”); Bar-Gill & Ben-Shahar (Duress), *supra* note 440, at 421 (contending that the credibility of the threat to breach a contract is inversely related to the uncompensated damages); Johnston, *supra* note 300, at 342 (“[T]he more severe the remedy for breach, the less likely is that . . . a threat will be credible.”).

⁵⁴⁶ See *infra* Chapter V.

Table 4 – Summary of Findings of Chapter III

§	TOPIC	EFFECT ON THE HOLD-UP PROBLEM
	Non-mod. Clauses	Legal rules do not avoid, solve, or mitigate the hold-up problem because they provide that no-modification clauses are unenforceable.
Private attempts	Stipulated damages clauses	By providing some damages that the law usually does not grant, liquidated damages mitigate the hold-up problem. Since their amount cannot be higher than damages, however, these clauses do not either avoid or solve the hold-up problem. Penalty clauses, on the other hand, could avoid or solve the hold-up problem to a greater degree if they were enforceable.
	Reputation bonds	In theory, reputation prevents the hold-up problem because the prospect of losing deals with the held-up party or with third parties deters a non-investing party from behaving opportunistically. In practice, the real effect of reputation depends on the industries where the hold-up problem arises.
	The Right to Demand Adequate Assurances	Mixed effect. On the one hand, a non-investing party might opportunistically apply these legal rules to obtain a contract modification. On the other hand, a held-up party might claim that the proposal for a modification triggered reasonable grounds for insecurity and, as a result, might demand adequate assurances. A non-investing party who anticipates this behavior might refrain from making an opportunistic offer.
Public attempts	Good faith modifications	Mixed effect. The legal rules mitigate the hold-up problem by entitling judges to strike down bad faith modifications. These rules, however, does not prevent the hold-up problem due to their vagueness.
	Econ. duress	Mixed effect. Legal rules mitigate but do not solve the hold-up problem. The reasons are the same indicated as to good-faith modifications.
	Remedies	The hold-up problem could not arise if legal remedies were fully compensatory. Perfectly compensatory remedies, however, would have negative effects in contract law; thereby, the goal of the law should be to mitigate the hold-up problem by granting a high level of remedies.

CHAPTER IV –THE HOLD-UP PROBLEM IN COLOMBIAN LAW

Section IV. A. – Introduction

Chapter IV discusses whether Colombian law prevents the hold-up problem in idiosyncratic contracts for the manufacture and sale of goods. The aim of this descriptive analysis is to compare its conclusions with the findings about U.S. law,⁵⁴⁷ to present the theories that will be experimentally tested in the following chapter,⁵⁴⁸ and to pave the way for making some proposals in Chapter VI.⁵⁴⁹ Overall, this chapter argues that Colombian law mitigates the hold-up problem but neither avoids nor solves it.

Pursuant to the so-called combination theory, the contracts under the scope of this dissertation are governed by the following groups of legal rules, provided those rules are not in contradiction.⁵⁵⁰ First, Civil Code Art. 2053 to 2062, governs the so-called contract for the manufacture of a tangible property and applies to commercial transactions via Commercial Code Art. 822.⁵⁵¹ Second, Commercial Code Art. 906-67, applies to commercial contracts for the sale of goods. Third, Commercial Code Art. 968-77, governs commercial contracts for the supply of goods.

⁵⁴⁷ See *supra* Chapter III.

⁵⁴⁸ See *infra* Chapter V.

⁵⁴⁹ See *supra* Chapter VI.

⁵⁵⁰ According to the combination theory, the legal rules applicable to a mixed contract are all the legal rules applicable to the underlying contracts. See, e.g., Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., mayo 31, 1938, M.P. J. Mujica, Gaceta Judicial [G.J.] (No. XLVI, p.541) (Colom.); Compañía Central de Seguros S.A. y Compañía Central de Seguros de Vida S.A. v. Maalula Ltda., agosto 31, 2000 (J. Suescún, J. Cárdenas, A. De Irisarri Arb.).

⁵⁵¹ Pursuant to C. COM. Art. 822, the legal rules on the Civil Code are applicable to commercial transactions unless displaced by the particular provisions of the Commercial Code.

Each one of these groups of legal rules governs a different stage of the transaction.⁵⁵² The legal rules governing contracts for the manufacture of a tangible property are applicable during the production stage. After this process has finished and if the delivery is composed of only one installment, the rules on commercial contracts for the sale of goods govern the transaction. If the contract contains more than one installment, by contrast, the rules on contracts for the supply of goods govern the transaction although the rules on contracts for sale of goods are still applicable in a subsidiary form (*i.e.*, to fill gaps).⁵⁵³ If a contradiction between the legal rules governing the manufacturing and the selling stage arises, the rules on commercial contracts for the supply and sale of goods trumps the rules on contracts for the manufacture of tangible property.⁵⁵⁴

The remaining sections of this chapter mirror the chapter about U.S. law.⁵⁵⁵ Thus, Section IV.B discusses whether the following kinds of private safeguards prevent the hold-up problem: no-modification clauses (§ IV.B.1), penalty clauses (§ IV.B.2), and reputation bonds (§ IV.B.3). The next section, Section IV.C, analyzes whether Colombian legal intervention prevents the hold-up problem. In particular, Section IV.C.1 examines the impact on the hold-up problem of the legal rules on the so-called *exceptio non- adimpleti contractus*. Sections IV.C.2 and IV.C.3, in turn, discuss whether mandatory legal rules on the duty of good faith and on economic duress, respectively, prevent the hold-up problem by entitling a held-up party to contest an extorted modification. Next, Section IV.C.4 evaluates whether Colombian legal rules on remedies for

⁵⁵² See *Astecnia S.A. v. Francocolombiana de Construcción Ltda.* (junio 14, 2005) (A. Pabón, L. Neira y J. Cárdenas Arb.); *Concentrados El Pijao Ltda. v. Finca S.A.* (febrero 18, 2008) (C. Useche, F. Silva, C. Calderón Arb.).

⁵⁵³ See C. COM. Art. 980.

⁵⁵⁴ See *id.* Art. 822.

⁵⁵⁵ See *supra* Chapter III.

breach of contract wholly or partially compensate an aggrieved held-up party. Finally, Section IV.D makes some concluding remarks.

Section IV.B - Private Attempts to Prevent the Hold-up Problem: Closing the Path to Extorted Modifications and Breach at the Formation of the Contract

1. No Modification Clauses

The general role of no-modification clauses was discussed in Section III.B.1; that analysis is not repeated here. Thus, Section IV.B.1 explains only that no-modification clauses do not prevent the hold-up problem in Colombian law because parties providing these contractual devices keep the legal capacity to rescind them.⁵⁵⁶

No modification clauses are presumed valid under Colombian law since no legal rule expressly prohibits them. Notwithstanding, some Colombian legal rules entitle the parties to a no-modification clause to rescind it and, subsequently, to modify their contract, making this safeguard useless.⁵⁵⁷ To begin with, Civil Code Art. 1502 provides that any individual or juridical person may make a legally binding promise if four conditions are met: (1) the person is legally capable; (2) the assent is free of any vices (*i.e.*, mistake, duress, and fraud); (3) the purpose is lawful; and (4) the cause is lawful.⁵⁵⁸ Rescinding a no-modification clause usually complies with these four conditions unless, to take two examples, the legal representative of any of the parties is a minor or an individual with some mental disabilities, which is highly unlikely

⁵⁵⁶ The conclusion is the same than in U.S. law. *See supra* § III.B.1.

⁵⁵⁷ Unfortunately, and to the best of the knowledge of this dissertation's author, no case law or academic writings stating that a new contract can rescind a previous contract containing a no modification clause exist.

⁵⁵⁸ *See* C.C. Art. 1502. All individuals have legal capacity unless the law expressly provides otherwise. *See* C.C. Art. 1503. Some examples of individuals with no or limited legal capacity are minors and people with mental disabilities. *See* C.C. Art. 1504 para. 3; L. 1306/09 Art. 1-39 (junio 5) [DIARIO OFICIAL]. Regarding juridical persons, they are, as a general rule, incapable of entering into any act beyond its corporate purpose. *See* C. COM. Art. 98.

when the contract involves sophisticated parties⁵⁵⁹ or, that the modification is agreed on under duress.⁵⁶⁰ In addition, this dissertation contends that Civil Code Art. 1502 is an immutable legal rule and, therefore, the parties to a contract are not entitled to provide conditions for making legally binding promises other than requiring some formalities (*e.g.*, a writing).⁵⁶¹ Last but not least, Civil Code Art. 1602 provides that a contract can only be rescinded by legal causes (*e.g.*, mistake) or by mutual assent.⁵⁶² The rescission of a no-modification clause, of course, amounts to a mutual assent. In sum, no-modification clauses are not effective. As a consequence, a non-investing party might easily couple its request for a price modification under threat to breach with a demand for the rescission of the no-modification clause.

On the other hand, some enforceable contractual devices might replicate the role of no-modification clauses. That is, a contract may contain an effective clause requiring modification to be made through a stated formality. In such a case, any device short of prohibiting modifications would make them sufficiently expensive as to be very unlikely. Unfortunately for parties intending to prevent the hold-up problem, the non-investing party may demand not only a price change but also an amendment of the contract rules of modification. Even if a change of these rules is not demanded, clauses requiring modification to be by a stated formality are highly imperfect substitutes of no-modification clauses.⁵⁶³

⁵⁵⁹ See C.C. Art. 1504.

⁵⁶⁰ See C.C. Art. 1513; *see also* C. COM. Art. 824 (providing that merchants can give assent orally, by written document, or by any other unequivocal form); *see also* *Mina Canales Limitada v. Interamerican Coal N.V. y C.I. Exportadora Interamerican Coal Colombia S.A.* (septiembre 9, 2008 (J. Santos, J. Benetti, L. López Arb.) (holding that the formation—and therefore the rescission—of the contract for supply of goods is not subject to any formal legal requirements).

⁵⁶¹ See C.C. Art. 1741.

⁵⁶² See C.C. Art. 1602.

⁵⁶³ See *supra* § III.B.1.

Three examples illustrate this last statement. First, a provision setting forth that the parties shall pay an amount of money to a third party if the contract is modified is valid under Colombian law.⁵⁶⁴ This strategy, however, would not prevent the non-investing party from offering a share of the modification surplus to the third-party and not the original and higher payment. A rational third-party will accept this offer after anticipating that rejection mean that no modification will be agreed on and, as a result, the third party will receive no money. For example, assume that in a original contract for \$100, the parties agreed to pay \$200 to a third party if the contract was modified, and that a non-investing buyer intends to demand a new price of \$40. In this case, the buyer may propose to share, for instance, half of the modification surplus, \$30 out of \$60, with the third party, which knows that if it rejects the offer, the contract will not be modified and, therefore, the payment of \$200 will never be received. As a result, this device will not prevent the hold-up problem. A more sophisticated strategy of promising payments to several parties might also not work because of its prohibitive transaction costs.⁵⁶⁵ In other words, although this device theoretically might be helpful, it is potentially impractical because of transaction costs.

Second, Colombian parties to hold-up situations may agree that several layers of consent within each of the parties' organizations are required for providing any valid modification (*e.g.*, both the boards of Directors and the General Assemblies of the two parties must approve it). This

⁵⁶⁴ See C.C. Art. 1506 (providing that any person may enter a contract in favor of a third-person, that only this third-person may demand fulfillment of the promise, and that the parties cannot rescind this provision after the third-party accepts it, either implicitly or explicitly). See also C.C. Art 1593 para. 3.

⁵⁶⁵ See *supra* § III.B.1.

device, while valid under Colombian law,⁵⁶⁶ may be unworkable in practice due to the increase of transaction costs and the creation of barriers to efficient modifications.⁵⁶⁷

Third, while no-oral-modification clauses are valid under Colombian law, its role in preventing the hold-up problem is negligible. The following syllogism explains why these clauses are valid. As the major premise, Commercial Code Art. 824 provides that a contract will only be formed or modified if it complies with the formal requirements that the law mandates.⁵⁶⁸ A writing may be one of this formal requirements.⁵⁶⁹ As the minor premise, every contract is the law for its parties.⁵⁷⁰ As a result, a no-oral-modification clause is valid for the parties to a contract. In any event, this dissertation has already argued no-oral-modification clauses do not prevent the hold-up problem because obtaining an assent in writing to a modification is the least of the worries for a non-investing party. Similar to what happens under U.S. law,⁵⁷¹ both no-modification clauses and their functional substitutes are unlikely to prevent one party from holding up the other in most cases.

2. Penalty Clauses

a. Introduction

Section IV.B.2 discusses whether penalty clauses, agreements providing that a breaching party shall pay a certain amount to the aggrieved party,⁵⁷² prevent the hold-up problem under Colombian law. Compared to U.S. law, where only liquidated damages are enforceable, the

⁵⁶⁶ See C. COM. Arts. 187(8), 419(7), 434, 824, 826.

⁵⁶⁷ See *supra* § III.B.1.

⁵⁶⁸ See C. COM. Art. 824; GUILLERMO OSPINA & EDUARDO OSPINA, *TEORÍA GENERAL DEL CONTRATO Y DEL NEGOCIO JURÍDICO* [GENERAL THEORY OF THE CONTRACT AND OF THE LEGAL TRANSACTION] 232 (5th ed. 1998).

⁵⁶⁹ See also C. COM. Art. 826.

⁵⁷⁰ See C.C. Art. 1602.

⁵⁷¹ See *supra* § III.B.1.

⁵⁷² See *Ladrillera Santa Fe S.A. v. STK de Colombia S.A.* (abril 16, 2002) (J. Chemás, N. Zabala y L. Parra Arb.).

Colombian legal rules making penalties enforceable seem to address more efficiently the hold-up problem.⁵⁷³ But the legal thresholds to the amount of penalty clauses and the discretionary powers that courts have to reduce this amount impairs the efficiency of penalty clauses in the context of hold-up situations.⁵⁷⁴

b. The Legal Rules on Penalty Clauses

Civil Code Art. 1592 to 1601 and Commercial Code art. 867 sets forth the legal rules governing penalty clauses.⁵⁷⁵ These legal rules, at least as they relate to this dissertation, may be broken down in the following six parts. First and more important, penalty clauses are enforceable in Colombia and, therefore, the breaching party must pay its whole amount.⁵⁷⁶ This is a major difference with U.S. law, where liquidated damages clauses, if valid, typically bind both parties.⁵⁷⁷

Second, the breaching party shall pay the amount of the penalty clause to the aggrieved

⁵⁷³ See C.C. Art. 1599; C. COM. Art. 867.

⁵⁷⁴ See C. COM. Art. 867; C.C. Art. 1601.

⁵⁷⁵ Recall that the rules on the Civil Code are applicable to commercial transactions unless displaced by the particular provisions of the Commercial Code. See *supra* § IV.B.1; C. COM. Art. 822. Regarding penalty clauses, the differences between the legal rules in the Commercial Code and the Civil Code are minimal with perhaps one major exception: the threshold of a penalty clause when the breached duty is re-expressible in monetary terms is the amount of such duty in commercial transactions and twice this amount in civil contracts. See C. COM. Art. 867; C.C. Art. 1601. On a related note, the Colombian Supreme Court rejected a claim arguing that penalty clauses were unconstitutional on the grounds that punishment should be exclusive of criminal law and held that Civil Code Art. 1592-1601 were in accordance with the Constitution enacted in 1886, which was the predecessor of the Constitution currently in legal force, enacted in 1991. See Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., septiembre 27, 1974, G. Álvarez, Gaceta Judicial [G.J.] (No. CXXXIV, p. 126) (Colom.). While these Civil legal rules have not been challenged under the current Constitution and the commercial legal rules on the same topic have never been contested, it is unlikely that the Constitutional Court would strike them in case of such a claim on at least three grounds: (i) Colombian contract law is amenable to the idea of private punishment to breaching parties; (ii) the Colombian Constitution does not make any reference to penalty clauses; and (3) this Constitution allows private parties to do anything that is not expressly forbidden. See C.P. Art. 6.

⁵⁷⁶ See C.C. Art. 1592 and 1599; C. Co. Art 867.

⁵⁷⁷ See *supra* § III.B.2.

party regardless of whether the breach caused any damages.⁵⁷⁸ Third, the aggrieved party may request the payment of the penalty clause on top of legal damages if the contract explicitly provides this accumulation of remedies. Under this scenario, a penalty clause will be a real punishment.⁵⁷⁹ This is another major difference with U.S. law, where the aggrieved party does not generally have the option to sue for damages beyond those liquidated.⁵⁸⁰

If the contract does not explicitly provide the accumulation of the penalty and damages, the aggrieved party will receive the larger amount between proved legal damages and the penalty clause.⁵⁸¹ In this case the penalty clause is just an estimation of damages, resembling more closely a liquidated damages clause under U.S. law,⁵⁸² and, therefore, is a misnomer. In any event, while both kinds of penalty clauses may prevent the hold-up problem, efficiency is enhanced when the breaching party must pay both the penalty and the legal damages.⁵⁸³

Fourth, a breaching party that has partially performed its duties, regardless of whether

⁵⁷⁸ See C.C. Art. 1599. See also JORGE SUESCÚN, *DERECHO PRIVADO, ESTUDIOS DE DERECHO CIVIL Y COMERCIAL CONTEMPORÁNEO* [PRIVATE LAW, STUDIES ON CONTEMPORANEOUS CIVIL AND COMMERCIAL LAW] 43-45 (2003) (categorizing a penalty clause as an irrebuttable presumption for the breaching party, who cannot claim that the breach did not cause any harm, and as a rebuttable presumption for the aggrieved party, who can prove that damages were larger than the amount of the penalty clause). For arbitral awards holding that the party who seeks the payment of a penalty clause does not need to prove damages resulting from the breach, see, e.g., *Comercial Okasa Ltda., v. Banco Colpatría Red Multibanca Colpatría S.A.* (mayo 27, 2004) (C. Torrente Arb.).

⁵⁷⁹ See Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., junio 23, 2000, M.P. J. Ramírez, Expediente C-4823, Gaceta Judicial [G.J.] (No. CCXII, p. 482) (Colom.); SUESCÚN, *supra* note 579, at 43-45. For arbitral awards mentioning this dual role of penalty clauses, see, e.g., *Impsa Andina S.A. v. Argosy Energy International* (diciembre 12, 2000) (J. Cabrera, R. Núñez, H. Chaux Arb.).

⁵⁸⁰ See *supra* § III.B.2.

⁵⁸¹ See C.C. Art. 1600.

⁵⁸² See *supra* § III.B.2.

⁵⁸³ See Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., junio 23, 2000, M.P. J. Ramírez, Expediente C-4823, Gaceta Judicial [G.J.] (No. CCXII, p. 482) (Colom.) (arguing that the amount of a penalty clause must be sufficiently high to persuade the promisor that the only profitable road is compliance with the contract); *Comercial Okasa Ltda., v. Banco Colpatría Red Multibanca Colpatría S.A.* (mayo 27, 2004) (C. Torrente Arb.) (contending that a penalty clause whose amount must be paid on top of legal damages works as a psychological pressure against the promisor).

they are re-expressible in monetary terms, is entitled to request a pro-rata reduction of the penalty.⁵⁸⁴ Fifth, if the breaching party failed either to pay an amount of money or to perform any other duty which is re-expressible in monetary terms, the amount of the penalty shall not be higher than the amount of this duty.⁵⁸⁵ For instance, and pursuant to a plain-meaning reading of Commercial Code Art. 867, if the seller fails to deliver the goods, the penalty, in addition to damages,⁵⁸⁶ cannot be larger than the contract price.⁵⁸⁷

For example, assume that a seller and a buyer enter a contract for the sale of goods at a price of \$5000. The seller must make a relationship-specific investment amounting to \$4000 to manufacture the goods. Suppose also that a seller anticipates that a court would not grant legal damages for breach of contract above the expected profit of the transaction (\$1000) because of the fact that the investment is not valuable for any other buyer is non-verifiable information. The law, however, entitles the seller to bargain for a penalty clause amounting to up to the contract price (\$5000) on top of legal damages,⁵⁸⁸ a figure larger than the amount necessary to wholly insure the investment (\$4000) and to deter an extorted modification.⁵⁸⁹

⁵⁸⁴ See C.C. Art. 1596; C. COM. Art. 867 para. 3.

⁵⁸⁵ See C. CO. Art. 867.; see also SUESCÚN, *supra* note 579, at 541, 45-46 (reminding that some but not all the duties arising out of a contract consist of the payment of money or are re-expressible in monetary terms).

⁵⁸⁶ Damages in sales contracts, where the seller fails to deliver the goods, might easily lead to damages well in excess of the price. A different reading of the rule would be illogical, since the penalty clause will not cover damages in most cases.

⁵⁸⁷ See C. COM. Art. 867.

⁵⁸⁸ See *id.*

⁵⁸⁹ At first sight, a penalty will not deter a demand for a modification under threat to breach if the non-investing party has a much better alternative trading opportunity. Under the facts of this example, however, and assuming a penalty clause amounting to \$4000, this ideal trading opportunity does not exist. The minimum price that any other seller may charge for functional equivalent goods to the buyer is an amount marginally above \$0. In this case, the buyer will save almost \$5000 by switching its supplier but will need to pay \$5000 to the original seller (\$1000 due to the expected profit plus \$4000 due to the penalty clause). Overall, this strategy will lead to a loss amounting to the price that the new seller offers. Nevertheless, if the figures of the example are changed, then the alternative trading opportunity may also be an opportunity for an efficient breach, as will happen, for instance, if the amount of the

If, by contrast, the breaching party failed to perform a duty which is not re-expressible in monetary terms, as happen when the quality of the goods is not in accordance with the contract provisions and the quality diminution cannot be measured in money, a court may reduce the amount of the penalty taking into account the equity and the importance of compliance for the aggrieved party.⁵⁹⁰

Last, L. 45/90 Art. 65 sets forth an additional limitation by providing that any amount that a creditor charges to a debtor in any commercial transaction on the grounds of delayed performance of a duty to pay money shall be regarded as default interest.⁵⁹¹ Commercial Code Art. 884, in turn, provides that the maximum default interest rate is one and a half times the weighted average interest rate that financial institutions are charging to their customers.⁵⁹²

These legal rules, which require that the amount of the penalty clause plus the contract default interest rate shall not surpass the maximum default interest rate,⁵⁹³ apply to contracts for

penalty was only \$1000 and the price that another seller offers is \$2000. In this case, the buyer will save \$3000 (the difference between the old and the new price) and shall only pay \$2000, \$1000 in legal damages plus other \$1000 because of the penalty clause.

⁵⁹⁰ See C. COM. Art. 867; SUESCÚN, *supra* note 579, at 45; *see also* MATTEI (COMPARATIVE), *supra* note 71, at 189 (mentioning that while the Napoleonic Code allowed the enforcement of penalty clauses without limits, the trend nowadays in civil law countries is to entitle courts to reduce the amount of these clauses).

⁵⁹¹ See L. 45/90 Art. 65, diciembre 18, 1990 DIARIO OFICIAL (D.O.). This legal rule seems peculiar to Colombian law. Neither French law nor German law, for instance, include such a legal rule. *See* French Civil Code Art. 1226-33; German Civil Code Art. 288-89 and 336-35. Something similar may be stated regarding Latin American Codes. *See, e.g.*, C.C. Art. 652-66 (Arg.). *See generally* Carlos A. Soto, *Inmutabilidad de las penas convencionales [Inmutability of Conventional Penalties]*, in 3 DERECHO PRIVADO Y GLOBALIZACIÓN: CONTRATOS [PRIVATE LAW AND GLOBALIZATION: CONTRACTS], 472 (Jorge Oviedo ed., 2008).

⁵⁹² See C. COM. Art. 884. Currently, the maximum default interest rate, pursuant to a certification that the Financial Superintendence of Colombia issues every three months, is 31.25%. *See* SUPERINTENDENCIA FINANCIERA DE COLOMBIA, <http://www.superfinanciera.gov.co/> (last visited Jan. 19, 2013).

⁵⁹³ See *Compañía Central de Seguros S.A. y Compañía Central de Seguros de Vida S.A. v. Maalula Ltda (J. Suescún, J. Cárdenas, A. De Irigorri Arb.)*; SUESCÚN, *supra* note 579, at 545-46. *But see* *Electrificadora del Caribe S.A. E.S.P. v. Energía Confiable S.A. E.S.P.*, (agosto 27, 2010) (G. Diago, F. Royet, A. Uribe Arb.). (holding that the amount of the penalty clause may be in excess of the maximum default interest rate if the parties provided the penalty to ensure the performance of the contract and not to compensate any damages resulting from breach).

the sale of goods providing a penalty clause in case the buyer fails to pay on time. As an illustration, assume that a buyer and a seller entered into a contract for sale of goods at a price of \$1000. The buyer must have paid the price on June 30, 2012, which was before delivery. Suppose also that the maximum default interest rate is 30%, that the contract provides a penalty clause amounting to \$100 per year of delay, and that on June 30, 2013, the seller has already manufactured the goods but the buyer has not paid, and that the aggrieved seller is entitled to the price of the goods.⁵⁹⁴

At first sight, the seller may be entitled to the price (\$1000), plus a default interest of \$300 (30% of the unpaid contract price), plus a penalty of \$100 (10% of the contract price) for a total of \$1400. A more careful reading of the legal rules indicated above suggests, however, that the amount of the penalty shall be computed as default interest. Hence, if the penalty amounts to \$100 (10% of the unpaid price), and the maximum default interest is \$300 (30% of the unpaid price), the seller can recover the price (\$1000) plus other (\$300) either if the latter amount is entirely considered as default interest or if it is regarded as the sum of the penalty (\$100) plus some default interest (\$200).

c. The Role of Penalty Clauses on the Prevention of the Hold-up Problem

This dissertation contends that penalty clauses under Colombian law prevent the hold-up problem to a higher degree than liquidated damages under U.S. law.⁵⁹⁵ This dissertation also

⁵⁹⁴ For some case law, see, e.g., *Philips Colombiana de Comercialización S.A. v. Cosmitet Limitada Corporación de Servicios Médicos Internacionales Them y Cía. Ltda.* (abril 21, 2005) (S. Muñoz, M. Silva y M. Plazas Arb.).

⁵⁹⁵ *See supra* § III.B.2. The general role of penalty clauses on the prevention of the hold-up problem was already described in this section and, therefore, is not repeated here.

argues that Colombian legal rules neither avoid nor solve the hold-up problem. These two statements are supported on the following grounds.

First, the fact that penalty clauses are enforceable in Colombia clearly helps to prevent the hold-up problem. Thus, parties to idiosyncratic contracts under Colombian law, in sheer contrast with similar contracts in the United States, do not need to carefully measure the potential damages (*i.e.*, liquidate them) or be excessively concerned if the amount of the penalty is far afield from either the estimated or the real damages. In addition, enforceable penalty clauses perform positive roles such as providing insurance of idiosyncratic investments against breach, giving incentives for achieving efficient levels of investment, and signaling an intention to honor the contract.⁵⁹⁶

This is the good news. The bad news is that the law caps the amount of a penalty clause and that courts may reduce it depending on the nature of the breached duty, as indicated earlier.⁵⁹⁷ On the one hand, a penalty shall not exceed the amount of a duty to pay some money or which is otherwise re-expressible in monetary terms.⁵⁹⁸ Most of the time, fortunately, this legal limitation should not restrict the role of a penalty clause in the prevention of the hold-up

⁵⁹⁶ *See id.*

⁵⁹⁷ *See supra* p. 135-37; C. COM. Art. 867.

⁵⁹⁸ On top of this limitation, courts and arbitrators rarely adjust the value of a penalty clause taking into account the time value of money on the grounds that no law authorizes this correction, that the parties may privately provide this mechanism and that such adjustment will aggravate too much the punishment. *See, e.g.*, Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., junio 23, 2000, M.P. J. Ramírez, Expediente C-4823, Gaceta Judicial [G.J.] (No. CCXII, p. 482) (Colom.); Instituto de Mercadeo Agropecuario, IDEMA, v. Americana de Gestiones Comerciales, AMERCO Ltda. (julio 13, 1996) (L. Alvarado Arb.). Thus, a held-up party should bargain for an amount of a penalty clause whose amount, after being depreciated for inflation, will still deter the non-investing party from breaching the contract.

problem if the contract provides that the penalty is in addition to damages,⁵⁹⁹ and provided that consequential damages are recoverable.⁶⁰⁰

On the other hand, if the breached duty is not re-expressible in monetary terms, courts can reduce the amount of penalty clauses based on some factors, some of which may work favorably for held-up parties while others may have opposite consequences. As a first factor, a court may reduce the amount of a penalty clause on equitable grounds. This factor, on first impression, is more favorable for non-investing parties than for held-up parties because equity may lead a court to reduce the amount of a penalty but rarely to keep it unchanged and never to increase it. In addition, equity is an important but nebulous concept.⁶⁰¹ As a result, a held-up party would find very difficult if not impossible to precisely predict the percentage of reduction at the time of making an idiosyncratic investment. Such percentage, for instance, may depend on the judges or arbitrators in charge of the case, on their attitudes during the trial, or on the sympathies that the non-investing party generates.⁶⁰²

Due to this factor, some risk-averse parties might refrain from making a relationship-specific investment.⁶⁰³ Other parties might decide to invest anticipating that the reduction of the penalty clause will be low. This second group of investing parties might protect themselves against a future reduction by bargaining for a gross-up penalty clause. Recall in the example indicated above that the contract price, the value of the relationship-specific investment, and the

⁵⁹⁹ Recall the example mentioned earlier. *See supra* p. 131-32.

⁶⁰⁰ As usually happens in hold-up situations. *See infra* § IV.C.3.

⁶⁰¹ *See generally* Gillian K. Hadfield, Weighing the Value of Vagueness: An Economic Perspective on Precision in The Law 82 CAL. L. REV. 541 (1994) (discussing the economic role of vague legal rules).

⁶⁰² *See* JEROME FRANK, COURTS ON TRIAL: MYTH AND REALITY IN AMERICAN JUSTICE 162 (1973) (“Justice is what the judge ate for breakfast.”).

⁶⁰³ For the concept of risk-aversion, see *supra* § II.B.

optimal value of the penalty were \$5000, \$4000, and \$4000, respectively. Suppose also that the investing party estimates that a court will reduce the penalty, on average, in 20%. In such a case, the investing party may bargain for a penalty amounting to \$5000, a figure that after a 20% reduction will add to \$4000.

As a second factor, courts may take into account how the importance of performance *in nature* for the aggrieved party. This factor should work well for held-up parties, which, by definition, are strongly interested in specific and timely performance to avoid losing their relationship-specific investments.⁶⁰⁴

As a third and final factor, which is also applicable when the breached duty is re-expressible in monetary terms, a court may reduce the amount of the penalty clause in proportion to the percentage of the contractual duties that have been performed.⁶⁰⁵ Fortunately for held-up parties, this is a default rule. As a result, the parties may provide that the whole amount of the penalty shall be paid regardless of the proportion of the contract that has been performed.⁶⁰⁶ This may be useful, for example, when a perfect tender of the goods (both in time and in quality) is essential for a held-up buyer or, more generally, when it is undesirable for a held-up party that the non-investing party breaches one of its duties (*e.g.*, late delivery) but not others duties (*e.g.*, delivering goods in accordance with the quality agreed on). The aggrieved party may obtain a

⁶⁰⁴ See *supra* § II.A.

⁶⁰⁵ See C. COM. Art. 867 para. 4; C.C. Art. 1596.

⁶⁰⁶ See *Compañía Central de Seguros S.A. y Compañía Central de Seguros de Vida S.A. v. Maalula Ltda.* (agosto 31, 2000) (J. Suescún, J. Cárdenas; A. De Irigorri Arb.). See also SUESCÚN, *supra* note 579, at 46-47 (contending that this provision is valid).

reduction of the amount of the penalty.⁶⁰⁷ As an alternative, at the expense of an increase of the transaction costs of reaching an original agreement, the held-up party may bargain for several penalty clauses, one for each kind of possible breach, a possibility that some arbitral tribunals have admitted.⁶⁰⁸

Some arbitral tribunals, indeed, have reduced the amount of penalty clauses, as Table 5 indicates (values in Colombian pesos were converted to equivalent U.S. dollars). In the headings of this table, *reasons* mean the arbitral tribunal's grounds to reduce the amount of the penalty, *PC* means such amount, *ARCA* means the amount of the reduced penalty clause while *%* means the ratio between *ARCA* and *PC*. Admittedly, some of the grounds to reduce the amount of penalties are that the companies seeking their payment were not only aggrieved parties but also breaching parties. This scenario, however, is not unlikely in hold-up litigations, where the non-investing party may claim any real or contrived, minor or substantial breach in order to obtain a reduction of the penalty clause.

⁶⁰⁷ See *Astecnia S.A. v. Francocolombiana de Construcción Ltda.* (junio 14, 2005) (A. Pabón, L. Neira y J. Cárdenas Arb.). See also *SUESCÚN*, *supra* note 579, at 542-43 (arguing that the proportion must be based on the analysis of all the contractual duties and not only on the breached duty).

⁶⁰⁸ See *Impsa Andina S.A. v. Argosy Energy International* (diciembre 12, 2000) (J. Cabrera, R. Núñez, H. Chaux Arb.); *Empresa de Telecomunicaciones de Valledupar, Teleupar S.A. ESP, en liquidación v. Angelcom S.A.* (mayo 18, 2005) (F. Sarmiento, M. Pretelt y L. Dávila Arb.).

Table 5 – Examples of Reductions of the Amount of a Penalty Clause

A Contract for	Grounds	PC	ARCA	%
The manufacture and reparation of industrial equipment for oil drilling. ⁶⁰⁹	The promisee waived some non-compliances and the breach was due to both parties' fault.	780,000	390,000	50%
The manufacture and sale of trash compactor boxes. ⁶¹⁰	Both parties breached the contract.	20,000	5000	25%
The rendering of services related to the health care system of high-cost diseases. ⁶¹¹	The reduction must depend on the performance of all the promisor's duties.	130,000	27,500	21%
Sale of small red beans. ⁶¹²	The breach was partial.	41,000	960	2%

d. Conclusions

The role of penalty clauses in the prevention of the hold-up problem is more significant in Colombia, where they are enforceable, than in the United States, where only liquidated damages clauses are enforceable. Notwithstanding, legal limitations to the amount of penalty clauses when the breached duty is re-expressible in monetary terms and the powers that courts have to reduce the amount of the penalty in the remaining cases impairs this role in Colombia. In any event, the extent at which penalties prevent the hold-up problem, considering the pros and cons of the Colombian legal rules, is an open question that can only be answered empirically.⁶¹³

⁶⁰⁹ See *Consortio CCIM v. Ecopetrol S.A.* (noviembre 24, 2005) (C. Manrique, C. Arrieta, W. Namén Arb.).

⁶¹⁰ See *Astecnia S.A. v. Francocolombiana de Construcción Ltda.* (junio 14, 2005) (A. Pabón, L. Neira y J. Cárdenas Arb.).

⁶¹¹ See *Compañía Central de Seguros S.A. y Compañía Central de Seguros de Vida S.A. v. Maalula Ltda.* (agosto 31, 2000) (J. Suescún, J. Cárdenas, A. De Irigorri Arb.).

⁶¹² *Instituto de Mercadeo Agropecuario, IDEMA, v. Americana de Gestiones Comerciales, AMERCO Ltda.* (julio 13, 1996) (L. Alvarado Arb.).

⁶¹³ See *supra* Chapter V..

3. Reputation bonds

Section IV.B.3 does not examine in depth the role of reputation bonds in the prevention of the hold-up problem because the efficacy of reputation bonds does not depend on any particular legal system. Thus, the conclusions reached in the previous chapter are also applicable to Colombian law.⁶¹⁴ The primary difference between their efficacy in Colombia and the United States is that the weakened role of courts in the enforcement of contracts in Colombia strengthens the importance of reputation bonds.⁶¹⁵

Section IV.C – Public Attempts to Prevent the Hold-up Problem: Closing the Path to Extorted Modifications and Breach at the Performance of the Contract

1. Exceptio Non-Adimpleti Contractus

a. Introduction

Section IV.C.1 analyses the legal rules on the so-called *exceptio non-adimpleti contractus*, which entitles one party to stop its own performance and demand guarantees of performance when the other party has neither performed their duties nor is ready to perform them prevent the hold-up problem. These rules are intended to avoid that the situation arising when one party wastes the money and time performing its duties when the other party does not intend to honor its obligations.

⁶¹⁴ See *supra* § III.B.3.

⁶¹⁵ See generally John McMillan & Christopher Woodruff, *Private Order Under Dysfunctional Public Order*, 98 MICH. L. REV. 2421, 2430-31 (2000) (stating that in developing countries such as Vietnam, social networks and informal gossip may substitute or complement an inadequate legal system). For similarities between Colombia and Vietnam, take into account that both countries are part of the so-called group of CIVETS. See Elaine Moore, *CIVETS, BRICS, and the Next 11*, THE FINANCIAL TIMES, June 8, 2012, <http://www.ft.com/intl/cms/s/0/c14730ae-aff3-11e1-ad0b-00144feabdc0.html#axzz2Qq69NzFe..> See generally Ellen D. Katz, *Private Order and Public Institutions*, 98 MICH. L. REV. 2481, 2486-87 (2000) (contending that private order mechanism may differ between developed and developing countries).

On the negative side, these legal rules give a perverse incentive to a non-investing party, which may use them as a sword, *i.e.*, as an excuse not to perform its duties until the other party guarantees performance through a disguised modification such as payment before the time agreed on the original contract. On the positive side, a held-up party may use the *exceptio non-adimpleti contractus* as a shield, *i.e.*, to protect itself from a non-investing party demanding a modification backed by a threat to breach.⁶¹⁶ In such a case, the held-up party may not only reject the proposed modification but may also refuse to perform its duties until the non-investing party either performs or grants some guarantee of performance. It seems, in theory, that the negative effect outweighs the positive one. The former approach may be used to disguise a breach as a lawful suspension of performance, increasing the chances of the other party being held-up, while in the latter case, the shield comes at the cost of a suspension of the performance of the contract, conduct that not only hurts the non-investing party but also the held-up party. Furthermore, the use of the *exceptio* as a shield may provide a non-investing party with an alternative trading opportunity with an excuse to get rid of the bargain. As a result, the legal rules on the *exceptio non-adimpleti contractus* may aggravate the hold-up problem. Eventually, however, empirical research will have the last say about the validity of this assumption.

b. The Colombian Laws on the *Exceptio Non- Adimpleti Contractus*

Unlike U.S. laws,⁶¹⁷ Colombian laws do not explicitly regulate either anticipatory breach or the right to demand adequate assurances of due performance. Regarding anticipatory breach, the rules in legal force are the same applicable to any breach: the aggrieved party may sue for

⁶¹⁶ See Edgardo Muñoz, *Right to Withhold Performance Under Ibero-American Law*, 1 CUADERNOS MAESTRÍA DERECHO 379, 382 (2010).

⁶¹⁷ See *supra* § III.C.1.

breach of contract and seek either monetary damages or specific performance.⁶¹⁸ Colombian laws, however, do regulate a functional equivalent of the right to demand adequate assurances of due performance – the so-called *exceptio non-adimpleti contractus*, pursuant to which no party to a bilateral contract is in default if the other party has neither performed its duties nor is ready to perform them.⁶¹⁹

An example may give a better understanding of this *exceptio*. Assume that a seller and a buyer entered into a contract for the sale of goods and that the contract provided payment upon delivery on the buyer's facilities, which are located hundreds of miles away from the seller's facilities.⁶²⁰ The seller, after entering the contract, becomes reasonably concerned about being paid on time because the buyer's credit ratings have been declining recently. This concern is worsened by the fact that, if the buyer does not pay the price, arranging a shipment of the goods back to the seller's facilities is very cumbersome and expensive. The legal rules on the *exceptio non-adimpleti contractus* may alleviate this concern by entitling the seller to suspend the shipment of the goods until the buyer either pays the price or grants some guarantee of payment.⁶²¹

⁶¹⁸ See C. COM. Art. 870; see also C.C. Art. 1546, 1882, and 1929; cf. UCC § 2-610; *supra* § III.C.1; see also Muñoz, *supra* note 617, at 387 (“The Ibero-American laws do not have an independent concept of, or rules on, anticipatory breach.”).

⁶¹⁹ See C.C. Art. 1609; see also Proctor Ltda. v. Caja de Compensación Familiar Campesina, Comcaja (enero 26, 2001) (N. Gamboa, J. Cubides y L. Salazar Arb.); Muñoz, *supra* note 617, at 381. This *exceptio*, rather than being exclusive of Colombian law, is very common in Latin American countries. See *id.*

⁶²⁰ One of the parties may be in Colombia, the other party in a different country, and Colombian legal rules may be the governing law.

⁶²¹ See C. COM. Art. 926.

The *exceptio non-adimpleti contractus* must comply with the following five conditions.⁶²² First, the parties must be mutually a promisor and a promisee and the contractual duties must be of similar importance.⁶²³ Second, the party against whom the *exceptio* is claimed must have breached the contract or failed to be ready to perform it. Third, this breach must be substantial.⁶²⁴ Otherwise, the use of the *exceptio non-adimpleti contractus* will lead to an abuse of rights or to bad-faith behavior.⁶²⁵ Fourth, the party claiming the *exceptio* must not have substantially breached the contract.⁶²⁶ Last but not least, in contracts providing that one party must comply some time before the other party (*e.g.*, payment before delivery or vice versa) only the party who performs later may take advantage of the *exceptio non-adimpleti contractus*.⁶²⁷ This legal rule has an exception: a seller may withhold performance, even if the term to pay the price of the goods has not lapsed, when the buyer's economic situation has deteriorated.⁶²⁸

⁶²² See Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., mayo 16, 2002, M.P. J. Santos, Expediente 6877, Gaceta Judicial [G.J.] (No. CCXV, p. 163) (Colom.); OSPINA & OSPINA, *supra* note 569, at 592.

⁶²³ See Muñoz, *supra* note 617, at 382-83.

⁶²⁴ For some case law and doctrine contending that the breach must be substantial, see, *e.g.*, *Philips Colombiana de Comercialización S.A. v. Cosmitet Limitada Corporación de Servicios Médicos Internacionales Them y Cía. Ltda.* (abril 21, 2005) (S. Muñoz, M. Silva y M. Plazas Arb.); OSPINA & OSPINA, *supra* note 569, at 593.

⁶²⁵ See *Icollantas S.A. v. Auto Mundial Ltda., Auto Mundial del Valle Ltda., y Reencauchadora Auto Mundial Ram Ltda.* (febrero 26, 1999) (J. Nárvaez, S. Rodríguez y R. Madriñán Arb.).

⁶²⁶ See C.C. Art. 1609.

⁶²⁷ For some case law and doctrine, see, *e.g.*, Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., mayo 16, 2002, M.P. J. Santos, Expediente 6877, Gaceta Judicial [G.J.] (No. CCXV, p. 163) (Colom.); Muñoz, *supra* note 617, at 382. In addition to these five conditions, some Colombian arbitrators and scholars suggest, by using words in Spanish as plaintiff, defendant and judicial procedures, that the *exceptio non-adimpleti contractus* may only be argued before a court, *i.e.*, as a defense against an action for breach of contract. See, *e.g.*, *Proctor Ltda. v. Caja de Compensación Familiar Campesina, Comcaja* (enero 26, 2001) (N. Gamboa, J. Cubides y L. Salazar Arb.); OSPINA & OSPINA, *supra* note 569, at 592. This dissertation, however, contends that the *exceptio non-adimpleti contractus* may also be argued before litigation begins. After all, the fact that some scholars and arbitrators have described the role of the *exceptio non-adimpleti contractus* in courts does not imply that its use is forbidden outside these venues.

⁶²⁸ See C. COM. Art. 926, and Muñoz, *supra* note 617, at 383.

c. The Role of the *Exceptio Non-Adimpleti Contractus* on the Prevention of the Hold-up Problem

The *exceptio non-adimpleti contractus* may be used for good or bad purposes. On the one hand, a party concerned about the other party's performance may use these rules as a shield to avoid wasting the value of its own performance.⁶²⁹ This is not only the positive side but also the normal use of the legal rules, as the word *exceptio* (in English: exception) suggests.⁶³⁰

More particularly, the legal rules on the *exceptio non-adimpleti contractus* may protect a held-up party from extorted modifications. Thus, a held-up party receiving a demand for a modification backed by a threat to breach may be entitled to suspend its own performance until the non-investing party performs its duties or grants any guarantee of performance. The anticipation of this held-up party's strategy may dissuade the non-investing party from demanding a modification under threat to breach provided that the held-up party does not have an alternative trading opportunity (that is, when the threat to breach is an empty one). Otherwise, the withholding of performance by the investing party would not be much deterrent.

Unfortunately, case law holding that a demand for a modification backed by a threat to breach entitles a promisee to suspend its own performance until the other party either performs or guarantee performance does not exist. More unfortunately, the *exceptio non-adimpleti contractus* may also be used as a sword (*i.e.*, abused), as happens when a non-investing party takes advantage of these legal rules to demand a redistributive modification under threat to

⁶²⁹ See generally DAVID V. SNYDER & MARTIN DAVIES, INTERNATIONAL TRANSACTIONS IN GOODS (2013) (reminding that payment in advance, or more generally, performance in advance, depends on both trust and some form of security).

⁶³⁰ See C.C. Art. 1609.

breach. The rationale under Colombian law of this dark side of the *exceptio* mirrors the analysis of the opportunistic use of the legal rules on adequate assurances of due performance under U.S. law.⁶³¹

At least one arbitral tribunal has admitted that the use of the *exceptio non-adimpleti contractus* as a device to extort a modification is a wrongful conduct. The tribunal in *Mitsui de Colombia S.A. v. Metalec, Manufacturas Metal Eléctricas Ltda.* held that one of the parties, Metalec, suspended its own performance to exert pressure over the other party, Mitsui, and to obtain better contractual terms, such as price adjustments and additional time to perform.⁶³²

A contract modification obtained through the use of the *exceptio non-adimpleti contractus* as a sword is rarely a price modification in nominal terms. A non-investing party, however, might obtain a price modification in real terms considering the time value of money.⁶³³ For instance, assume that a non-investing seller claims feeling insecure about the other party's performance due to some rumors of insolvency. As a result, the seller refuses to perform its duties until the buyer agrees to pay before shipping the goods and not some weeks after delivery as the parties had agreed on the original contract.⁶³⁴ This non-investing seller may also request some forms of security, such as letter of credits,⁶³⁵ a pledge on the delivered goods,⁶³⁶ or a collateral consisting of the seller keeping the title over the goods until the full price has been

⁶³¹ See *supra* § III.C.1.

⁶³² See *Mitsui de Colombia S.A. v. Metalec, Manufacturas Metal Eléctricas Ltda.* (septiembre 7, 1993) (J. Esguerra, J. Nárvaez, A. Mendoza, Arb.).

⁶³³ See *supra* § III.C.1.

⁶³⁴ See C. COM. Art. 926.

⁶³⁵ Provided that seller and buyer are in different countries and that Colombian legal rules are the governing law. Regarding letters of credit, see generally SNYDER & DAVIES, *supra* 631, at 61.

⁶³⁶ See C. COM. Art. 951.

paid.⁶³⁷ A non-investing buyer, on the other hand, may claim to be uneasy about the quality of the goods and ask for some assurance, such as an insurance policy, which will increase the seller's costs.

Naturally, the held-up party may avoid the issuance of these guarantees by performing its duties. If the buyer is the held-up party, however, performing entails paying and, therefore, surrendering to the price modification in real terms. Another option exists, though. A held-up buyer may deposit the price before a court,⁶³⁸ or, if the contract provided so, in an escrow account under the supervision of a trustee (in Spanish: *Sociedad Fiduciaria*).⁶³⁹ The court or the trustee will keep the money until the seller delivers the goods or guarantees to do so.⁶⁴⁰ A held-up buyer whose seller has contrived the claims about insolvency, may also refuse both to pay before the contract deadline and to provide any security. A prompt delivery, however, is usually key for a held-up buyer, which, even if proving that the grounds for insecurity were contrived and prevailing at trial, would not obtain the goods at the time necessary to avoid consequential losses, some of which may not be legally recoverable.⁶⁴¹ If the seller is the held-up party, on the other hand, performance is complex and lengthy; *i.e.*, a held-up seller can rarely hasten the delivery of idiosyncratic goods to avoid the opportunistic use of the *exceptio non-adimpleti contractus*.

Going back in time, a held-up party, either a buyer or a seller, may also employ two strategies at the making of the original contract to avoid the use of the *exceptio non-adimpleti*

⁶³⁷ *Id.* at Arts. 952-53.

⁶³⁸ See C.C. Art. 1656-65.

⁶³⁹ Unlike U.S. law, only some financial institutions may act as trustees in Colombia. See C. COM. Art. 1226; *cf.* RESTATEMENT (SECOND) OF TRUSTS § 89 (1959).

⁶⁴⁰ See Muñoz, *supra* note 617, at 384.

⁶⁴¹ See *infra* § IV.C.4.

contractus as a sword. First, the held-up party may bargain around the legal rule providing the *exceptio non-adimpleti contractus*.⁶⁴² The cons of a similar strategy mentioned in the previous chapter also arise here: this petition may put in danger the closing of the deal by signaling a held-up party's intention not to honor the contract and, if this risk is avoided, the parties would be unable to take advantage of the *exceptio non-adimpleti contractus* not only in an opportunistic manner but also in a reasonable form.⁶⁴³ As an additional drawback, a Colombian court may hold that this *exceptio* is a mandatory rule and, therefore, that the parties to the contract were not entitled to bargain around it. Second, even if this legal rule is mandatory, and similar to the strategy explained in the previous chapter,⁶⁴⁴ the parties might precisely define in the original contract the meaning of lack of performance; *i.e.*, the circumstances entitling any of them to suspend its own performance.

Overall, whether the effects of the use of the *exceptio non-adimpleti contractus* as a sword outweighs the effects of its use as a shield is, at the end of the day, an experimental question. Since experiments addressing this question do not exist, this is also an open question. This is not to say, however, that some hypothesis cannot be formulated in the absence of experimental analyses. After all, experiments are designed to test theories. Thus, on the theoretical level, it appears that the negative effect of the legal rules on the *exceptio non-adimpleti contractus* outweighs its positive effect; as a result, these rules aggravate the hold-up problem. After all, when the *exceptio non-adimpleti contractus* is used as a sword, the held-up party will surrender to a modification reducing its contract surplus in the best scenario and will

⁶⁴² See C.C. Art. 1609.

⁶⁴³ See *supra* § III.C.1.

⁶⁴⁴ See *id.* at 65.

obtain a delayed performance in the worst case. If the *exceptio*, by contrast, is used as a shield, a held-up party may dissuade extorted modifications or make them less profitable for non-investing parties in some but not in all cases.

d. Conclusion

The legal rules on the *exceptio non-adimpleti contractus* may aggravate the hold-up problem if a non-investing party use them opportunistically to justify its delayed performance until a demand for a one-sided modification has been accepted. The held-up party, of course, may also use these legal rules to stop its own performance and thus, protect itself from a threat to breach backing a demand for a redistributive modification. From an exclusively theoretical standpoint, the negative effect seems to outweigh the positive one. This theory, in any event, is an explanation that needs to be tested experimentally.

2. Good Faith Modifications

a. Introduction

Section IV.C.2 discusses whether the duty of good faith, applicable during both the formation (including negotiation) and performance of contracts under Colombian law, plays a positive role in the prevention of the hold-up problem. This section answers this question with a qualified yes. The answer is in the affirmative due to the importance and degree of development of the notion of good faith in Colombian law. Thus, a held-up party who has either accepted a demand for a modification under threat to breach may claim that the other party should be legally liable for acting in bad faith with a non-negligible likelihood of success. The answer, however, is

qualified because, as in U.S. law,⁶⁴⁵ the vagueness of the good-faith notion and the unpredictability of the case law, at least regarding commercial contracts, impairs the usefulness of good-faith in the prevention of the hold-up problem.

b. The Legal Rules on Good Faith in the Context of Contract Law

Good-faith is a notion deeply enshrined in civil law countries,⁶⁴⁶ and Colombia is not an exception to this statement. The Colombian Constitution provides that the acts of any person must be in good faith.⁶⁴⁷ If this legal rule leaves any questions about the applicability of the duty of good-faith in mercantile contract law, three immutable legal rules in the Commercial Code resolve them.⁶⁴⁸ First, Commercial Code Art. 863 establishes that parties shall act in good-faith during precontractual negotiations.⁶⁴⁹ Second, Commercial Code Art. 871 provides that contracts shall be executed and performed in good faith and, as a result, that contracts bind parties not only to the expressly agreed promises but also to any other duty emanating from their nature in accordance with the law, the trade usages, and the equity.⁶⁵⁰ Last but not the least, Commercial Code Art. 899 provides that any contractual provision in breach of mandatory rules, such as the legal rules on good-faith, is void.⁶⁵¹

⁶⁴⁵ See *supra* § III.C.2.

⁶⁴⁶ See, e.g., BÜRGERLICHES GESETZBUCH [BGB] [CIVIL CODE] § 242 (Ger.); C. CIV. Art. 1134 (Fr.).

⁶⁴⁷ See C.P. Art. 83.

⁶⁴⁸ While the law is silent, the case law has consistently held that the legal rules on good-faith are immutable. See, e.g., *Consortio CCIM v. Ecopetrol S.A.* (noviembre 24, 2005) (C. Manrique, C. Arrieta, W. Namén Arb.).

⁶⁴⁹ This is in sheer contrast with U.S. law, where the duty of good faith is not applicable to precontractual negotiations. See UCC § 1-304; E. Allan Farnsworth, *Precontractual Liability and Preliminary Agreements: Fair Dealing and Failed Negotiations*, 87 COLUM. L. REV. 217 (1987); *supra* § III.C.2.

⁶⁵⁰ See C. COM. Art. 871; see also C.C. Art. 1603 (providing a legal rule almost identical to C. COM. 871 save the references to usages and equity); FERNANDO HINESTROSA, *TRATADO DE LAS OBLIGACIONES* [TREATY ON OBLIGATIONS] 564-65 (3d ed. 2007).

⁶⁵¹ See C. COM. art. 899(1). A fourth rule may also be applicable. Pursuant to C. COM. Art. 830, any party shall pay the damages resulting from an abuse of rights. This dissertation, however, focuses on the doctrine of good faith and not on its cousin, the doctrine of abuse of rights.

c. The Role of the Legal Rules on Good Faith in the Prevention of the Hold-up Problem

Colombian law, as indicated earlier, not only imposes a duty of good faith during the performance of contracts but also during its negotiation stage. This dual scope strengthens the role of the law in preventing the hold-up problem. On first impression, a non-investing party extorting a modification acts in bad faith only during the performance stage of the contract, when it couples a demand for a modification (something legal) with a threat to breach (something that may be illegal) to take advantage of the held-up party's concern that it will lose its idiosyncratic investment.⁶⁵² On further consideration, a second aspect of bad faith may become apparent: a non-investing party may have acted in bad-faith not only during the performance stage but also before the contract was executed. In this line of reasoning, a shrewd non-investing party might have devised the complete scheme of persuading the held-up party to enter a contract and to make a relationship-specific investment by offering a very favorable price anticipating that, after the investment was sunk, this price might be renegotiated.

In addition to the benefits of the duty of good-faith being applicable both in the precontractual and in the performance stage, the utmost importance that courts and arbitrators give the notion of good-faith may increase the chances of a held-up party successfully

⁶⁵² See *Constructora Mazal Ltda. v. Inversiones GBS Ltda.* (marzo 15, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.).

challenging an extorted modification⁶⁵³ and, consequently, may reduce the likelihood of a rational non-investing party demanding an extorted modification.⁶⁵⁴

On the negative side, the nebulousness of the term “good faith” impairs its role on the prevention of the hold-up problem. Neither the statutory law nor the case law, at least in the context of contract law, has defined good faith.⁶⁵⁵ The doctrine has assumed this task but without too much success. According to Professor Fernando Hinestrosa, good faith “means acting with honesty, loyalty, transparency, and without deceitfulness.”⁶⁵⁶ This definition, however, does not eliminate the ambiguity of the duty of good faith since the terms used (honesty, loyalty, transparency, and deceitfulness) are also vague. Consequently, the depth and importance of this duty evokes the image of an accordion stretching and squeezing depending on the broad or narrow criteria of the judges and arbitrators applying it.⁶⁵⁷

Furthermore, the fact that courts and arbitrators have failed to create some tests to establish whether certain conduct is in good or in bad faith, at least within the context of contract

⁶⁵³ Many courts and arbitral tribunals have considered good faith as the most important notion in contract law. *See, e.g.*, *Consortio CCIM v. Ecopetrol S.A.* (noviembre 24, 2005) (C. Manrique, C. Arrieta, W. Namén Arb.) (holding that good faith illuminates all the legal rules); *Mitsui de Colombia S.A. v. Metalec, Manufacturas Metal Eléctricas Ltda.* (septiembre 7, 1993) (J. Esguerra, J. Nárvaez, A. Mendoza, Arb.) (contending the duty of good faith is part of every agreement); *Formametal E.U. v. Compañía Internacional de Alimentos Ltda.* (septiembre 8, 2008) (H. Bueno, F. Puerta, C. Valencia Arb.) (categorizing the duty of good faith as a golden rule).

⁶⁵⁴ These chances, admittedly, may be reduced taking into account that good-faith is presumed pursuant to Colombian Constitution . *See* C.P. art. 83. Under a plain meaning of this constitutional rule, however, good faith is presumed in procedures between private parties and public authorities but not in transactions between private parties. Under a contextual interpretation, by contrast, the legal rule indicated above is just illustrative and, therefore, good faith is also presumed in transactions between private parties.

⁶⁵⁵ *See* *Constructora Mazal Ltda. v. Inversiones GBS Ltda.* (marzo 15, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.).

⁶⁵⁶ *See* HINESTROSA, *supra* note 652, at 564-65. For a similar definition, see OSPINA & OSPINA, *supra* note 569, at 331.

⁶⁵⁷ This parallel between good-faith and a musical instrument is based on the analogy that the WTO Appellate Body made between the notion of like product in international trade law and an accordion. *See* Appellate Body Report, *Japan—Taxes on Alcoholic Beverages*, 21, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R (4 Oct. 1996) (“The accordion of ‘likeness’ stretches and squeezes in different places as different provisions of the WTO Agreement are applied.”).

law, increases the unpredictability of the case law.⁶⁵⁸ It is unclear, for instance, whether modifications based on factors such as rising costs, costs that are steady but above the contract price, a falling demand for goods, and market shifts making performance a losing business for one of the parties to a contract are in good faith under Colombian law.⁶⁵⁹ Of course, this lack of predictability may make a risk-averse held-up party less willing to spend significant time and money in litigation.⁶⁶⁰ Going to court is still a less promising road after taking into account that nullification of the coerced modification reinstates the original contract without granting damages other than the difference between the modified and the initial price to the held-up party.⁶⁶¹

A final question is whether a held-up party may employ the strategies discussed in the previous chapter's analysis of the U.S. law.⁶⁶² The first strategy, bargaining for some clauses in the original contract detailing the meaning of good faith and the reasons justifying a demand for a good-faith modification, is valid under Colombian law.⁶⁶³ The success of the second strategy, accepting the modification with the secret intention to challenge it and, later on, bring suit before a court, depends heavily on the evidence. If the non-investing party is able to prove that the held-up party had decided to challenge the modification before it was accepted, the chances of a court refusing to strike down a modification on the grounds that the held-up party acted in bad-faith

⁶⁵⁸ In contrast with the United States, where courts have developed a two-pronged test for good-faith modifications and have clarified notions such as commercial legitimate reasons and honesty in fact. *See supra* § III.C.2.

⁶⁵⁹ Despite the absence of these tests, the more factors supporting a modification, the lower the chances of a court striking down it.

⁶⁶⁰ Regarding the notion of risk-aversion, *see supra* § II.B.

⁶⁶¹ A similar situation happens regarding economic duress. *See infra* § IV.C.3.

⁶⁶² *See supra* § III.C.2.

⁶⁶³ C.P. art. 6.

may be considerable. The held-up party, anticipating this result and taking into account the expenses of litigation, may refrain from bringing suit.

d. Conclusion

This section concludes that the Colombian legal rules on the duty of good faith mitigate the hold-up problem. The rationale is that a non-investing party may refrain from demanding a modification backed by a threat to breach after anticipating the consequences of a court holding that the proposal was in bad-faith. If this line of reasoning does not dissuade the non-investing party from demanding and obtaining a modification, the held-up party may initiate a legal action claiming that the modification was in bad-faith with non-negligible chances of success. Sadly, the vagueness of the notion of good faith and the unpredictability of the case law, at least in the context of contract law, prevents a larger degree of mitigation of the hold-up problem, or even its complete avoidance or solution.

3. Economic Duress

a. Introduction

Section IV.C.3 analyses whether the Colombian legal rules on duress prevent the hold-up problem. This section concludes that two barriers preclude the law of duress from achieving this purpose. The requirements to find duress are very stringent under Colombian law. Additionally, while economic duress is a valid category under the broader concept of duress, the law is silent regarding this notion and the case law has referred to it (under the name of moral duress) but without developing meaningful and predictable tests. Because of these two barriers, the rules on economic duress neither avoid nor solve the hold-up problem. At best, these rules slightly mitigate the problem.

b. The Colombian Legal Rules on Economic Duress

Colombian law does not define duress; it is defined in the case law. According to the Colombian Supreme Court, duress is any unfair physical or moral coercion exerted over a person to obtain its assent to the making of a contract.⁶⁶⁴ The law breaks its silence regarding when duress occurs, what its effects are, and who may impose duress. Civil Code Art. 1513 provides that duress arises when an act generates in a person the concern of an irreversible and serious injury to him or her or to his or her spouse, ascendants, or descendants. Pursuant to this same legal rule, duress makes not only a party's assent but also a contract voidable when it generates a strong effect on a normal person, taking into account his or her age, gender, and condition.⁶⁶⁵ Civil Code Art. 1514, in turn, provides that duress vitiates assent regardless of who exerts it.

Duress exists when both factors of a two-pronged test exist.⁶⁶⁶ According to the first and quantitative prong, duress must reach the level required to inflict in the victim a reasonable concern of suffering serious harm.⁶⁶⁷ Thus, only excessive pressures amount to duress, although the line beyond which some pressure is excessive is unclear.⁶⁶⁸ As to the second and qualitative

⁶⁶⁴ See Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., junio 30, 2005, M.P. E. Villamil, Gaceta Judicial [G.J.] (No. CCXXIII, p.313) (Colom.). The doctrine provides a similar definition. See OSPINA & OSPINA, *supra* note 569, at 212. Under the view that any contractual change provides new or altered rights and duties, duress may also arise in the modification context.

⁶⁶⁵ See C.C. Art. 1513; See also *id.* Arts. 1741, 1743. Despite of the use of terms such as “spouse,” “ascendants,” “descendants,” “age,” “gender,” and “condition” in the legal texts, both the case law and the doctrine acknowledge that duress may be exerted over juridical persons. See, e.g., Unión Temporal Distral S.A., CMD S.A. y Consorcio Tito Marcelo, Pabición Ltda. y Primont Ltda. v. Empresa Colombiana de Petróleos – Ecopetrol (junio 20, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.); OSPINA & OSPINA, *supra* note 569, at 216.

⁶⁶⁶ For some case law and doctrine mentioning this test, see, e.g., Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., abril 15, 1969, M.P. B. Pérez, Gaceta Judicial [G.J.] (No. CXXXII, p. 273); Constructora Mazal Ltda. v. Inversiones GBS Ltda. (marzo 15, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.); OSPINA & OSPINA, *supra* note 569, at 216-21.

⁶⁶⁷ See C.C. Art. 1513; OSPINA & OSPINA, *supra* note 562, at 213-14.

⁶⁶⁸ See Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., junio 30, 2005, M.P. E. Villamil, Gaceta Judicial [G.J.] (No. CCXXIII, p.313) (Colom.); Unión Temporal Distral S.A., CMD S.A. y Consorcio Tito Marcelo,

prong of the test,⁶⁶⁹ duress must be unfair, *i.e.*, it must amount to an act that the law forbids.⁶⁷⁰ In principle, a threat to suspend performance of a contract may be sufficiently abusive and, therefore, may amount to unfair duress, although the lack of case law regarding this issue may affect the veracity of this statement. A threat to terminate an at-will contract, a threat to bring suit, or a threat to exert a contractual right, by contrast, do not meet this second prong.⁶⁷¹ An exception, however, must be carved out: a threat to do something legal amounting to an abuse of rights may be unfair duress, as when a supplier, taking advantage of the desperate conditions of its buyer, repeatedly threaten to terminate an at-will contract to obtain one-sided modifications.⁶⁷²

Unfortunately, the law does not refer to economic duress while cases discussing this notion are very few.⁶⁷³ A preliminary issue, therefore, is whether economic duress makes a contract voidable. The answer, in theory, is in the affirmative. Nothing in Colombian law suggests that this legal system is in contradiction with economic duress. The legal rules

Pabición Ltda. y Primont Ltda. v. Empresa Colombiana de Petróleos – Ecopetrol (junio 20, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.).

⁶⁶⁹ This prong, which is not explicitly in the law, has been developed by the case law. *See* Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., abril 15, 1969, M.P. B. Pérez, Gaceta Judicial [G.J.] (No. CXXXII, p. 273).

⁶⁷⁰ *See* OSPINA & OSPINA, *supra* note 569, at 216-17.

⁶⁷¹ *See* Aire Ambiente S.A. v. Concreto S.A. y BRG Sociedad de Inversiones Ltda., BRG Ltda. (marzo 10, 2010) (J. Cárdenas Arb.) (concluding that a threat to exert the contractual right of making some collaterals and guarantees effective did not amount to duress).

⁶⁷² *See* Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., octubre 5, 1939, M.P. A. Gómez, Gaceta Judicial [G.J.] (No XLVIII p. 720) (Colom.); Constructora Mazal Ltda. v. Inversiones GBS Ltda. (marzo 15, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.; OSPINA & OSPINA, *supra* note 569, at 216-17).

⁶⁷³ *See, e.g.*, Constructora Mazal Ltda. v. Inversiones GBS Ltda. (marzo 15, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.).

regarding duress do not include the adjective “physical.”⁶⁷⁴ More importantly, both the case law and the doctrine acknowledge that duress may be either physical or moral.⁶⁷⁵

Physical duress is any material coercion over a person.⁶⁷⁶ Moral duress usually consists of threats intended to intimidate the victim and persuade the victim to assent to a contract.⁶⁷⁷ Economic duress, as an arbitral tribunal suggested, arises when a strong economic power is used to obtain an excessive advantage from a person in difficult financial conditions – as is usually the case in hold-up situations.⁶⁷⁸ Pursuant to these definitions, economic duress is part of the broader notion of moral duress.

In practice, unfortunately, a judicial acceptance of economic duress seems far in the horizon on at least two grounds. On the one hand, to amount to economic duress, behavior must fit the same requirements of general duress, which are very stringent. On the other hand, the lack of awareness of the notion of economic duress among scholars, practitioners, courts, and arbitrators make unlikely the application of this notion, at least in the short-term.

⁶⁷⁴ See C.C. Art. 1513-14.

⁶⁷⁵ See, e.g., Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., junio 30, 2005, M.P. E. Villamil, Gaceta Judicial [G.J.] (No. CCXXIII, p.313) (Colom.); Unión Temporal Distral S.A., CMD S.A. y Consorcio Tito Marcelo, Pabición Ltda. y Primont Ltda. v. Empresa Colombiana de Petróleos – Ecopetrol (junio 20, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.); OSPINA & OSPINA, *supra* note 569, at 212.

⁶⁷⁶ For some case law and doctrine defining and giving examples of physical duress, see, e.g., Unión Temporal Distral S.A., CMD S.A. y Consorcio Tito Marcelo, Pabición Ltda. y Primont Ltda. v. Empresa Colombiana de Petróleos – Ecopetrol (junio 20, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.); OSPINA & OSPINA, *supra* note 569, at 212.

⁶⁷⁷ See, e.g., Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., abril 15, 1969, M.P. B. Pérez, Gaceta Judicial [G.J.] (No. CXXXII, p. 273) (Colom.); Aire Ambiente S.A. v. Concreto S.A. y BRG Sociedad de Inversiones Ltda., BRG Ltda. (marzo 10, 2010) (J. Cárdenas Arb.); OSPINA & OSPINA, *supra* note 569, at 212.

⁶⁷⁸ See Aire Ambiente S.A. v. Concreto S.A. y BRG Sociedad de Inversiones Ltda., BRG Ltda. (marzo 10, 2010) (J. Cárdenas Arb.).

c. The Role of the Colombian Legal Rules on Economic Duress on the Prevention of the Hold-up Problem

As a general rule, obtaining a finding of duress is a hard task. A finding of economic duress in hold-up situations may be even harder to prove. The chances of meeting the first prong of the test may increase if the held-up party explains in layman's terms the technical and financial reasons making almost impossible to reject the demand for a modification, which could persuade a court that the held-up party – despite its sophistication – was intimidated by the other party's threat to breach the contract.

A held-up party's chances, alas, are lower with regard to the second prong. In spite of its qualified personnel and financial resources, a held-up party may find it difficult to prove that the non-investing party threatened to breach the contract, at least when this threat was purposely drafted in cryptic and unclear terms. After all, hold-up situations may be covert extorted modifications disguised as lengthy and friendly negotiations. Even if the evidence is convincing, a court may hold that the threat was legal and so, that duress did not arise.⁶⁷⁹

Some other reasons to be pessimistic exist. To begin with, a held-up party bears the burden of proving economic duress.⁶⁸⁰ Furthermore, the law gives a perverse incentive to the person exerting duress. If the victim of duress prevails at trial, the contract is void and, consequently, the judgment must put the parties as they were before the making of the vitiated modification (a kind of reliance damages). This may be a pyrrhic victory for the held-up party. It

⁶⁷⁹ See *supra* p. 160.

⁶⁸⁰ See Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., junio 30, 2005, M.P. E. Villamil, Gaceta Judicial [G.J.] (No. CCXXIII, p.313) (Colom.) (holding that the party claiming duress must fully prove it); see also Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., enero 30, 2007, M.P. E. Villamil, Gaceta Judicial [G.J.] (No. CCXXVII, p. 108) (Colom.).

is true that, in such a case, the original contract is again in legal force, which is good for the held-up party. The non-investing party, however, is not obligated to pay legal damages for breach of contract (because such breach did not occur) other than interest over the payments that the buyer paid in excess or that the seller did not receive. The only way a held-up party can attain additional damages is to prove that duress not only entailed a contract modification but also triggered some damages, such as consequential ones (for example, proof that the new price impaired the cash flow of the held-up party, which, as a result, was unable to timely meet some payments.)⁶⁸¹ Thus, the legal rules are inefficient since the company exerting duress will obtain the benefit of the extorted modification in the best scenario, either if this contractual change is not challenged or if the held-up party does not prevail at trial, and will be forced to perform the contract under the original terms without any punishment, in the worst scenario.⁶⁸² This situation resembles pickpockets stealing watches or a smartphones under the assumption that if the police catch them, they may regain their freedom by returning the stolen items.⁶⁸³

Prevailing case law contributes to this pessimistic standpoint. In *Unión Temporal Distral S.A., CMD S.A. y Consorcio Tito Marcelo, Pabición Ltda. y Primont Ltda. v. Empresa Colombiana de Petróleos – Ecopetrol*, the arbitral tribunal did not find duress in a contract modification allegedly accepted under a threat of unilateral termination of the original administrative contract. The tribunal, among other reasons, concluded that complex

⁶⁸¹ See Yaneth Pérez, *Análisis Económico de los Vicios del Consentimiento en el Régimen Colombiano y en los Principios sobre los Contratos Comerciales Internacionales UNIDROIT [Economic Analysis of Vices of Consent in Colombian Law and in the UNIDROIT Principles on International Commercial Contracts]*, 21 R. DÍKAION, 179, 179 (2007).

⁶⁸² See *id.* at 179.

⁶⁸³ See C. PEN. Art. 63, 239, 268-69.

“negotiations” lasting more than three months and assisted by experts counseled against a finding of duress.⁶⁸⁴ Under this rationale, a modification in hold-up situations would only amount to economic duress if it were promptly demanded and accepted, as happens when a non-investing buyer says: “Reduce the price in 40% or I will breach” and the held-up party replies: “Yes” to avoid retaliation. Of course, this scenario is unlikely because non-investing sophisticated parties are not so naïve as to make these recordable explicit threats, and held-up parties are not so negligent as to take such an important decision in a split second.⁶⁸⁵

In a more favorable case for held-up parties, *Constructora Mazal Ltda. v. Inversiones GBS Ltda.*, the arbitral tribunal suggested, in *obiter dicta*, that the repeated breaches of one party (Inversiones GBS) were decisive in obtaining the other party’s assent (Conmazal) to an early termination of the contract and, therefore, might have amounted to duress.⁶⁸⁶ The arbitral tribunal, however, found that it did not have jurisdiction to analyze this issue in more detail and to strike down the early contract termination since Conmazal had not claimed duress in its complaint.⁶⁸⁷

⁶⁸⁴ See Unión Temporal Distral S.A., CMD S.A. y Consorcio Tito Marcelo, Pabición Ltda. y Primont Ltda. v. Empresa Colombiana de Petróleos – Ecopetrol (junio 20, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.).

⁶⁸⁵ This arbitral case, undeniable, was about administrative contracts and, therefore, a distinction must be made regarding private contracts. The arbitral tribunal held that a threat to an unilateral termination did not amount to duress not only due to the protracted negotiations but also because, pursuant to administrative law, a party to a contract which is also a state-owned enterprise is entitled to unilaterally terminate a contract. See L. 80/93 Art. 17 (octubre 28) [DIARIO OFICIAL]. In private contracts, in contrast, unilateral termination is unlawful unless the contract provides otherwise. See C.C. Art. 1602 (“*Todo contrato legalmente celebrado es una ley para los contratantes, y no puede ser invalidado sino por su consentimiento mutuo o por causas legales* - Every contract which is legally entered into is the law for the parties and may not be invalidated other than by mutual agreement between them or on legal grounds). See also Unión Temporal Distral S.A., CMD S.A. y Consorcio Tito Marcelo, Pabición Ltda. y Primont Ltda. v. Empresa Colombiana de Petróleos – Ecopetrol (junio 20, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.).

⁶⁸⁶ See *Constructora Mazal Ltda. v. Inversiones GBS Ltda.* (marzo 15, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.).

⁶⁸⁷ See *id.*

That the reference to duress was *obiter dicta* and not a *ratio decidendi* is not the only negative part of this award for held-up parties. The arbitral tribunal acknowledged that the victim might have faced great challenges meeting its burden of proof because some evidence stated that it had freely agreed to the early termination.⁶⁸⁸ This line of reasoning seems wrong because a victim of duress is rarely able to execute a contract under protest. To put it more bluntly, this rationale is almost as perplexing as the holding of court rejecting the claim of an individual against his or her kidnappers on the grounds that he or she had recently sent a video to his or her relatives stating that everything was fine, that the situation was not so horrible, and that his or her health was in good condition.⁶⁸⁹

d. Conclusions

Section IV.C.3 concluded that Colombian legal rules on duress neither avoid nor solve the hold-up problem on two grounds. On the one hand, the general requirements that the law and the case law impose to find duress are very stringent. As a result, only clear and unmistakable cases might persuade a court that duress arose (*e.g.*, when a threat is direct or blunt). Naturally, a rational non-investing party will usually try to disguise its threat to breach and, therefore, will make more difficult for the held-up party to prove duress. On the other hand, and save isolated cases,⁶⁹⁰ the case law has not applied the notion of economic duress. Thus, at least until a pioneer

⁶⁸⁸ *See id.*

⁶⁸⁹ *See id.* In a third award, the arbitral tribunal held that lack of payment of an amount of money does not amount to duress unless the victim does not have any other form of obtaining funds to avoid financial ruin. Under this rationale, held-up sellers, which are usually sophisticated companies with easy access to capital markets, cannot argue that a delayed payment is the main cause of its financial ruin unless they provide evidence of being at the brink of bankruptcy. *See Aire Ambiente S.A. v. Conconcreto S.A. y BRG Sociedad de Inversiones Ltda., BRG Ltda.* (marzo 10, 2010) (J. Cárdenas Arb.).

⁶⁹⁰ *See Unión Temporal Distral S.A., CMD S.A. y Consorcio Tito Marcelo, Pabición Ltda. y Primont Ltda. v. Empresa Colombiana de Petróleos – Ecopetrol* (junio 20, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.).

court or arbitrator applies this doctrine and leads a jurisprudential quantum leap, the lack of case law is another barrier against the usefulness of economic duress in the prevention of the hold-up problem.⁶⁹¹

4. Remedies for Breach of Contract

a. Introduction

Section IV.C.4 analyses whether legal remedies for breach of contract prevent the hold-up problem. Like the analysis under U.S. law in the preceding chapter,⁶⁹² this section concludes that legal remedies mitigate the hold-up problem by reimbursing part of losses that the investing party suffers. The degree of mitigation under Colombian law may be even higher than in the United States taking into account, for instance, that if the breacher acted with deceitfulness, a non-investing party must pay not only foreseeable damages but also any other damages directly resulting from breach,⁶⁹³ and that the party prevailing at trial may recover attorneys' fees.⁶⁹⁴ Nonetheless, other limitations and expenses, such as the impossibility of recovering speculative losses, the expenses to prevail on litigation, and the time value of money prevent a further degree of mitigation.

b. The Colombian Legal Rules on Remedies for Breach of Contract

Unlike U.S. law,⁶⁹⁵ and as a general rule, an aggrieved party to any bilateral contract under

⁶⁹¹ Nevertheless, Chapter VI makes some proposals intended to make economic duress workable not only in theory but also in practice. *See infra* Chapter VI.

⁶⁹² *See infra* § III.C.4.

⁶⁹³ *See* C.C. Art. 1616. In contrast, damages rarely depend on whether or not the breach was willful under U.S. law. *See infra* § III.C.4.

⁶⁹⁴ *See infra* p. 175-77.

⁶⁹⁵ *See infra* § III.C.4.

Colombian law may choose between seeking monetary damages and specific performance.⁶⁹⁶ In practice, however, specific performance is a very limited remedy in the context of commercial contracts for sale or supply of goods, almost as limited as in U.S. law.⁶⁹⁷ While the law does not restrict specific performance to certain parties to a contract, logical considerations dictate that this remedy is not applicable when an aggrieved seller is seeking the price plus any default interest. As to contracts for sale of goods, but not regarding contracts for supply of goods, buyers can seek monetary damages only in the form of a price reduction when the breach is minor (*e.g.*, when goods with some small defects are anyway fit for the particular contract purpose).⁶⁹⁸

As an additional limitation, if a buyer complains about any quality or quantity defect, a claim that must be made within four days following the delivery of the goods or within the term that the contract provided,⁶⁹⁹ experts will determine whether the defects are substantial.⁷⁰⁰ If the answer is in the negative, then the buyer can only seek monetary damages in the form of a lower price. If, however, the answer is in the affirmative, then the buyer may choose between paying a lower price and refusing to take delivery (*i.e.*, the latter case amounts to a rescission of the

⁶⁹⁶ See C. COM. Art. 870; *cf.* UCC § 2-716. For some case law and doctrine regarding the election between monetary damages and specific performance, see, *e.g.*, Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., mayo 16, 2002, M.P. J. Santos, Expediente 6877, Gaceta Judicial [G.J.] (No. CCXV, p. 163) (Colom.); Mitsui & Co Ltd. y Sumitomo Corporation, agosto 22, 2002, R. Bernal, A. Mendoza, J. Cubides Arb.).

⁶⁹⁷ See *infra* § III.C.4.

⁶⁹⁸ See C.C. Art. 1924. See generally Philips Colombiana de Comercialización S.A. v. Cosmitet Limitada Corporación de Servicios Médicos Internacionales Them y Cía. Ltda. (abril 21, 2005) (S. Muñoz, M. Silva y M. Plazas Arb.). On a related note, specific performance is also unavailable when the goods have hidden defects and the buyer would have purchased the goods even if it were aware of the defects at the making of the contract. See C. COM. Art. 934. This exception, however, is not applicable to the contracts within the scope of the dissertation since they are for the *manufacture* and sale of goods and, as a result, neither the goods nor any defect may exist before the execution of the contract.

⁶⁹⁹ Of course, four days is a very short term to check the quality and quantity of idiosyncratic goods. As a result, held-up buyers should bargain for a clause providing a longer term.

⁷⁰⁰ See C. COM. Art. 931.

contract).⁷⁰¹ Thus, the seller is not forced to repair the goods, as specific performance would require.⁷⁰²

The conclusions are not very different regarding contracts for the supply of goods. Commercial Code Art. 973 provides that an aggrieved party is entitled to cancel a supply contract only when the breach causes serious damages or may, by itself, reduce the trust of the aggrieved party on the breaching party about its capacity to deliver or to pay future installments in compliance with the provisions of the contract.⁷⁰³ A buyer may cancel a contract, for instance, when the supplier failed to deliver conforming goods during the three last installments or to timely deliver the goods and the agreement had provided that time was of the essence, for example. A buyer, by contrast, would not be entitled to cancel the contract if, for example, an installment marginally deviated from the quality standards agreed on the contract.

Given these limitations to the remedy of specific performance, this chapter assumes that the aggrieved held-up party seeks monetary damages, which are divided into two broad categories. The first category is actual damages (in Spanish: *daño emergente*), or the expenses incurred in preparation of performance.⁷⁰⁴ An aggrieved party may recover most actual losses without too much difficulty.⁷⁰⁵ The second category is lost profits (in Spanish: *lucro cesante*), which amount to the earnings that the aggrieved party would have obtained if the contract would

⁷⁰¹ *See id.*

⁷⁰² *See id.*; *see also* C.C. Art. 1914-18.

⁷⁰³ *See* C. COM. Art. 973.

⁷⁰⁴ *See* C.C. Art. 1613-14; *Granjas El Socorro Ltda., v. Colombiana de Incubación S.A. Incubacol* (agosto 5, 2002) (H. Mora, A. Hernández, H. Romero Arb.).

⁷⁰⁵ *See* *Gallo's Comunicaciones E.U. v. Super 9 Comunicaciones S.A.* (noviembre 17, 2004) (C. de la Torre, H. Cardozo y F. Santos Arb.) (arguing that estimation of actual losses is not so difficult because they refer to past events).

not have been breached).⁷⁰⁶ Lost profits are a notion much more linked to the undercompensatory nature of remedies since their calculation is not as easy and precise as actual losses.⁷⁰⁷

The extent of lost profits, in contrast with U.S. law,⁷⁰⁸ depends on whether the breacher acted with wrongful intent or, more particularly, with the positive intention to inflict damage on the other person (in Spanish, and hereinafter: “*dolo*”). If the answer is no, then the breaching party is liable only for damages that were foreseeable or might have been foreseeable at the making of the contract.⁷⁰⁹ Alternately, the breaching party is also liable for any loss directly resulting from the breach.⁷¹⁰ In any event, this is a default rule; thereby, the parties may bargain around it.⁷¹¹

If the seller is the party seeking monetary damages, some additional legal rules apply. In respect of the manufacturing stage, the party requiring the goods may unilaterally suspend the fabrication process at will by paying to the manufacturer all its expenses plus the value of the

⁷⁰⁶ See C.C. Art. 1613-14. For case law regarding lost profits, see, e.g., Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., septiembre 9, 2010, M.P. W. Namén, Gaceta Judicial [G.J.] (No. CCXXXIV, p. 563) (Colom.); Granjas El Socorro Ltda., v. Colombiana de Incubación S.A. Incubacol (agosto 5, 2002) (H. Mora, A. Hernández, H. Romero Arb.).

⁷⁰⁷ See Gallo’s Comunicaciones E.U. v. Super 9 Comunicaciones S.A. (noviembre 17, 2004) (C. de la Torre, H. Cardozo y F. Santos Arb.) (categorizing as uncontroversial that lost profits are much more difficult to prove than actual losses); see also Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., marzo 4, 1998, M.P. C. Jaramillo, Gaceta Judicial [G.J.] (No. CCXVIII, p. 450) (Colom.); HINESTROSA, *supra* note 652, at 224. In any event, the development of sophisticated econometric tools have diminished the degree of inaccuracy in the estimation of lost profits. For arbitral tribunals applying these techniques, see, e.g., *Icollantas S.A. v. Auto Mundial Ltda., Auto Mundial del Valle Ltda., y Reencauchadora Auto Mundial Ram Ltda.* (febrero 26, 1999) (J. Nárvaez, S. Rodríguez y R. Madriñán Arb.).

⁷⁰⁸ See Eric A. Posner, *Fault in Contract Law*, in *FAULT IN AMERICAN CONTRACT LAW* 69 (2010).

⁷⁰⁹ See C.C. Art. 1616.

⁷¹⁰ See *id.*

⁷¹¹ See *id.*

partial work plus a reasonable profit.⁷¹² This payment, unfortunately, may not be enough to put a held-up party in the position it would have been in if the contract had been fully performed in case a court fails to understand that the relationship-specific investment is worthless for any other party.⁷¹³

To take one illustration, assume that a seller and a buyer entered into a contract for the manufacture and sale of a highly customized 1000 ton rail press which the buyer will use to make frame rails as part of its manufacturing process of trucks.⁷¹⁴ Suppose that the buyer, when the manufacturing process was half-way, decided to suspend these works because its project of fabricating trucks was indefinitely postponed and that the parties did not reach an agreement regarding the damages to be paid. Assume, finally, that an arbitrator granted the seller \$10 million corresponding to the manufacturing costs and other \$1 million. for the expected profit but did not award any damages to compensate the investment made in customizing the rail press (e.g., in training the personnel, drawing new designs and experimenting with new materials) by wrongly surmising that similar rail presses might be manufactured and sold to other buyers.

As to the selling stage, aggrieved sellers usually seek either payment of the outstanding price or acceptance of the goods. In the former case, the law irrefutably presumes that damages, in the form of default interests, arose because of the delay and, therefore, the seller is relieved of

⁷¹² See *id.* Art. 2056. The value of the partial work, of course, cannot be the same that the seller's expenses; thereby the words "value of the partial work" (in Spanish: "*lo que valga el trabajo hecho*") must be construed as the seller's investment, at least in hold-up situations.

⁷¹³ See, e.g., *Mitsui de Colombia S.A. v. Metalec, Manufacturas Metal Eléctricas Ltda.* (septiembre 7, 1993) (J. Esguerra, J. Nárvaez, A. Mendoza, Arb.).

⁷¹⁴ The facts of this example are based on the case *Beijing Light Automobile Co., Ltd. v. Connell Limited Partnership*, governed by the rules of the Convention for International Sale of Goods, and decided by the Arbitration Institute of the Stockholm Chamber of Commerce on June 5, 1998. (Arb. T. Leijonhielm, R. Romlöv, and Johan Gernandt). The decision is available at <http://cisgw3.law.pace.edu/cases/980605s5.html>. See also SNYDER & DAVIES, *supra* 631, at 61.

proving any loss.⁷¹⁵ In the latter case, the seller may recover incidental damages such as expenses resulting from storage.⁷¹⁶

c. An Example of Undercompensation in Hold-up Situations

This dissertation will explain why Colombian legal rules on remedies for breach of contract mitigate but neither avoid nor solve the hold-up problem through the same numerical example mentioned in the analysis of legal remedies under U.S. laws.⁷¹⁷ The only differences are that, here, the parties did not provide a liquidated damages clause but a penalty, although the amount is the same (\$1000), and that the expected time of litigation is a little longer (eight years instead of six years), taking into account that Colombian legal procedures are slower than in the United States.⁷¹⁸

The facts of this hypothetical case are summarized again here. The price of the bauxite is \$3000 and Buyco has already paid \$1000 at the time of breach. The expected profit of this transaction was \$1500. Buyco will need to pay its customers a penalty amounting to \$1000. Other losses that Buyco suffers are the unrecouped value of the investment necessary to customize the aluminum for its customers (\$2700), good will losses (\$700), lost opportunities with new customers (\$2300), and expenses necessary to train employees substituting personnel who voluntarily retired because of the breach (\$300). In addition, the likelihood of Buyco prevailing at trial (i.e., proving that Selco breached the contract), is 80%,⁷¹⁹ litigation expenses

⁷¹⁵ See C.C. Art. 1617(2); C. COM. Art. 934, 947-48. This is not to say that the seller cannot recover any other loss. In such a case, however, the seller needs to prove this loss. See C. COM. Art. 946.

⁷¹⁶ See C.C. Art. 1883.

⁷¹⁷ See *supra* § III.C.4.

⁷¹⁸ See WORLD BANK, Nov. 19, 2103, <http://data.worldbank.org/country..>

⁷¹⁹ Under Colombian law, an aggrieved party must prove the following statements. First, the aggrieved party must prove that the other party failed to honor a contractual promise, although, regarding positive duties, this burden

amount to \$500 (60% are attorney's fees), and Selco will be insolvent when Buyco intends to enforce a favorable judgment with a 10% likelihood. Recall also that restrictions to legal remedies for breach are divided into limitations preventing the aggrieved party from recovering its entire losses, expenses necessary to recover at least part of these losses, and other unrecoverable losses.⁷²⁰

In respect of the first kind of limitations, the analysis is as follows. Buyco, of course, is entitled to recover, as damages, the paid price (\$1000). It is not so clear, however, whether Buyco may recover its entire expected profit resulting from the sale of aluminum to their customers. Since the legal rules on lost profits under Colombian law are not substantially different from the legal rules on expectation damages under U.S. law,⁷²¹ at least regarding expected profits, this dissertation will keep the assumption made in the previous chapter,⁷²² and suppose that a court would only grant \$1000 out of the \$1500 loss. \$1000 are recoverable considering that idiosyncratic contracts, at least in theory, are more likely to have provable losses

might shift to the other party. *See generally* HINESTROSA, *supra* note 652, at 261-64. Second, the aggrieved party must prove that it is the fault of the breaching party. *See id.* at 280. Fortunately for held-up parties, fault in actions for breach of contracts is usually presumed, at least in duties to achieve a specific result. *See* C.C. Art. 1604. For some case law and doctrine, see, e.g.; Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., junio 12, 1990, M.P. C. Hernández, Gaceta Judicial [G.J.] (No. CLXXXVIII, p. 283 (Colom)); Formametal E.U. v. Compañía Internacional de Alimentos Ltda. (septiembre 8, 2008) (H. Bueno, F. Puerta, C. Valencia Arb.); OSPINA & OSPINA, *supra* note 569, at 168-69. *But see, e.g.*, Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., octubre 24, 2009, M.P. W. Namén, Gaceta Judicial [G.J.] (No. CCXXXII, p. 120) (Colom.); Ladrillera Santa Fe S.A. v. STK de Colombia S.A. (abril 16, 2002) (J. Chemás, N. Zabala y L. Parra Arb.); JAVIER TAMAYO, LA CULPA CONTRACTUAL [CONTRACTUAL FAULT] 1 (1990). Third, the aggrieved party must prove that it has complied with its duties or is ready to perform them. *See* C.C. Art. 1609. Fourth, the aggrieved party must prove that the breach has caused some damages. *See* Gallo's Comunicaciones E.U. v. Super 9 Comunicaciones S.A. (noviembre 17, 2004) (C. de la Torre, H. Cardozo y F. Santos Arb.). Fifth, the aggrieved party must prove a causality link between breach and damages. *See* Gallo's Comunicaciones E.U. v. Super 9 Comunicaciones S.A. (noviembre 17, 2004) (C. de la Torre, H. Cardozo y F. Santos Arb.); HINESTROSA, *supra* note 652, at 296-97. This causality link is also presumed, at least in duties to achieve a specific result. *See* Icollantas S.A. v. Auto Mundial del Valle Ltda., y Reencauchadora Auto Mundial Ram Ltda. (febrero 26, 1999) (J. Nárvaez, S. Rodríguez y R. Madriñán Arb.).

⁷²⁰ *See supra* § III.C.4.

⁷²¹ *See id.*

⁷²² *See id.*

than ordinary contracts since the contract is part of a relatively highly specified project. The remaining \$500 would be unrecoverable because the profit resulting from some future sales to Buyco's future customers might be too speculative.

On the other hand, the value of the relationship-specific investment should be regarded as damages. After all, the held-up party exclusively incurred in this sunk cost to perform the contract. In practice, however, the conclusion might be different. To begin with, explaining to a court, uninformed of financial and technical matters,⁷²³ that a complex investment was useful for the breaching party but not for anybody else may be an expensive task at best and an impossible one at worst. Furthermore, since the investment is registered in the ledger books under this name (as an investment) and not as an expense, proving otherwise is still more difficult.⁷²⁴ This is not just a theoretical concern. In *Ladrillera Santa Fe S.A. v. STK de Colombia S.A.*, the plaintiff invested in some equipment and optic fiber networks without value outside the business relationship between the parties. Nonetheless, the arbitral tribunal denied recovery of this investment not only because the plaintiff failed to prove that the investment lacked any purpose after breach (or perhaps, the arbitrators were unable to understand that) but also because the equipment and fiber optic networks were registered in the ledger books as investments (assets) and not as expenses.⁷²⁵ On this line of reasoning, assume that only one-third of the courts and arbitrators will understand the real nature of a relationship-specific investment and, as a result, that the average recoverable losses will amount to $\$2700 \times (1/3)$ or \$900.

⁷²³ Unless the case is decided by arbitrators with expertise in these topics.

⁷²⁴ See D. 2649/93 Art. 35,40, 61, 64 diciembre 29, 1993, DIARIO OFICIAL [D.O.]; see also Code of General Procedure [hereinafter "C.G.P."] Art. 264, enacted by L. 1564/12, julio 12, 2012, DIARIO OFICIAL [D.O.] (providing that disputes among merchants will be decided in accordance with their ledger books).

⁷²⁵ See *Ladrillera Santa Fe S.A. v. STK de Colombia S.A.* (abril 16, 2002) (J. Chemás, N. Zabala y L. Parra Arb.).

Some unforeseeable and uncertain losses may also be non-recoverable. Unforeseeable losses are those that are neither ordinary nor usual for the non-breaching party in accordance with its expertise and knowledge.⁷²⁶ Unforeseeable and its antonym, foreseeable losses, are the two subsections of direct losses.⁷²⁷ Direct losses are the immediate consequence of breach while indirect losses, which are not recoverable, are a sequel of breach and may have other causes.⁷²⁸ Unfortunately, the line dividing direct and indirect damages is blurry because the case law has never clarified when damages are the immediate consequence of breach.⁷²⁹

Unforeseeable losses are only recoverable under Colombian law if the breacher acted with *dolo*.⁷³⁰ The parties, however, may bargain around this default rule.⁷³¹ A non-investing party always acts with *dolo* because it fails to perform in fulfillment of its threat.⁷³²

Since a non-investing party is liable for both foreseeable and unforeseeable losses, the held-up party may recover the amount of the penalty clause (\$1000). Most debatable is whether the held-up party may recover the expenses (\$300) necessary to train the personnel who replaced

⁷²⁶ See HINESTROSA, *supra* note 652, at 217-18; *see also* Corte Constitucional [C.C.] [Constitutional Court], diciembre 9, 2010, M.P.: L. Vargas, Sentencia C-1008-2010, Gaceta de la Corte Constitucional [G.C.C.] (vol. LI, p. 53) (Colom.) (defining foreseeable losses as those that a diligent promisor has considered as possible in case of breach).

⁷²⁷ See HINESTROSA, *supra* note 652, at 217.

⁷²⁸ See, e.g., Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., septiembre 3, 1977, M.P. V. Betancur, Gaceta Judicial [G.J.] (No. CXLII, p. 657) (Colom.); Granjas El Socorro Ltda., v. Colombiana de Incubación S.A. Incubacol (agosto 5, 2002) (H. Mora, A. Hernández, H. Romero Arb.); HINESTROSA, *supra* note 652, at 214.

⁷²⁹ See HINESTROSA, *supra* note 652, at 216-18, 21 (stating that case law about direct and indirect damages is very scarce). Unfortunately, Colombian case law has also omitted any reference to the economic notions related to unforeseeable losses, such as the information-forcing effects of the *Hadley v. Baxendale* rule. See *Hadley v. Baxendale*, 9 Exch. 341, 156 Eng. Rep. 145 (1854).

⁷³⁰ See C.C. Art. 1616. Recall that *dolo* arises when a party acts with wrongful intent or, more particularly, with the positive intention to inflict damage on the other person. See *supra* p. 170.

⁷³¹ See C.C. Art. 63,1616 para. 3. This dissertation, however, assumes that this rule is applicable in hold-up situations not only because parties rarely bargain around default rules (*see* Korobkin (Status Quo), *supra* note 502, at 611-12) but also because such negotiation would entail the held-up party shooting itself in the foot. On a related note, *dolo* is never presumed and, hence, must be proved by the aggrieved party. See C.C. Art. 1516.

⁷³² See *supra* § II.A.

the employees that changed jobs. The non-investing party may reasonably argue that these employees quit their jobs not only for the breach but also due to other unrelated reasons (e.g., an intention to start an enterprise or to have more time for the kids). Based on this rationale, this chapter assumes that these expenses are not recoverable at all.

In contrast with the restrictions on unforeseeable damages, the limitations regarding uncertain losses do not lie on the Civil and Commercial Codes,⁷³³ but on the case law, which have consistently rejected speculative damages.⁷³⁴ Naturally, the case law acknowledges that lost profits are, by definition, probabilistic and, as a result, that the requirement of certainty is not absolute.⁷³⁵ Unfortunately, the line dividing lost profits that are probabilistic but sufficiently certain and other lost profits that are too speculative to be recovered is blurry. As a consequence, the broad powers that courts have to determine whether or not some lost profits are recoverable are not reassuring for a held-up party estimating in advance the damages resulting from breach in order to decide whether or not to accept a demand for an extorted modification.⁷³⁶

A kind of losses that may be uncertain are lost opportunities, especially if they are contingent on factors other than performance of the contract. An opportunity is lost when the aggrieved party cannot obtain the profit of some projected transactions, such as some deals that

⁷³³ See C.C. Art. 1614 (defining lost profits without limiting them).

⁷³⁴ See, e.g., Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., septiembre 9, 2010, M.P. W. Namén, Gaceta Judicial [G.J.] (No. CCXXXIV, p. 563) (Colom.) (holding that certainty about the lost profits is a condition to recover damages); *Mina Canales Limitada v. Interamerican Coal N.V. y C.I. Exportadora Interamerican Coal Colombia S.A.* (septiembre 9, 2008) (J. Santos, J. Benetti, L. López Arb.) (holding that chimeric calculus of profits or mere conjecture are not recoverable); see also *SUESCÚN*, *supra* note 579, at 197-98 (stating that damages that were just possible at the time of breach are not recoverable); cf. RESTATEMENT (SECOND) OF CONTRACTS (1981) § 352 cmt. a (“The main impact of the requirement of certainty comes in connection with lost profits”); *Cent. Coal & Coke Co. v. Hartman*, 111 F. 96, 96 (8th Cir. 1901) (“Speculative, remote or contingent damages cannot form the basis of a lawful judgment”).

⁷³⁵ See Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., septiembre 9, 2010, M.P. W. Namén, Gaceta Judicial [G.J.] (No. CCXXXIV, p. 563) (Colom.); *HINESTROSA*, *supra* note 652, at 199-200.

⁷³⁶ See *HINESTROSA*, *supra* note 652, at 199-200.

an aggrieved held-up buyer were negotiating with some third-parties and which were suspended shortly after the breach.⁷³⁷ The doctrine and the case law require a significant amount of certainty about both the causality link between the breach and the lost opportunity and its likelihood but a lower degree of certainty regarding its amount.⁷³⁸

Back to the example, the amount of the lost opportunity was \$2300. Assume that a court estimates that, if the contract had not been breached, the likelihood of this opportunity turning into actual profitable deals was 20%. Hence, the recovered sum would be \$2300 adjusted by 20% (\$460), which is similar to the amount in the analysis under U.S. law.⁷³⁹

Another kind of lost profits, good will losses, are also usually unrecoverable due to their speculative nature. Unlike the U.S. law,⁷⁴⁰ the requirement of certainty is not relaxed in Colombian case law; thereby, proving good will losses with the required certainty is an uphill task.⁷⁴¹ *Granjas El Socorro v. Incubacol* illustrates this statement. In this case, the plaintiff, a buyer of live chickens unable to honor its contracts for sale of processed chicken because its seller did not delivery on time, sought good will losses. The arbitral tribunal denied this claim on the grounds that the seller's breach was not proved, a holding which seems logical since if there is no breach there are no damages. Less logically, however, and arguing *arguendo* that such breach had been proved, the tribunal concluded that good will losses would not have been granted because of its lack of certainty. Thus, based on the stringency of the case law, suppose

⁷³⁷ See JAVIER TAMAYO, II LA RESPONSABILIDAD CIVIL [TORTS] 30 (1986) [hereinafter TAMAYO (TORTS)].

⁷³⁸ Regarding the case law and the doctrine, see, e.g., *Productora Tabacalera de Colombia S.A.S. Protabaco S.A.S. (Protabaco) v. División Mayor del Fútbol Colombiano (Dimayor)* (septiembre 9, 2011) (M. Castro, E. Rengifo, L. Salazar Arb.); HINESTROSA, *supra* note 652, at 201; TAMAYO (TORTS), *supra* note 739, at 357.

⁷³⁹ See *supra* § III.C.4.

⁷⁴⁰ See *id.*

⁷⁴¹ Regarding the U.S. law, see *id.* As to Colombian case law, see *Granjas El Socorro Ltda., v. Colombiana de Incubación S.A. Incubacol* (agosto 5, 2002) (H. Mora, A. Hernández, H. Romero Arb.).

that a court only awarded \$100 in goodwill losses rejecting the remaining \$600 due to its speculative nature.

As a final limitation preventing an aggrieved party from recovering its whole losses, a judgment granting Buyco monetary damages may not be worth more than the piece of paper on which it is written if Selco is insolvent at the time of enforcement.⁷⁴²

As to the second kind of restrictions to remedies (expenses necessary to recover at least part of the losses), Colombian law entitles the party prevailing at trial to get back its reasonable attorney's fees and other judgment costs (in Spanish, the so-called "*costas*").⁷⁴³ At first sight, a Colombian held-up party prevailing at trial and recovering its reasonable attorney's fees and other judgment costs is better off than an U.S. successful held-up plaintiff. The outlook, unfortunately, is not so favorable for Colombian parties. To begin with, the costs of enforcing a contract in Colombia add to 46% of the claim.⁷⁴⁴ Courts usually reject a fraction of this 46% on the grounds that it is non-verifiable or not useful for the dispute.⁷⁴⁵

⁷⁴² In this case, L. 1116/06 diciembre 27, 2006, DIARIO OFICIAL [D.O.] is applicable.

⁷⁴³ See C.G.P. Art. 361-66. For the former rule, see C.P.C. Art. 392.

⁷⁴⁴ This percentage is disaggregated as follows: attorney's fees (23.2%); judgment costs (12.6%); and enforcement costs (12.1%). See THE WORLD BANK, *Doing Business Colombian Report 2012*, <http://www.doingbusiness.org/data/exploreeconomies/colombia/#enforcing-contracts> (last visited Nov. 19, 2013). In the United States, by contrast, the cost of enforcing a contract is only 14.4% of the claimed amount. See THE WORLD BANK, *Doing Business 2011, Colombia, Comparing Business Regulations in 183 Economies*, <http://espanol.doingbusiness.org/~media/FPDKM/Doing%20Business/Documents/Profiles/Country/DB11/COL.pdf> (last visited Nov. 19, 2013).

⁷⁴⁵ See Rule 1887 Art. 1 (junio 26, 2003). Sala Administrativa Consejo Superior de la Judicatura. See also L. 794/03 Art. 43 enero 8, 2003, DIARIO OFICIAL [D.O.]. Additionally, a new law recently enacted by Congress provides that the plaintiff must pay at the time of filing its claim a tax adding up to the larger amount between 1.5% of the claimed amount and two hundred minimum monthly wages (\$117,900,000 in 2013 or around US\$62,000). Since the sums at stakes in hold-up litigations are usually high, the plaintiff normally will pay the cap, i.e., around US\$62,000. See L.1653/13 Art. 8 (julio 15) [DIARIO OFICIAL]. Admittedly, a plaintiff prevailing at trial may recover this payment from the losing party. See L.1653/13 para. 4 Art. 6 (julio 15) [DIARIO OFICIAL].

On top of that, courts may reject a significant fraction of attorney's fees on the grounds that they are unreasonable. Pursuant to Rule 1887 of the Administrative Section of the Judicial Superior Council,⁷⁴⁶ attorney's fees are capped at 15% of the claimed amount plus some additional small amounts in proceedings without any appeal on the merits such as arbitrations and at 25% in proceedings subject to appeal in the merits, such as commercial litigation before Civil courts (this percentage includes the two instances).⁷⁴⁷ Furthermore, these are upper limits and, therefore, arbitral tribunal and courts may discretionally grant a lower amount.⁷⁴⁸ Of course, these amounts may be only a small fraction of the significant expenses that a held-up party bears in litigation.

To take one illustration, in *Comercial Okasa Ltda., v. Banco Colpatría Red Multibanca Colpatría S.A.*, the recoverable attorney's fees and other judgment costs were only 1.5% (COP\$217,500,000 – around US\$110,000) of the amount in dispute (\$14,500,000,000 – around US\$7,300,000).⁷⁴⁹ Of course, the outlook will be worse if the outcome is unfavorable, a case in which the held-up party will not only fail to recover any litigation costs but also shall pay the reasonable attorney's fees and judgment expenses of the non-investing party.

Based on the analysis indicated above, assume that the court ordered Selco to pay to

⁷⁴⁶ See Rule 1887 Art. 1 (junio 26, 2003). Sala Administrativa Consejo Superior de la Judicatura; *see also* L. 794/03 Art. 43 enero 8, 2003, DIARIO OFICIAL [D.O.] (setting forth that judgment costs include any expense assumed by the prevailing party in relation to the litigation provided that they are proved, have been useful for the settling of the dispute, and relate to acts that the law authorizes).

⁷⁴⁷ See Rule 1887 Art. 6 (junio 26, 2003). Sala Administrativa Consejo Superior de la Judicatura. The minimum monthly wage in Colombia in 2013 is \$589,500, around US \$320). *See* Decree 27288/12 Art. 1 y 6 (diciembre 28) [DIARIO OFICIAL]. Admittedly, if duties to do (in contrast to duties to pay) were discussed in court, some additional attorney's fees, no larger than US\$1300, might be reimbursed. *See id.*

⁷⁴⁸ See Rule 1887 Art. 3 (junio 26, 2003). Sala Administrativa Consejo Superior de la Judicatura.

⁷⁴⁹ See *Comercial Okasa Ltda., v. Banco Colpatría Red Multibanca Colpatría S.A.* (mayo 27, 2004) (C. Torrente Arb.).

Buyco \$100 regarding attorney's fees and \$200 in respect of other judgment costs. The remaining \$200 was not granted because Buyco did not prove its reasonableness. On top of that, and similar to the analysis under U.S. law,⁷⁵⁰ Buyco will not be able to recover other non-verifiable litigation expenses such as the monetary value of the personnel's time employed in litigation (e.g., estimating the losses, attempting to reach a settlement, etc.).⁷⁵¹

As to the third category of restrictions to legal remedies (other no recoverable losses), monetary damages are only obtained after considerable delay. Thus, even a party prevailing at trial and obtaining the whole amount claimed as damages suffers a monetary loss in real terms. This loss depends on the length of the legal procedures and on the pre-judgment interest rate. As to the first factor, the World Bank's study mentioned earlier, finds that Colombian legal procedures are very protracted.⁷⁵² According to this multilateral institution, 34 procedures and 1,346 days (almost four years) are required to enforce a contract in Colombia.⁷⁵³ Neither the number of days nor the cost of the process nor the number of proceedings has reduced since, at

⁷⁵⁰ See *supra* § III.C.4.

⁷⁵¹ See *Ladrillera Santa Fe S.A. v. STK de Colombia S.A.* (abril 16, 2002) (J. Chemás, N. Zabala y L. Parra Arb.) (rejecting the expenses on personnel who was allegedly and exclusively dedicated to the litigation on the grounds that the conditions required to be a recoverable damage were not met).

⁷⁵² See THE WORLD BANK, *Doing Business 2012 Full Report*, 96, <http://www.doingbusiness.org/~media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB12-FullReport.pdf> (last visited Nov. 19, 2013).

⁷⁵³ See *id.* The length of the process is disaggregated as follows: 68 days filing and servicing a claim, 913 days for the trial and its appeal, and 365 days for enforcement. By contrast, 32 procedures and 300 days (less than one year) are necessary in the United States to enforce a contract. See THE WORLD BANK, *Doing Business Colombian Report 2012*, <http://www.doingbusiness.org/data/exploreconomies/colombia/#enforcing-contracts> (last visited Nov. 19, 2013); THE WORLD BANK, *Doing Business 2011, Colombia, Comparing Business Regulations in 183 Economies*, <http://espanol.doingbusiness.org/~media/FPDKM/Doing%20Business/Documents/Profiles/Country/DB11/COL.pdf> (last visited Nov. 19, 2013). These negative figures, coupled with the excessive costs of enforcing a contract put Colombia in a disgraceful 149th position among 183 countries in the category of enforcement of contracts. See THE WORLD BANK, *Doing Business 2012 Colombia Report*, 89, <http://www.doingbusiness.org/~media/giawb/doing%20business/documents/profiles/country/COL.pdf> (last visited Jan. 19, 2013).

least, 2004.⁷⁵⁴ In this connection, and with the only exception of a new Code of General Procedures streamlining some judicial proceedings,⁷⁵⁵ Colombia has not enacted any other legal rule intended to reduce the time and cost of enforcing contracts (e.g., allowing electronic filings of claims or clearing inactive cases from dockets).⁷⁵⁶

On top of that, the figures indicated above are for standardized commercial disputes.⁷⁵⁷ As a result, the time and cost of hold-up litigations may be longer and higher.⁷⁵⁸ For this reason, this chapter assumes that the whole litigation, including the enforcement of a favorable judgment, takes eight years, two more than the assumption under U.S. law.⁷⁵⁹

In respect of the second factor of the monetary loss in real terms, the prejudgment interest is usually a low rate,⁷⁶⁰ although rarely as low as in U.S. litigation.⁷⁶¹ This interest rate, even

⁷⁵⁴ *See id.*

⁷⁵⁵ *See* Code of General Procedures, L. 1563/12 (julio 12) [DIARIO OFICIAL].

⁷⁵⁶ *See* THE WORLD BANK, *Doing Business 2012 Colombia Report*, 91, <http://www.doingbusiness.org/~media/giawb/doing%20business/documents/profiles/country/COL.pdf> (last visited Jan. 19, 2013).

⁷⁵⁷ *See id.* The timing (but not the cost) of arbitration may be much shorter.

⁷⁵⁸ Undeniably, if the parties provided an arbitration clause, the time may be, at first sight, lower. However, arbitral awards under Colombian law may be subject not only to motions to vacate them but also to a writ for the protection of fundamental rights (the so-called *tutela*). These recourses, and the enforcement of the final judgment, may take a long time. *See, e.g.*, Corte Constitucional [C.C.] [Constitutional Court], febrero 2, 2009, M.P.: J. Araujo, Sentencia T-058-2009, Gaceta de la Corte Constitucional [G.C.C.] (vol. XLIX, p. 223) (Colom.).

⁷⁵⁹ *See supra* III.C.4.

⁷⁶⁰ *See* C.G.P. Art. 284, 424-25. Under the worst-case scenario, this pre-judgment interest rate would be zero. Some courts and arbitral tribunals justify this low rate on the grounds that the award is constitutive of rights and that the obligation to pay the money was disputed and uncertain before such award. *See, e.g.*, Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., septiembre 29, 1984, M.P. J. Escobar, Gaceta Judicial [G.J.] (No. CLXXVI, p.288) (Colom.); Consorcio CCIM v. Ecopetrol S.A. (noviembre 24, 2005) (C. Manrique, C. Arrieta, W. Namén Arb.). In a better scenario, the interest rate would be the provided by the Civil Code: 6% per year. *See* C.C. Art. 1617(1). Under an even better scenario, the interest rate would be the average interest rate that financial institutions are charging to their customers, which is currently 20.83%. *See* COLOMBIAN FINANCIAL SUPERINTENDENCE, <http://www.superfinanciera.gov.co> (last visited, Jan. 19, 2013). Finally, in an ideal scenario, the interest rate will be the maximum default interest, which is actually 31.25%. *See id.*

⁷⁶¹ *See* § III.C.4 *supra* p. 102.

worse, is rarely compounded.⁷⁶² Colombian law, however, has an advantage over U.S. law: damages are due since the breaching party was in default.⁷⁶³

In the example, the damages that Buyco may recover amount to \$4760. Assume that the court would award a pre-judgment interest equals to 10% for the time between breach and enforcement (*li*), that Buyco may borrow funds in the capital markets at 15% (market interest – *mi*-), and recall that the expected length of litigation is eight years. The actual adjusted damages (AAD) are calculated as follows:⁷⁶⁴

$$\begin{aligned} AAD &= \text{Damages awarded} * (1 + li)^{lt} && \text{Equation 4} \\ &= \$4760 * (1.10)^8 = \$10,203 \end{aligned}$$

The ideal adjusted damages (IAD) are calculated as follows (recall that in Colombia *li* equals to *mi* because damages are due as of the breach):

$$\begin{aligned} IAD &= \text{Damages awarded} * (1 + mi)^{at} && \text{Equation 5} \\ &= \$4760 * (1.15)^8 = \$14,561 \end{aligned}$$

The difference between the actual adjusted damages and the ideal adjusted damages amounts to \$4357 (or 43.57% of the total damages measured in present value). This is the uncompensated loss that Buyco suffers due to the time value of money.

On top of that, Buyco is not completely sure of prevailing in litigation. In a negative scenario, a court would hold, either based on legal authority or just mistakenly, that Selco did not

⁷⁶² See, e.g., Transportadora de Gas del Interior S.A. E.S.P. –T.G.I. S.A. E.S.P. v. Empresa Colombiana de Gas – Ecogás (septiembre 2, 2009) (J. Cárdenas, M. Monroy, A. Linares Arb.). *But see* Philips Colombiana de Comercialización S.A. v. Cosmitet Limitada Corporación de Servicios Médicos Internacionales Them y Cía. Ltda. (abril 21, 2005) (S. Muñoz, M. Silva y M. Plazas Arb.) (ordering the application of compound interest and indicating the mathematical procedure to do that).

⁷⁶³ See C.C. Art. 1608, 1615.

⁷⁶⁴ Ideally, a court should take into account the daily interest. Finding this interest and applying it, however, may be very cumbersome for a court; so, using a yearly interest would be a very good approximation.

breach the contract for sale of goods but legally terminated it. In such a case, Buyco will not only be unable to recover its attorney's fees and other judgment costs (\$300) but also shall pay Selco's reasonable attorney's fees and other judgment costs, which are assumed to equal \$300. The example, therefore, assumes that a court would award Buyco \$4760 in damages with a 80% likelihood and -\$300 with a 20% likelihood; thereby, the expected value of remedies is not \$4760 but \$3748 (i.e., $4760 * 80\% - 300 * 20\%$).

Table 6 summarizes the main figures of the example.

Table 6 – Undercompensatory Nature of Legal Remedies in Colombia

Concept	Damages	Compensated Value (CV)	Uncompensated Value (UV)	% UV
Paid price	1000	1000	0	0.0%
Other gen. damages	1500	1000	500	5.0%
Penalty clause	1000	1000	0	0.0%
Unrecouped inv.	2700	900	1800	66.7%
Good will losses	700	100	600	6.0%
Lost opportunities	2300	460	1840	18.4%
Training employees	300	0	300	3.0%
Litigation expenses	500	300	200	2.0%
Total	\$10,000	4760	5240	52.4%

Table 6, however, did not show the losses arising out of the time value of money (\$4357) and of the uncertainty of litigation (\$1012). Table 7 includes them.

Table 7 – Effects of Time Value of Money and Uncertainty of Litigation

Concept	Damages	Compensated Value (CV)	Uncompensated Value (UV)	% UV
Total damages	10,000	5060	4940	49.40%
Time value of money	14,561	10,203	4357	43.57%
Uncertainty litigation	1072	0	1072	10.72%
Grand total	25,633	15,263	10,370	103.70% ⁷⁶⁵

d. Conclusion

Section IV.D.4 concludes that legal remedies under Colombian law not only mitigates the hold-up problem but also that the degree of such mitigation may be higher than in U.S. law on at least the following three grounds. First, and at first glance, the held-up party is entitled to choose between monetary damages and specific performance. Nevertheless, the impact of this factor is significantly reduced by some legal rules on contracts for sale of goods limiting the availability of specific performance for buyers. Second, the non-investing party must pay not only foreseeable but also unforeseeable damages because it acts with *dolo*.⁷⁶⁶ Third, Colombian aggrieved parties prevailing in litigation may recover a pre-judgment interest as of the time of breach. Notwithstanding, Colombian legal rules on remedies for breach of contract do not fully prevent the hold-up problem due to, on the one hand, the fact that some losses resulting from the breach such as uncertain damages and some expenses resulting from litigation are unrecoverable; and, on the other hand, the significant length of litigation.

⁷⁶⁵ 103.7% is the percentage of uncompensated losses over the nominal value of damages (\$10,000). Such percentage is 40.46% over the adjusted value of damages (\$25,633).

⁷⁶⁶ See C.C. Art. 1616.

Section IV.D. Conclusions

Table 8 summarizes the findings of Chapter IV

Table 8 – Summary of Findings of Chapter IV

§	TOPIC	EFFECT ON THE HOLD-UP PROBLEM
Private attempts	Non-mod. Clauses	Legal rules do not avoid, solve, or mitigate the hold-up problem because parties to a contract may rescind a no modification clause at any time.
	Penalty clauses	Penalty clauses mitigate the hold-up problem to a larger degree than liquidated damages under U.S. law. Penalties, however, do not solve or avoid the hold-up problem due to legal limitations to their amount.
	Reputation bonds	From a legal standpoint, the conclusions are the same than in the U.S. market. Some differences, however, such as a thinner market and the weaker role of courts in Colombia in comparison with the United States may strengthen the role of reputation in the former country.
Public attempts	The <i>Exceptio Non-Adimpleti Contractus</i>	Mixed effect. On the one hand, a non-investing party might use the <i>exceptio</i> to obtain a contract modification. On the other hand, a held-up offeree of an extorted modification might claim this <i>exceptio</i> and refuse to perform until the other party grants some security. This party, anticipating this behavior, might refrain from making an opportunistic offer.
	Good faith modifications	Mixed effect. The legal rules on good-faith and its key role in Colombian law mitigate the hold-up problem. These rules, however, does not wholly prevent the hold-up problem due to their vagueness.
	Econ. duress	The legal rules neither avoid, solve, nor mitigate the hold-up problem due both to the stringent requirements of duress and to the absence of theories and case law on economic duress.
	Remedies	Legal remedies are undercompensatory and, as a result, they mitigate but neither avoid or solve the hold-up problem.

CHAPTER V - AN EXPERIMENT ON THE HOLD-UP PROBLEM

Section V.A - The Importance and Purpose of an Empirical Chapter in the Dissertation

Chapter V is an empirical analysis of the hold-up problem testing the theories predicting that penalty clauses, on the one hand, and a high level of legal remedies for breach of contract, on the other hand, prevent the hold-up problem. This analysis may be beneficial in several ways. To begin with, it strengthens the proposals and conclusions that Chapters VI and VII present.⁷⁶⁷ Naturally, this dissertation acknowledges that proposing legal amendments from data or making some conclusions about the application of some theories in the real world requires not a single empirical analysis but many of them.⁷⁶⁸ After all, empirical law goes slowly.⁷⁶⁹

Furthermore, an empirical analysis increases the contribution of this dissertation to the contract law field,⁷⁷⁰ especially in Colombia where studies about empirical legal studies are almost inexistent. Last but not the least, this experiment not only intends to test some theories but also to encourage further experiments with similar purposes.⁷⁷¹ Put it differently, this dissertation may be a pioneer of several empirical examinations of the role of contractual and legal devices in the prevention of the hold-up problem.

⁷⁶⁷ See *infra* Chapters VI and VII.

⁷⁶⁸ See Kathryn Zeiler, *Cautions on the Use of Economics Experiments in Law*, 166 J. INST. & THEORETICAL ECON. 178, 196-200 (2010) (cautioning against the common practice of applying the results from a handful of experiments, rather than well-supported theories, to law and policy).

⁷⁶⁹ See Richard K. Neumann, Jr. & Stefan H. Krieger, *Empirical Inquiry Twenty-Five Years After the Lawyering Process*, 10 CLINICAL L. REV. 349, 377 (2003).

⁷⁷⁰ See Colin Camerer & Eric Talley, *Experimental Study of Law*, in 2 HANDBOOK OF LAW AND ECONOMICS 1621, 1621 (A. Mitchel Polinsky & Steven Shavell eds., 2007) (stating that empirical studies and theory work better as a pair than in an isolated way); Eva I. Hoppe & Patrick W. Schmitz, *Can contracts solve the hold-up problem? Experimental evidence*, 73 GAMES & ECON. BEHAVIOR 186, 186 (2011) (stating that, ultimately, the question of whether contracts can prevent the hold-up problem must be empirically answered).

⁷⁷¹ See Neumann & Krieger, *supra* note 772, at 359 (stating that the value of an empirical analysis depends on the ability of other investigators to replicate the research); see also Rachel Croson, *Why and How to Experiment: Methodologies from Experimental Economics*, 2002 UNIV. OF ILL. LAW REV. 921, 922.

For instance, the theory stating that penalty clauses prevent the hold-up problem might be tested in the United States, where this kind of clauses are unenforceable.⁷⁷² If the U.S. experiments confirm the theory, the proposals stating that penalty clauses should be enforceable might have empirical support, at least in relation to the hold-up problem.⁷⁷³ The theory stating that a high level of legal remedies mitigates the hold-up problem might also be tested in the United States or in any other country. These are not, of course, the only theories that might be tested. To just name one example, other experiments, either in Colombia, or in the United States or in any other country, might test theories predicting that less stringent rules on economic duress prevent the hold-up problem.

This chapter is structured as follows. § V.B reviews the literature on experiments testing theories related to the hold-up problem. § V.C describes the theoretical framework; that is, the theories that this experiment tests. Since these theories were explained in deep detail before,⁷⁷⁴ § V.C is only a summary. § V.D describes the experimental design; i.e., the hypothetical facts that the subjects participating in the experiment will analyze before taking their decisions, the payments that they will receive, and the predictions of the results. § V.E summarizes the results of the experiment. Finally, § V.F makes some concluding remarks.

Section V.B - An Experiment on the Hold-up Problem – A Review of the Literature

Since other experiments testing theories related to the hold-up problem provide some guidance for the design of this dissertation's experiment, Section V.B reviews them, organized

⁷⁷² See *supra* § III.C.2.

⁷⁷³ See *id.*

⁷⁷⁴ See *id.*; *supra* § III.C.4.

from the oldest to the newest one. Professor Steven C. Hackett tested the theory predicting that the division of contractual surplus depends both on the party who makes a sunk investment and on its value. The results confirmed this prediction.⁷⁷⁵ Drawing on Professor Hackett's findings, this dissertation's experiment assumes that the contractual surplus of the parties to a contract for sale of goods depends on the sunk investment that the buyer makes and tests whether penalty clauses and legal remedies for breach of contract may attenuate this conclusion.

Professors Hessel Oosterbeek, Joep Sonnemans & Susan Van Velzen tested the essential theory underlying the hold-up problem; that is, the theory predicting that people underinvest in relationship-specific assets. In this experiment, one of the players (player 2) made a choice between: (1) ten pies of 1000 points with payoffs of (250, 250) for player 1 and player 2 if they did not reach an agreement (the so-called disagreement payoffs); and (2) ten pies of 1500 points with disagreement payoffs of: (a) (250,0) in the first treatment, (b) (750,0) in the second treatment, and (c) (1250, 0) in the third treatment. The size of the disagreement payoffs were varied in order to make some comparisons among them under the rationale that the larger the size, the larger the investment and, therefore, the likelier the occurrence of a hold-up. These three treatments were compared with three benchmark treatments in which the subjects were not allowed to influence neither the size of the pies nor the disagreement payoffs. After the pies were chosen, player 1 proposed a division of the ten pies. If player 2 accepted the offer; the experiment ended. Otherwise, the first pie vanished, both players received their disagreement payoffs, and player 2 made a counterproposal to divide the remaining nine pies. If player 1 did not accept this proposal; the second pie vanished, players received their disagreement points, and

⁷⁷⁵ Steven C. Hackett, *Incomplete Contracting: A Laboratory Experimental Analysis*, 31 ECON. INQUIRY 274 (1993).

the process went on until an agreement was reached or until the ten pies disappeared. The rationale underlying this experimental design is that player 2, who was entitled to choose the size of the pies, took a decision equivalent to a relationship-specific investment which made him/her vulnerable to the opportunistic behavior of player 1 during the bargaining stage. According to the prediction of game theory, through backward induction, participants should choose the smallest pie (that is, they should minimize the size of their investments in order to prevent hold-ups).

Professors Oosterbeek, Sonnemans & Van Velzen found that almost all players invested in the third treatment (disagreement payoffs of 1250,0), about half of the players invested in the second treatment (disagreement payoffs of 750, 0), and almost none of the players invested in the third treatment (disagreement payoffs of 250, 0). These findings led Professors Oosterbeek, Sonnemans & Van Velzen to conclude that the players underinvested, especially when the disagreement payoffs were low. Notwithstanding, the experimenters also concluded that underinvestment did not occur to the degree that the theory predicts because some players decided to invest even though the payoffs of their decisions (e.g., when the disagreement payoffs were 750, 0) were below the backwards induction payoffs resulting from not making the investment.⁷⁷⁶

Professors Randolph Sloof, Joep Sonnemans & Hessel Oosterbeek tested the theory predicting that an increase of outside options from a non-binding level to a binding high level may induce the socially efficient level of investment and, as a result, prevent the hold-up problem. Outside options are payments that the held-up party receives when the non-investing

⁷⁷⁶ Hessel Oosterbeek, Joep Sonnemans & Susan Van Velzen, *Bargaining with Endogenous Pie Size and Disagreement Points*, 1999 J. POPULATION ECON. 1, 14 (1999). The authors, however, did not explain why players decided to invest larger sums than the theory predicted. *See id.* at 14.

party breaches the contract. An option is binding whenever exercising it makes the investor better off than doing the opposite.⁷⁷⁷ This experiment is relevant for this dissertation because both penalties and legal remedies for breach of contract, which may prevent the hold-up problem, are examples of outside options.⁷⁷⁸

In contrast with the theoretical predictions, Professors Sloop, Sonnemans & Oosterbeek found that the level of investments did not depend on the amount of the outside option. According to this finding, the usefulness of contractual devices to prevent the hold-up problem is “rather limited in practice.”⁷⁷⁹ Notwithstanding, Professors Sloop, Sonnemans & Oosterbeek also concluded that the under-investment effect of the hold-up problem is not as harmful in practice as it seems in theory after observing that subjects made investments that were below efficient levels but above the levels that the theory predicted.⁷⁸⁰ Professors Sloop, Sonnemans & Oosterbeek, however, did not attempt to explain why outside options are not as effective in practice as in theory to prevent the hold-up problem.

The three authors of the last experiment, and a fourth scholar (Professor Arno Riedl), tested the theory predicting that legal remedies prevent the hold-up problem and, if the answer is in the affirmative, whether this protection was excessive, leading to overinvestment. Overinvestment might occur on two grounds: the insurance and the separation motives. The insurance motive guarantees to the held-up party the return of its investment even if it is in excess of an efficient level. The separation motive, in turn, gives the held-up party an incentive to invest too much in

⁷⁷⁷ *See id.* at 30.

⁷⁷⁸ *See id.*

⁷⁷⁹ *See id.*

⁷⁸⁰ *See id.*

order to increase the damages resulting from a failure to honor the promise and, therefore, to reduce the likelihood of the non-investing party efficiently breaching the contract. The results of this experiment confirmed the predictions of the theory.⁷⁸¹

Professors Tore Ellingsen & Magnus Johannesson performed an experiment where bilateral bargaining followed some unilateral investments. The results, as the theory predicted, indicated that relationship-specific investments weakened the bargaining power of held-up parties during the performance stage and, consequently, made them vulnerable to redistributive modifications.⁷⁸²

Professors Jose R. Moraes, Maria S. Macchioni & Sergio G. Lazzarini also tested the theory predicting that relationship-specific investments lead to renegotiations reducing the investing party's surplus. In the first stage, subjects acting as sellers decided whether or not to build a factory to manufacture a product which might be sold to a buyer if a contract was successfully negotiated. Building this factory was a relationship-specific investment since all other buyers' centers were far away. Subjects acting as buyers, in turn, decided whether to buy the product either from the seller making the investment or from a foreign manufacturer at a fixed price.⁷⁸³ In the second stage, happening after the factory had been built, sellers were informed that the price

⁷⁸¹ Randolph Sloof, Hessel Oosterbeek, Arno Riedl & Joep Sonnemans, *Breach remedies, reliance and renegotiation*, 26 INT'L REV. L. & ECON. 263-296, 1 (2006). Professors Sloof, Oosterbeek, Riedl & Sonnemans have performed at least other two similar experiments, which are not reviewed here because their differences with the experiments already summarized are neither considerable nor relevant for this dissertation. See Randolph Sloof, Edwin Leuven, Joep Sonnemans & Hessel Oosterbeek, *An Experimental Comparison of Reliance Levels under Alternative Breach Remedies*, 34 RAND J. ECON. 205, 205 (2000); Joep Sonnemans, Hessel Oosterbeek, & Randolph Sloof, *On the Relation Between Asset Ownership and Specific Investments*, 111 ECON. J. 791, 791 (2001).

⁷⁸² See Tore Ellingsen & Magnus Johannesson, *Is There a Hold-Up Problem?*, 106 SCANDINAVIAN J. ECON. 475-494, 476-77 (2004).

⁷⁸³ See Jose R. Moraes, Maria S. Macchioni & Sergio G. Lazzarini, 'Hold-Up' in Negotiations Involving Specific Investments: An Experimental Investigation 11 (Jan. 20, 2007) (unpublished manuscript) (*available at* <http://ssrn.com/abstract=957790>).

that the foreign manufacturer was willing to charge might have been reduced; buyers, however, learned that this price has not really changed. Put it another way, buyers were able to falsely claim that they could replace their sellers with another supplier as a strategy to obtain a renegotiation of the contract price. Professors Moraes, Macchioni & Lazzarini reported that while 62.7% of the buyers obtained a reduction of the original contract price, the new price was below than the seller's costs, making the investment unprofitable, in only 14.7% of all cases.⁷⁸⁴ Professors Moraes, Macchioni & Lazzarini speculate that behavioral reasons may explain the differences between the theory, predicting a higher frequency of hold-ups and a larger reduction of the contract price, and the experiment.⁷⁸⁵ In particular, reputation concerns or social norms might have deterred some participants from making more aggressive demands.⁷⁸⁶ In turn, buyers might have been willing to make larger investments than the theory predicts after estimating that the likelihood of being held-up was small.⁷⁸⁷

Finally, Professors Eva I. Hoppe & Patrick W. Schmitz performed an experiment to test the theory predicting that option contracts may prevent the hold-up problem.⁷⁸⁸ Under an option contract: (1) the buyer and the seller enter a contract for the option to purchase some goods in consideration of a price (the strike price); (2) the seller makes the relationship-specific investment required to manufacture the goods; and (3) the buyer decides whether or not to exercise the option to purchase the goods. According to the theory, the option may prevent the hold-up problem because a seller deciding to make a high investment would feel entitled to the

⁷⁸⁴ *Id.* at 1.

⁷⁸⁵ *Id.*

⁷⁸⁶ *Id.*

⁷⁸⁷ *Id.*

⁷⁸⁸ See Hoppe & Schmitz, *supra* note 773, at 186.

strike price, would reject any offer lower than such a price (that is, any demand for a renegotiation), and would feel aggrieved if the buyer does not exercise the option.⁷⁸⁹

The theory predicts that the option will be exercised if the seller has chosen at least the minimum level of investment required to manufacture goods whose value for the buyer is higher than the strike price (taking into account that the quantity and fitness of the good for the buyer purposes depend on the investment level).⁷⁹⁰ The seller, in turn, will only invest if the costs are below the strike price in order to make a profit. Professors Hoppe & Schmitz experimentally found that option contracts may induce investments and, as a result, prevent the hold-up problem. More particularly, the authors found that a large share of buyers exercised the option when the sellers make large investments.⁷⁹¹

Section V.C - The Theoretical Framework

The purpose of experiments, in general, is to test theories or,⁷⁹² in simpler words, to look how the world beyond the doctrine is.⁷⁹³ More to the point, this dissertation's experiment tests the theories predicting that penalty clauses in Colombia, on the one hand, and a high level of legal remedies for breach of contract, on the other hand, prevent the hold-up problem by inducing relationship-specific investments and reducing the gap between the price that the non-investing party demands under threat to breach in the performance stage and the original price. §

⁷⁸⁹ *Id.*

⁷⁹⁰ *Id.*

⁷⁹¹ *Id.*

⁷⁹² See Zeiler, *supra* note 771, at 180.

⁷⁹³ See David V Snyder, *Go out and Look: The Challenge and Promise of Empirical Scholarship in Contract Law*, 80 TUL. L. REV. 1009, 1009 (2005).

V.C summarizes the theories that this experiment tests. The word “summarizes” is used here because Chapters III and IV already discussed these theories in depth.⁷⁹⁴

1. Penalty Clauses

Penalty clauses, which are enforceable in Colombia,⁷⁹⁵ may avoid or solve the hold-up problem in the best scenario and mitigate it in the worst case. The rationale supporting this statement is that, if the non-investing party breaches the contract after the held-up party rejects a demand for a modification, a penalty might make the held-up party better off than if the contract would have been performed.⁷⁹⁶ The non-investing party might refrain from demanding such a modification after anticipating this line of reasoning

More specifically, penalty clauses might prevent the hold-up problem on at least the following four grounds. First, the amount of a penalty clause may not only include some losses that the law rarely awards but also be higher than the damages resulting from the breach of contract. Second, a penalty clause signals to the held-up party that the non-investing party intends to honor the contract and, as a result, may persuade the former to enter an idiosyncratic contract and make a relationship-specific investment. Third, penalty clauses insure the held-up party’s idiosyncratic investment. In other words, penalties are the functional equivalent of an insurance that the non-investing party issues in favor of the held-up party. Fourth, penalty clauses deter some efficient breaches and, consequently, reduce the credibility of a threat to breach. In simpler words, a rational non-investing party whose demand for a modification is

⁷⁹⁴ Regarding penalty clauses, see *supra* §§ III.B.2, IV.B.2. Regarding legal remedies for breach of contract, see *supra* §§ III.C.4 IV.C.4.

⁷⁹⁵ See C.C. Art. 1592-601 and C. COM. Art. 867.

⁷⁹⁶ Of course, this assumes not only that the penalty is sufficiently high but also that the held-up party succeeds collecting the penalty’s amount from the breaching party.

rejected will not carry out its threat to breach the contract if the amount of the penalty is higher than the benefits of breaching.

2. Legal Remedies for Breach of Contract

This dissertation's experiment tests the theory stating that a higher level of legal remedies, in comparison with the present Colombian level, might increase the degree at which this legal device mitigates the hold-up problem. This degree of mitigation is measured here in two ways. First, as a reduction in the number of relationship-specific investments that parties afraid of being held-up during the performance stage refrains to make at the formation stage of a contract. Second, as the reduction of the difference between the renegotiated price and the original price. The theory supporting this prediction is summarized below.

If remedies were fully compensatory and capital markets were perfect, the hold-up problem would not arise. In this ideal scenario, a specifically-invested party will not be concerned about a threat to breach and, therefore, will not agree to any modification decreasing its benefit of the bargain. If, for any reason, the non-investing party breaches the contract, the aggrieved party might finance litigation and recover all losses after some time.⁷⁹⁷ As a result, breach would be as good for the held-up party as performance of the contract at the original price.⁷⁹⁸

Nevertheless, neither capital markets are perfect nor, more important for this experiment, remedies are fully compensatory,⁷⁹⁹ neither in Colombia nor in the United States nor possibly in

⁷⁹⁷ See Schwartz & Scott, *supra* note 29, at 568 n. 49.

⁷⁹⁸ Charles R. Knoeber, *An Alternative Mechanism to Assure Contractual Reliability*, 12 J. LEGAL STUD. 333, 334-35 (1983).

⁷⁹⁹ See Schwartz & Scott, *supra* note 29, at 568 n.49.

any other country. Remedies are undercompensatory due to limitations preventing the aggrieved party from recovering its entire losses; to expenses needed to recover at least part of these losses; and to other unrecoverable losses.⁸⁰⁰ Regarding the first category, legal rules usually limit the recovery of unforeseeable and uncertain losses. As to the second category, the main expenses needed to recover damages are attorney fees, and other judgment costs. The third and final category includes the cost of the delay of litigation and the likelihood that the court fails to hold that the contract was breached; that is, that wrongfully conclude that the non-investing party's actions were in accordance with the law.

Even if the current legal rules were amended, legal remedies for breach of contracts would still be under-compensatory because, among other reasons, some losses might be non-verifiable for a court, the case would take some time, and some litigation expenses, such as the time of key executives, would be impossible to measure and recover. Thus, remedies are and will continue being under-compensatory regardless of the legal rules in force. The law, however, might mitigate the hold-up problem by minimizing the degree of under-compensation of legal remedies.

Section V.D – Experimental Design

1. Treatments

A bargaining experiment with three treatments is used to test the theories about penalty clauses and legal remedies for breach of contract.⁸⁰¹ The first treatment is the control or general

⁸⁰⁰ See *supra* § III.C.4.

⁸⁰¹ A bargaining game is a game “played to solve a distribution problem.” Werner Güth, Rolf Schmittberger, Rolf & Bernd Schwarze, *An Experimental Analysis of Ultimatum Bargaining*, 3 J. ECON. BEHAVIOR & ORG. 367, 367

one while the second and third treatments respectively test the role of penalty clauses and a high level of legal remedies for breach of contract in the prevention of the hold-up problem.⁸⁰² This section describes the first treatment in detail and then explains the other two treatments in reference to the first one.

a. First (General) Treatment

This treatment is divided into two stages. In the first stage, subjects divided in pairs of one seller and one buyer decides whether or not to enter a contract for the sale of one indivisible unit of bauxite. If the contract is made, the buyer will make a relationship-specific investment. In the second and final stage, beginning after the buyer had made its investment but before it has taken delivery of the bauxite, subjects acting as sellers demand to subjects acting as buyers a higher price and threaten to breach the contract by selling the indivisible unit of bauxite to a third-party if such demand is rejected. More particularly, during this stage, buyers were informed that the price that another buyer of bauxite was willing to pay for this raw material, which had been \$500 during the first stage, might have changed. Sellers, in contrast, knew that this price did not change (that is, sellers were able to bluff about this price). Subjects acting as buyers then decide whether to accept or reject their sellers' offers. If an offer is accepted, the experiment ends and the new price equals the new seller's offer. If the offer is rejected, the buyer immediately learns that its seller did not breach because the offer that a third-party had made to

(1982). In this dissertation's experiment, subjects acting as either sellers or buyers will redistribute the surplus of their contract. On the other hand, three treatments is a common number in experimental economics. *See* Croson, *supra* note 774, at 939–40 (explaining that most experimental designs have between three and six treatments).

⁸⁰² Thus, the second and the third treatment differ from the first treatment in only one factor. *See id.* at 940 (stating that if treatments differ in two or more factors and result in different behavior, the investigator would not be able to identify which factor is causing the change in the results).

buy the bauxite was very low (i.e., breaching the contract is inefficient). In this case, the experiment also ends and the new price equals the original seller's offer.

A more detailed account of the hypothetical scenario is as follows. Buyco is a buyer in the business of manufacturing and selling aluminum to its customers downstream while Selco is a seller in the business of extracting and selling bauxite, an indispensable input in the production of aluminum. Selco's costs of extracting and delivering one indivisible unit of bauxite are \$1000. Buyers of bauxite other than Buyco are very far away and, therefore, not willing to pay more than \$500 for the bauxite.

Buyco intends to use the bauxite and other inputs in the manufacturing of one customized indivisible unit of aluminum.⁸⁰³ This unit is intended to be delivered to a customer downstream, Cusco. The estimated costs of this manufacturing process are \$1000. On top of that, Buyco will make a relationship-specific investment amounting to \$1500 to customize the aluminum in accordance with Cusco's requirements. If, for any reason, Buyco cannot take delivery of the bauxite from Selco, the investment would be almost worthless (it can be sold as scrap at \$500). Due to this customization, this investment and the customized aluminum are worthless for any other customer. If Buyco closes the deal with Selco, it would also close the deal with Cusco at a price of \$7500. Otherwise, the contract with Cusco will not be agreed on and, of course, the relationship-specific investment will not be made. Cusco has accepted this price, and not a lower one, on the condition that Buyco delivers the customized aluminum according to a tight schedule

⁸⁰³ Most idiosyncratic contracts for sale of goods provide the delivery of several units during the contract term. This experiment, for the sake of simplicity, assumes that the parties to the contract trade one indivisible unit of the goods, which is equivalent to the total number of units that are manufactured and delivered in similar contracts in real business life.

provided in the contract because time is of the essence. If Buyco does not deliver the aluminum on time, Cusco will be entitled to refuse delivery; in this case, Cusco will make some adjustments to its plant and will use a non-customized kind of aluminum that it has on inventory.

After learning this information, subjects playing the roles of sellers sent an offer for the sale of bauxite and subjects playing the roles of buyers decided whether to accept or reject it. If the offer was accepted, the contract was formed and subjects participated in the second stage of the experiment. In contrast, both buyers rejecting the offer and their sellers did not participate in the second stage. These participants, however, stayed in the same place doing a moot task in order not to signal to the other subjects that they did not make a contract. For buyers, the moot task consisted of explaining in few words why they did not accept their sellers' offers. All sellers, in turn, assumed that their buyers had accepted their first offers and, if this assumption turned false, the seller's offer in the second stage was moot.⁸⁰⁴

It was efficient for the parties to enter the contract since Selco's costs of manufacturing one indivisible unit of bauxite were \$1000 while Buyco's profit of selling one indivisible unit of aluminum was \$5000 before subtracting the price of the bauxite. Put it differently, Selco should have been willing to sell the bauxite at any price above \$1000 while Buyco should have been willing to buy the bauxite at any price below \$5000. The efficient range of contracting is, therefore, (\$1000, \$5000).

Table 9 summarizes these figures.

Table 9 – Main Figures of the Hypothetical Scenario

⁸⁰⁴ This assumption saved the time that would have been necessary to inform sellers whether or not their buyers had accepted the offers.

CONCEPT	VALUE
Selco's cost of extracting and delivering one unit of bauxite	\$1000
Price that buyers other than Buyco will pay for the bauxite	\$500
Price of the customized aluminum that Buyco would sell to Cusco (AP)	\$7500
Buyco's costs of manufacturing the customized aluminum (MC)	\$1000
Buyco's investment required to manufacture the bauxite (I)	\$1500
Value of the investment (scrap) if Buyco cannot get the bauxite from Selco	\$500
Buyco's total costs (TC = MC + I)	\$2500
Buyco's profit before subtracting the cost of the bauxite (P = AP – TC)	\$5000
Price at which Selco would sell the bauxite to Buyco	TBD

In this experimental design, the buyer and not the seller is the held-up party. It could have been the other way without loss of generality; that is, the seller as the held-up party and the buyer as the non-investing company threatening to breach the contract if the price is not decreased. After all, the crucial feature of the hold-up problem in contracts for sale of goods is not the role of the investing party (either the buyer or the seller) but the fact that it cannot make a cover transaction if the contract is breached due to its relationship-specific investment.

Notwithstanding, recall that this dissertation tests the role of penalty clauses, which are a kind of private remedies, on the one hand, and of legal remedies for breach of contract, on the other hand. While remedies are always under-compensatory, the degree of under-compensation is more acute when the aggrieved party is the buyer in comparison with the seller on at least three grounds.⁸⁰⁵ To begin with, legal rules on unforeseeable damages usually limit the amount of remedies granted to aggrieved buyers but not to aggrieved sellers. In the same vein,

⁸⁰⁵ For an in-depth discussion of this topic, *see supra* § III.C.4.

limitations on uncertain losses are more a problem when the seller, and not the buyer, is the breaching party, especially if an aggrieved seller is entitled to the price. Last but not the least, a held-up seller who has received part or the full amount of the price (or, at least, a guarantee of payment that a third-party has issued) before delivering the goods might be less vulnerable to extorted modifications than a held-up buyer who has paid or guaranteed to pay part or the full amount of the price but who has not yet taken delivery of the goods.

Summing up, since not only the theory dictates that the under-compensatory nature of remedies is a driver of the hold-up problem but also that the degree of undercompensation is more acute in the case of buyers, the held-up party in this experiment is the buyer and not the seller.⁸⁰⁶ In the hypothetical scenario, incidentally, Buyco is held-up because, if Selco fails to timely deliver the bauxite, it will not be able to timely find another supplier of bauxite at a reasonable cost, will not honor its contract with Cusco, and will have incurred in a worthless relationship-specific investment.

During the second stage, all participants that entered the contract in the first stage were informed that Buyco had made its relationship-specific investment and that Selco's costs were still \$1000 but that the price that another buyer of bauxite (Thirdco) was willing to pay for this raw material, which had been \$500 during the first stage, might have changed. Due to production constraints, a seller delivering the bauxite to Thirdco would not be able to sell this mineral to Buyco. Buyers were also informed that Thirdco's offer was revealed to sellers in a confidential envelope. All envelopes, however, contained the same price as in the first stage, \$500. The price remained unchanged to create an information asymmetry between sellers and buyers. If the price

⁸⁰⁶ *See id.*

than Thirdco offers during the second stage were higher than the price that Selco and Buyco agreed on during the first stage, the seller might have had an opportunity for efficient breach, which is not the focus of the experiment.⁸⁰⁷ Thus, sellers were allowed to falsely claim to their buyers that they had received better offers for the sale of one indivisible unit of bauxite. Information about this alternative trading opportunity was non-verifiable for buyers; that is, buyers were unable to check at a reasonable cost in the market the real or approximate price that Thirdco might have offered.

Thus, if Selco breaches, Buyco would be unable to timely find another supplier at a reasonable cost to meet its tight deadline with Cusco (that is, Buyco would breach its contract with Cusco). In such a case, Buyco would not lose either the price of the bauxite because the contract provided payment upon delivery or the costs of manufacturing the aluminum, because Buyco would have not begun this process at the time Selco would have breached.

Buyco, however, would suffer the following losses. First, Buyco would lose the expected net profit of the transaction with Cusco. This profit equaled the contract price of the aluminum (\$7500) minus the sum of the manufacturing costs (\$1000) and the price of the bauxite, which varied among participants. Thus, the net profit would be \$6500 minus the contract price. Second, Buyco should pay to Cusco the value of a penalty clause, amounting to \$300. Third, the relationship-specific investment (\$1500) would be scrap with a market value of only \$500. Fourth, due to its stained reputation, other Buyco's customers would stop doing business with this company and, as a result, the lost opportunities would amount to \$300. Fifth, Buyco would

⁸⁰⁷ In other words, a credible threat of breach based on asymmetric information is enough to recreate the conditions under which the hold-up problem arises.

also suffer other good will losses valued at \$200. Sixth and finally, expected litigation expenses would amount to \$700 (including the cost of enforcing a favorable judgment). These expenses are disaggregated in attorney fees (\$400) and other judgment costs (\$300). On top of that, the expected time between the breach of contract and the enforcement of a favorable judgment is four years while the likelihood of Selco prevailing in court is 10% (e.g., the court holds that Selco did not breach but legally terminated the contract). Table 10 summarizes these figures.

Table 10 – Buyco’s Losses

LOSSES	VALUE
Expected profit	\$6500 - contract price
Relationship-specific investment	\$1000
Penalty paid to Cusco	\$300
Loss of business opportunities	\$300
Good will losses	\$200
Litigation expenses	\$700
TOTAL	\$9,000 – contract price

If Selco breaches the contract and Buyco sues Selco for this reason, Buyco would recover the following damages. First, although other suppliers of bauxite are far away to deliver this mineral to Buyco at a reasonable cost and taking into account that the available existences of bauxite would have been delivered to Thirdco, this dissertation assumes that a court would deny specific performance.⁸⁰⁸ The court, instead, would assume that Buyco might have manufactured standard aluminum using the bauxite and might have obtained a reasonable market profit

⁸⁰⁸ This assumption is made because the purpose of this experiment is not to test the role of specific performance in the prevention of the hold-up problem. *See generally* C. COM. Art. 870.

amounting to \$5850 minus the price of the bauxite.⁸⁰⁹ Second, the court would refuse to grant to Buyco the value of the penalty (\$300) that it shall pay to Cusco, and the value of the now almost worthless relationship-specific investment (a loss of \$1000 after taking into account the market value of the scrap) on the grounds that these are consequential damages that Buyco did not mention to Selco at the making of the contract.⁸¹⁰ Third, the court would only grant \$200 out of the \$300 value of lost opportunities (this sum already takes into account the 90% likelihood of Buyco prevailing at trial), rejecting the other \$100 due to its speculative nature. The court would refuse to grant any damages related to good will losses on the same grounds. Fourth, the court would only grant to Buyco \$450 for attorney costs and other judgment costs. \$450 is the value of the attorney and other judgment costs that a court would find reasonable (\$500), adjusted for the 90% likelihood of Buyco prevailing at trial.⁸¹¹ Table 11 summarizes the damages that Buyco would receive in case of breach of contract. These figures, incidentally, are common knowledge for both buyers and sellers.

Table 11 - Damages in the First Treatment

DAMAGES	ACTUAL LOSS	REMEDIES
Expected profit	\$6500 – Contract price	\$5850 - Contract price
Relationship-specific investment	\$1000	\$0
Penalty paid to Cusco	\$300	\$0
Lost opportunities	\$300	\$200
Good will losses	\$200	\$0
Litigation expenses	\$700	\$450

⁸⁰⁹ This profit before taking into account the price of the bauxite might be disaggregated into a market price of \$7000 for standard aluminum and a variable manufacturing cost equal to \$500. The net profit of \$6500, adjusted by the 90% likelihood of Buyco prevailing in trial, equals \$5850.

⁸¹⁰ See C.C. Art. 1616.

⁸¹¹ See C.G.P. Art. 361-66.

TOTAL	\$9000 – Contract price	\$6500 – Contract price
Difference between actual loss and remedies		2500

Based on this information, the bargaining rounds began. Both sellers and buyers knew beforehand that there was only one round of bargaining. If the facts of this experiment were real, the rounds of renegotiation would have been more than one. Increasing the number of rounds, however, would have increased the time necessary for performing the experiment without obtaining any benefit in exchange. After all, if the number of rounds would have been more than one, sellers' threats in all rounds other than the last one would have not been credible because buyers would have anticipated that sellers would prefer to make an additional, last offer, rather than breaching the contract. Put it differently, rational buyers would have rejected any offer and have waited few minutes, without assuming any cost, for a better proposal in the next round.⁸¹² Only the last offer is an ultimatum.

The bargaining round was divided into the following two parts. First, subjects acting as sellers demanded a new price (p_1) threatening to breach the contract if Buyco rejected this offer (a take-it-or-leave-it offer). Standard theory, assuming rational actors and that utility only results from money, predicts that the new price (p_1), should be higher than the original contract price (p_0). Sellers' offers may have either said the true about Thirdco's offer or may have falsely claimed that the offered price was higher. To prevent sellers from using funny, obscene, inappropriate or out of context words, they used the following message: "We think that the

⁸¹² See John Kennan & Robert Wilson, *Bargaining with Private Information*, 31 J. ECON. LITERATURE 45, 52 (1993) ("[A] party will be unwilling to accept an offer to which he can make a counteroffer costlessly."). Buyers in this experiment were not allowed to make counteroffers; however, a rejection of a buyer's offer in a two-stage bargaining stage would be equivalent to a counteroffer of keeping the contract price unmodified.

contract price is too low considering the current conditions of the market, especially after receiving a Thirdco's offer for our bauxite at a price of \$____. We propose to you the following new price _____. If this new price is not accepted, our company will breach the contract and sell the bauxite to Thirdco''

Second, subjects acting as buyers decided whether or not to accept the new price (). Buyers were not allowed to make counteroffers.⁸¹³ If the offer was accepted, the experiment ended with a new price agreement. Otherwise, buyers immediately learned that their sellers did not carry out their threats (that is, that they did not breach the contract). Recall that since the Thirdco's offer was \$500 while the original contract price should have been at least \$1000, breach would be inefficient. Thus, in this case, the experiment ended without a new price agreement (i.e., the final price was the agreed price during the first stage).

b. Second Treatment – Penalty Clauses

In contrast with the general treatment, the contract between Selco and Buyco in the second treatment provided an enforceable penalty clause. Pursuant to this clause, any party breaching the contract shall pay to the aggrieved party \$7000 regardless of the quantity of actual damages. This value already takes into account the likelihood of a court reducing its amount.⁸¹⁴ Table 12 summarizes the damages applicable to this treatment.

Table 12 - Damages in the Second Treatment

DAMAGES	ACTUAL LOSS	REMEDIES
---------	-------------	----------

⁸¹³ The rationale of this restriction is that held-up parties usually have little or zero bargaining power. *See supra* II.B.

⁸¹⁴ For example, assume that the original value of the penalty clause is \$9000 and that a court will reduce it to \$6000 and \$4000 with a 25% and 25% likelihood, respectively. It follows that the expected value of the penalty clause is $\$11,000 \cdot 50\% + \$8000 \cdot 25\% + \$6000 \cdot 25\% = \7000 . The second treatment, on the other hand, assumes that the costs of enforcing the penalty clause are zero. *See generally* C. COM. Art. 867.

Expected profit	\$6500 – Contract price	
Relationship-specific investment	\$1000	
Penalty paid to Cusco	\$300	
Lost opportunities	\$300	\$7000
Good will losses	\$200	
Litigation expenses	\$700	
TOTAL	\$9,000 – Contract price	
Difference between actual loss and remedies		2000 – Contract price⁸¹⁵

c. Third treatment – High level of legal remedies

In this treatment, a court would grant a higher level of remedies in comparison with the general treatment. More specifically, a new Colombian legal rule would entitle Buyco to fully recover its relationship-specific investment (a kind of consequential and, therefore, unforeseeable damage) and also to recover a greater amount of other losses, as Table 13 shows.

Table 13 - Damages in the Third Treatment

DAMAGES	ACTUAL LOSS	REMEDIES
Expected profit	\$6500 – Contract price	\$5850- Contract price
Relationship-specific investment	\$1000	\$1000
Penalty paid to Cusco	\$300	\$200

⁸¹⁵ Thus, if the original contract price is above \$2000, a breach would make Buyco better off in comparison with performance of the contract (of course, provided that Buyco successfully collect the amount of the penalty from the breaching seller).

Lost opportunities	\$300	\$200
Good will losses	\$200	\$150
Litigation expenses	\$700	\$600
TOTAL	\$9000 – Contract price	\$8000 – Contract price
Difference between actual loss and remedies		1000

Anticipating some criticisms, it could be said that an amendment of the legal rule on remedies is not necessary since the parties to a contract are entitled to freely bargain around the default rule and to provide that not only some unforeseeable losses but also some uncertain losses are recoverable. Most of the time, however, a non-investing seller will not be willing to bargain around this default rule or, even if this seller is willing to compromise, such bargaining will entail high transaction costs.⁸¹⁶

2. Main Features and Controls of the Experiment

The experiment was performed in Medellín, Colombia. Subjects were undergraduate students enrolled in law programs in *Universidad EAFIT* and *Universidad Pontificia Bolivariana*. According to the curriculum of their law programs, they might have had basic knowledge of economic notions but were not expert in these topics. Overall, one hundred and eighty subjects participated and, since each subject only participated in one treatment, the number of pairs was ninety in total and thirty per treatment. This figure ensured the robustness of the results and the statistical power required in law & economics' experiments.⁸¹⁷

⁸¹⁶ See Korobkin (Status Quo), *supra* note 502, at 611-12 (finding that contracting parties usually prefer default rules to alternative states).

⁸¹⁷ See Croson, *supra* note 774, at 940-42 (indicating that a rule of thumb is having between twenty and thirty observations in each treatment).

Participants learned that the information and answers submitted during the sessions were confidential and, indeed, the experimenter was not able to associate individual decisions with the name of the participants who made them. Furthermore, all interactions between buyers and sellers were anonymous. In other words, subjects did not know the identity of their trading partners. Anonymity was preserved to reduce the bias that would have resulted from subjects making decisions based on friendship or peer pressure,⁸¹⁸ on a desire to tease other subjects,⁸¹⁹ or to please the experimenter.⁸²⁰

Payments were made in cash at the end of the experiment in an individual and discreet form. Just for their participation in the experiment, all subjects were entitled to receive a show up fee of \$9000 COP (around \$5).⁸²¹ An additional fee, contingent on the decisions that each subject took was capped at \$30,000 COP (around \$16).⁸²² These figures are in accordance with other experiments in law and economics.⁸²³

As a rule of thumb, the higher the final price that subjects acting as sellers obtained for their companies or the lower such a price in the case of buyers, the more the money that they received for their participation in this experiment. Payments depended on the final price but not

⁸¹⁸ For example, without anonymity, subjects might not want to be regarded too greedy by their classmates. *See* Moraes, Macchioni & Lazzarini, *supra* note 786, at 15.

⁸¹⁹ *See id.* at 17.

⁸²⁰ *See* Jennifer Arlen & Eric L. Talley, *Introduction to Experimental Law and Economics*, in EXPERIMENTAL LAW AND ECONOMICS xv (Jennifer Arlen & Eric Talley eds., 2008). *See generally* Alvin E. Roth, *Bargaining experiments*, in HANDBOOK OF EXPERIMENTAL ECONOMICS 253 (John H. Kagel & Alvin E. Roth eds., 1995). (indicating that, in comparison with anonymous bargains, there is a lower rate of disagreements in face-to-face experiments, where subjects have more difficulty controlling preferences or being rude).

⁸²¹ For the conversion rate between the Colombian Peso and the U.S. dollar, *see* *Superintendencia Financiera de Colombia* (Colombian Financial Superintendence), <http://www.superfinanciera.gov.co/> (last visited Nov. 19, 2013).

⁸²² *See* Arlen & Talley, *supra* note 823, at xxx (noticing that payments should reflect the payoffs that sophisticated parties will receive if the facts of the hypothetical scenario were true); *see also* Croson, *supra* note 774, at 944 (highlighting that subjects must be paid in accordance to their choices).

⁸²³ *See* Croson, *supra* note 774, at 943.

on the original one. Otherwise, sellers would have had a perverse incentive to offer a low original contract price in order to maximize the price increase in the renegotiation stage while buyers would have a similar incentive to accept a high original contract price. Since seller's costs were \$1000 while the buyer's profit before subtracting the bauxite price was \$5000, the original contract price should have been within the range from \$1000 to \$5000, whose median is \$3000. Thus, a high original contract price (e.g., \$4000) gave a start advantage to the seller and, conversely, a low original price (e.g., \$2000) gave a start advantage to the buyer.

More particularly, a seller received the minimum additional payment (\$0) if the renegotiated price was \$1,000 or less and the maximum payment if the price was \$5,000 or more. Conversely, a buyer received the minimum additional payment (\$0) if the price was \$5,000 or higher, and the maximum payment if the price was \$1,000 or lower. As to other prices, payments were calculated at a pro rata basis. The formulas to calculate the exact value of this additional fee appear in Table 14. p_0 means the original contract price, and p_1 means the renegotiated price. Payments were rounded to the closest thousands of pesos. For example, if the calculation equaled \$11,577 COP, the payment was \$12,000. In contrast, if the calculation equaled \$11,260, the payment was \$11,000.

Table 14 - Payments in Addition to the Show up Fee

SCENARIO	PAYMENT PER TREATMENT (US\$)
----------	------------------------------

SELLERS	The buyer rejected its seller's first offer ⁸²⁴	\$0
	The buyer accepted its seller's first offer	$\begin{aligned} &\text{If } p_1 \geq \$5000, \text{ payment} = \$0; \\ &\text{if } p_1 \leq \$1000, \text{ payment} = \$30.000; \\ &\text{if } \$1000 < p_1 < \$5000, \text{ payment} = \\ &\$30.000 * (p_1 - \$1000) / \$4000 \end{aligned}$
BUYERS	The buyer rejected its seller's first offer	\$0
	The buyer accepted its seller's first offer and, regardless of whether the second offer was accepted, the seller did not breach the contract.	$\begin{aligned} &\text{If } p_1 \geq \$5000, \text{ payment} = \$0; \\ &\text{if } p_1 \leq \$1000, \text{ payment} = \$30.000; \\ &\text{if } \$1000 < p_1 < \$5000, \text{ payment} = \\ &\$30.000 * (\$5000 - p_1) / \$4000 \end{aligned}$
	The buyer accepted its seller's first offer, rejected the second offer and its seller breached the contract. ⁸²⁵	\$0

3. Qualitative Hypotheses (Prediction of Results)

The prediction of the results under standard economic theory will be made using the method of backward induction. For that purpose, recall that the amount of the unrecoverable losses of a buyer suffering a breach are \$2500 in the general treatment,⁸²⁶ \$2000 minus the contract price in the penalties treatment,⁸²⁷ and \$1000 in the remedies treatment.⁸²⁸ Since the amount of unrecoverable losses depends on the contract price in the penalties treatment, it is

⁸²⁴ Along this chapter, the pronoun "its" is used to refer to the either buyer or seller's counterpart taking into account that both parties are companies. Of course, the pronouns his/her might also be used considering that individuals and not companies took the decisions during the experimental sessions.

⁸²⁵ As mentioned earlier (*see supra* p. 204), sellers did not breach the contracts because it was inefficient. Buyers, however, did not know that and were informed that if that breach occurred, their additional payment would be zero. This reflects the information asymmetries during the experiment.

⁸²⁶ *See supra* Table 11.

⁸²⁷ *See supra* Table 12.

⁸²⁸ *See supra* Table 13.

necessary to assume a value for this price before applying the method of backward induction. Recalling that the seller's costs are \$1000 and that the buyer's profit is \$5000 before paying the price of the bauxite, it is assumed for the three treatments that the parties split the differences and that the contract price of the bauxite is \$3000. In such a case, the profit in all treatments is \$2000 ($\$5000 - \3000) and the unrecoverable losses in the penalties treatment are $-\$1000$ (that is, the aggrieved buyer obtains a net benefit from breach provided that it successfully collects the amount of the penalty). An assumption about the likelihood of breach is also necessary to use the method of backward induction: suppose that the buyer estimates this likelihood in 50%.

- a. Hypothesis 1: There Might Be Differences Among Treatments Regarding the Number of Buyers who Rejects their Seller's First Offers.

Table 15 shows the payoffs for the three treatments using the method of backward induction.

Table 15 – Backward induction to determine whether buyers decide to invest

TREATMENT	DECISION - FIRST STAGE	STATE OF NATURE - SECOND STAGE	PAYOFF	EXPECTED PAYOFF
General	Investing	Breach	$-\$2500*50\%$	-\$1250
	No investing	Performance	$\$2000*50\%$	
Penalties	Investing	Breach	$\$1000*50\%$	\$1500
	No investing	Performance	$\$2000*50\%$	
Remedies	Investing	Breach	$-\$1000*50\%$	\$500
	No investing	Performance	$\$2000*50\%$	
			\$0	\$0

As Table 15 indicates, refusing to invest is a better decision for a buyer in the general treatment (payoff of \$0) than investing (expected payoff of -\$1250). Indeed, a buyer in the general treatment would only invest when the likelihood of breach is estimated at any percentage below 44.4444%. In that case, the expected payoff resulting from breach would be $\$2500 * 44.4444\% = \1111.1111 , the same amount than the expected payoff resulting from performance ($\$2000 * 55.5556\% = \1111.1111).

In sheer contrast with the general treatment, investing makes a buyer better off than refusing to invest in the penalty treatment regardless of the likelihood of breach. After all, and due to the amount of the penalty, breach generates a net profit for the buyer. Thus, the expected payoff of investing is \$1500 while the payoff of refusing to invest is, of course, \$0.

Finally, and under an assumption of a 50% likelihood of breach, a buyer is better off investing (expected payoff of \$500) than doing the opposite in the remedies treatment (payoff of \$0). This buyer would only refuse to invest if the likelihood of breach is above 66.6667%. In that case, the expected payoff resulting from breach would be $\$1000 * 66.6667\% = \666.6667 , the same amount that the expected payoff resulting from performance ($\$2000 * 33.3333\% = \666.6667).

Naturally, the predictions indicated above are based on standard economic theory. Behavioral reasons and notions such as risk aversion and fairness might alter the decisions of buyers. For instance, the numbers indicated above suggest that a buyer in the penalty treatment should always invest. Such buyer, however, might be afraid of not only suffering a breach but also of failing to collect the amount of the penalty, a situation in which it would suffer an unrecoverable loss. To avoid this scenario, this buyer might prefer to decline the offer to enter

the contract. Similarly, and even if the method of backward induction suggests that investing is the optimal decision, a buyer in either the general or in the remedies treatment might refuse to invest after considering that the seller's offer is unfair (e.g., above \$3000). Finally, recall that the method of backward induction was applied assuming that the original price was \$3000. If this price is higher, the buyer's expected profit is, of course, lower, and the buyer would be less willing to invest given a certain estimation of breach. The opposite is also true, if the offer is lower, the expected profit would be higher and the buyer would be more willing to invest.

b. Hypothesis 2: There Should Be Differences Among Treatments Regarding the Price of the Original Contract

As explained earlier,⁸²⁹ the theory predicts that penalty clauses and a higher level of legal remedies for breach of contract may protect investing parties from suffering a hold-up. These contractual safeguards, however, do not come for free. More particularly, the cost of these safeguard should be a price increase in the penalties and in the remedies treatment in comparison with the general treatment. As to penalties, the seller might only accept to provide a penalty clause in the contract if the buyer accepts a higher price. Regarding remedies, the protection comes from the law and not from the contract itself and the parties cannot change the legal rules (that is, the seller cannot propose to enter a contract governed by less stringent legal rules on remedies). Notwithstanding, a higher level of remedies might make a seller less willing to enter a contract (since it would be more expensive to get rid of it). As a result, the seller might enter the contract but only after requesting a higher price in comparison with a scenario in which the level of legal remedies is lower.

⁸²⁹ See *supra* § V.C.

The difference between the price in either the penalties or the remedies treatment and the price in the general treatment should be related to the differences in the amount of damages that the seller should pay to the buyer in case of breach. These payments are \$6500 minus the contract price in the general treatment, \$7000 in the penalties treatment, and \$8000 minus the contract price in the remedies treatment. Assuming that the contract price is \$3000, the payments, in the same order, are \$3500, \$7000, and \$5000. It follows that the price differential when a buyer requests a penalty clause should be \$3500 ($\$7000 - \3500) and that the same differential when the law grants a higher level of legal remedies should be \$1500 ($\$5000 - \3500).⁸³⁰

c. Hypothesis 3: There Should Be Differences Among Treatments Regarding the Number of Buyers who Accepted the First Offer and Rejected the Second Offer

The theory predicts that both penalty clauses and a higher level of remedies for breach of contract protect investing parties from unfavorable renegotiations during the performance stage.⁸³¹ As a result, the number of buyers accepting their first sellers' offers and rejecting the second ones should be higher in both the penalties and the remedies treatments in comparison with the general treatment. Furthermore, and since the penalty clause seems a better protection against a extorted modification than the higher level of remedies (recall that under the penalty treatment the breach entails a net benefit for an aggrieved buyer), the number of buyers accepting their first sellers' offers and rejecting the second ones in the penalty treatment should be higher than in the remedies treatment.

⁸³⁰ Again, behavioral reasons might generate some deviations from these predictions. *See supra* p. 212.

⁸³¹ *See supra* § V.C.

d. Hypothesis 4: There Should Be Differences Among Treatments as to the Price that Triggers the Rejection in the Second Stage

For the reasons indicated in the explanation of the third hypothesis, a buyer in the general treatment would only reject the demand for a renegotiation under threat to breach at a price higher than a buyer in the remedies treatment. Similarly, a buyer in the remedies treatment would only reject such a demand at a price higher than a buyer in the penalties treatment. After all, penalties, and a higher level of remedies to a lower extent, should increase the incentives that an investing party has to reject a demand for a modification or, in other words, to be less afraid of a breach if the threat is carried out.

e. Hypothesis 5: There Should Be Differences Among Treatments Regarding the Prices that Sellers Offers in the Second Stage and that Their Buyers Accepts

For the same reasons indicated in the explanation of the third and the fourth hypotheses, there should be differences among the three treatments regarding not only the renegotiated prices but also the gaps between these renegotiated prices and the original offers. Thus, the lowest average renegotiated price should appear in the general treatment, which does not include any protection against the hold-up problem. In turn, the average renegotiated price in the remedies treatment should be higher than the same price in the general treatment but lower than in the penalties treatment.

f. Hypothesis 6: There Should not Be Differences Among Treatments Regarding the Sellers' False Claims About the Thirdco's Offer for the Bauxite

Although estimating in advance the seller's false claim about the Thirdco's offer for the bauxite is very difficult, some comments are possible. First, there should not be differences (at

least significant) among treatments. Second, the higher the original seller's offer, the higher the false Thirdco's offer. After all, the third-party's offer should be higher than the original price to increase the likelihood of the buyer accepting the price increase. Third, the Thirdco's offer should be lower than the seller's second offer. Otherwise, the buyer would anticipate that the claim is false since it would be better for the seller to deliver the bauxite to Thirdco and not to this buyer.

g. Hypothesis 7: There Should Be Weak Extraction of Rents but not Strong Rejection of Rents

Extraction of rents may be divided in two kinds. On the one hand, a weak extraction of rents arises when the renegotiated price is higher than the original one but not above the buyer's total costs (\$5000).⁸³² Thus, while an investing party is worse off after the renegotiation, it is still making a profit of the contract. A strong extraction of rents, in contrast, occurs whenever the buyer accepts a demand for a new price higher than \$5000. More generally, a strong extraction of rents arises whenever the new price turns the held-up party's profits into red numbers.⁸³³ To be sure, both kinds of extraction of rents are harmful for investment effects. The degree of harmfulness, however, is different. The weak extraction of rents is the lesser of two evils; after all, the contract surplus of the held-up party is reduced but this company is still obtaining a profit from the contract. Put it another way, the held-up party is better off performing a contract where the extraction of rents have arisen than never entering in the original contract. In sheer contrast, a

⁸³² For the notion of strong and weak extractions of rents in experiments, see Moraes, Macchioni & Lazzarini, *supra* note 786, at 15.

⁸³³ *See id.*

held-up party suffering a strong extraction of rents would prefer not having entered the original contract because in such scenario the losses would have been avoided.

While a weak extraction of rents should occur frequently in the experiment, the strong version of this extraction should be rare or even inexistent. After all, recall that the unrecoverable losses of a buyer in case of breach are \$2500, \$2000 minus the contract price, and \$1000 in the general, penalties, and remedies treatments, respectively. The penalties treatment is the easiest to analyze. Any original price above \$2000 entails that the buyer would obtain a net benefit from breach (provided that it successfully collect the amount of the penalty). Therefore, no buyer in the penalty clause should accept a renegotiated price above \$5000.

As to the other two treatments, a rational buyer would only accept a price above \$5000 if the losses measured as the renegotiated price minus the original price are lower than the unrecoverable losses resulting from the seller carrying out its threat to breach. For instance, a buyer in the general treatment who accepted a price of \$4000 in the first stage might accept a price up to \$6500 in the second stage. Similarly, a buyer in the remedies treatment who accepted a price of \$4800 in the first stage might accept a price up to \$5800 in the second stage. Behavioral reasons, however, might alter the assumptions of the standard economic theory. For instance, buyers might reject too high prices out of spite even if accepting them is better than suffering greater unrecoverable losses.

Section V.E – Results of the Experiment

The data collected during the experimental sessions and its analysis is presented below.

1. There Are Not Significant Differences Among Treatments Regarding the Number of Buyers who Rejected their Sellers' First Offers

Table 16 summarizes the information of pairs who did not reach the second stage.

Table 16 – Number of Buyers Rejecting their Sellers’ First Offers

TREATMENT	BUYERS REJECTING THE FIRST OFFER	SELLER’S OFFER (AVERAGE)
General	4	\$2963
Penalty Clauses	6	\$2183
Legal Remedies	5	\$2620
AVERAGE	5	\$2537
Standard Deviation	1	\$994
Pairs Reaching Second Stage	75	\$1923

Recall that Selco’s total costs of extracting and delivering the bauxite were \$1000 while Buyco’s profit was \$5000 minus the contract price.⁸³⁴ Thus, sellers should have proposed prices between \$1000 and \$5000 and buyer should have accepted these offers provided that they believed that unfavorable price renegotiation and breach was unlikely. In accordance with the first part of this forecast and save two participants who offered prices below \$1000,⁸³⁵ all sellers offered prices higher than \$1000 and lower than \$5000 (indeed, the lowest price was \$1000 and the highest was \$4750). In contrast with the second part of the theoretical prediction, however, some buyers did not accept their sellers’ first offers in spite of them being lower than \$5000.

On the other hand, while the number of buyers rejecting their sellers’ first offers differs among treatments, such differences are negligible. In more statistical terms, these small differences combined with the also small number of observations does not allow for rejecting the

⁸³⁴ See *supra* § V.D.

⁸³⁵ One seller offered a price of \$800 and another a price of \$780. Of course, their buyers accepted these offers and, less predictably, the sellers offered a new price during the second stage, which was higher but still lower than the cost of extracting the bauxite (\$880 and \$810). Perhaps, these participants did not understand the instructions or the figures of the hypothetical case well. An alternative explanation is also plausible: perhaps these sellers did not misunderstand the instructions but were just very risk-averse taking into account that other buyers of bauxite were only willing to pay \$500 for this mineral (that is, they were not making any profit but, at least, reducing the losses).

hypothesis stating that the number of acceptance of original offers varied significantly within treatments. In other words, the likelihood of reaching an agreement in the first stage did not depend on whether either the original contract provided a penalty clause or the law granted a high level of legal remedies for breach of contract.

Since it was efficient to enter the contract in the first stage, behavioral and economic reasons must explain why fifteen out of ninety buyers rejected their sellers' first offers. Some behavioral reasons might have been either a misunderstanding of the hypothetical case or a feeling that the offer was too high and, therefore, unfair.⁸³⁶ The economic reasons, in turn, are more related to the hold-up problem and, more particularly, linked to beliefs about the possibility of an unfavorable price renegotiation or breach during the second stage. After all, some participants might have concluded that entering the contract and therefore, making an investment whose profitability depended on the prompt delivery of the bauxite for a seller without competitors in the area triggered a too high risk that was not commensurate with the offer, especially taking into account the likelihood of breach resulting from a third-party offering a higher amount for the bauxite at a larger stage.

Some qualitative evidence from the experiment supports this statement. Buyers who did not reach an agreement in the first stage explained why they rejected their sellers' offers. Most answers were quite simple, just stating that the offer was too high. Other answers, however, are quite revealing. One buyer of the general treatment, for instance, rejected because the profit was

⁸³⁶ Nonetheless, this reason does not seem very plausible considering that the efficient range of prices was between \$1000 and \$5000 and that the average price of rejected offers was, for all treatments, below the median of this range (\$3000), which may have signaled a fair distribution of the profits. In any case, the focus of the experiment was not on these behavioral reasons and, therefore, it did not collect more information to prove these assumptions.

too low for a too risky business. Another buyer, this time from the remedies treatment, provided a similar reason: the risks were too high to accept the offer. A third buyer, in the penalty treatment, stated that the offer was too high for a seller lacking any other buyer to purchase the bauxite at a price above its costs. Other two buyers, both in the remedies treatment, claimed that the profit resulting from their sellers' offers was not enough taking into account the investment necessary to manufacture customized aluminum. In short, all these buyers, while presumably arriving to the experiment without knowing anything about the hold-up problem, understood the risks of suffering breach due to a third-party making a better offer for a bauxite and of making an investment necessary to sell customized aluminum for a customer downstream whose profitability depended on the seller of the bauxite timely honoring its promise. Put it another way, such buyers were not willing to accept their sellers' offers unless the prices incorporated the contract risks through a downwards adjustment (that is, through a discount).

Admittedly, and according to the economics of the hold-up problem,⁸³⁷ the reluctance to enter the contract should have been ameliorated in both the penalties and the remedies treatment in comparison with the general treatment. After all, both penalties and a higher level of remedies for breach of contract increase the protection against a buyer who might be held-up by its seller. The results, however, do not indicate major differences between the willingness to enter the contract in the general treatment, on the one hand, and in either the penalties or the remedies treatment, on the other hand. As a result, the data does not allow for concluding that either penalties or a higher level of remedies reduce the under-investment effect of the hold-up problem.

⁸³⁷ See *supra* § II.A.

Nevertheless, as Table 15 indicates,⁸³⁸ some differences do exist among treatments regarding the threshold from which buyers are no longer willing to accept their sellers' offers. Indeed, such threshold is lower in the remedies treatment (\$2620) in comparison with the General treatment (\$2963) and it is reduced even further in the penalties treatment (\$2183). At first sight, therefore, penalties, and also remedies to a lower extent, reduce the price that the investing party tolerates during the contract negotiation and that the non-investing party may obtain if it intends to reach an agreement with its buyer. The differences, however, are not statistically significant at the 10% level since the $P(T \leq t)$ value is 0.2273 when the general and the penalties treatment are compared (the t stat and the degrees of freedom – hereinafter DF – are, respectively, 1.3078 and 8), and 0.6875 when the general and the remedies treatments are compared (t stat=0.4194, and DF=7).

2. There Are Descriptive but not Significant Differences Among Treatments Regarding the Price of the Original Contract

For the seventy five pairs, out of the ninety pairs participant in the experiment, who entered a contract, some differences among the original prices exist among treatments. Table 17 shows these prices.

Table 17 – Original Prices for Pairs Reaching the Second Stage

TREATMENT	NUMBER OF BUYERS ACCEPTING THEIR SELLERS' OFFER	ORIGINAL SELLER'S OFFER (AVERAGE)
General	26	\$2077
Penalty Clauses	24	\$1778

⁸³⁸ See *supra* Table 15.

Legal Remedies	25	\$1901
AVERAGE	25	\$1923
Standard Deviation		\$785

At first sight, these numbers suggest that both penalty clauses and a higher level of legal remedies for breach of contract, to a lower extent, have a downward effect on the original seller's offer. More precisely, the difference between the sellers' first offers in the general and in the penalty treatments is 14.3958% while the difference between these offers in the general and in the remedies treatments is 8.4738%. Undeniably, these are not big percentages but neither negligible amounts, especially when the contract price is in the nine-digits as usually happen in complex contracts leading to hold-up situations.

Since the theory dictates that a rational seller usually accepts a penalty clause in exchange for a premium which, of course, is a price increase,⁸³⁹ it is surprising that the original prices in the penalty treatment were lower than in the general one. In any event, these price differences among treatments could be good news for held-up parties. Even if a buyer is held-up in the second stage and, therefore, if the price is increased, a lower original price in both the penalties and the remedies treatment might entail a head-start and, therefore, mitigate the hold-up problem under the assumption that the lower the original price, the lower the renegotiated price. A more formal statistical analysis, however, does not allow for categorically concluding that either penalties or a high level of remedies push downwards the original offer that a seller makes to its buyer. On the one hand, a *t* test does not allow for rejecting the equality of prices in the general and in the

⁸³⁹ See *supra* § III.B.2.

penalty treatments. To be sure, the results are not conclusive taking into account, as Table 18 indicates, that the $P(T \leq t)$ value is 0.1039, a figure slightly higher than the figure required to reject the hypothesis of equality of prices when the significance level is relaxed to ten-percent.

Table 18 – Testing the Equality of Prices in the General and in the Penalties Treatment

<i>t</i> – TEST	VALUES
DF	48
<i>t</i> Stat	1.6575
$P(T \leq t)$ two-tail	0.1039
t Critical two-tail	2.0106

In respect of remedies, the results are much clearer. A *t* test does not allow for rejecting the equality of prices in the general and in the remedies treatments, as Table 19 shows.

Table 19 – Testing the Equality of Prices in the General and in the Penalties Treatment

<i>t</i> – TEST	VALUES
DF	49
<i>t</i> Stat	0.9519
$P(T \leq t)$ two-tail	0.3458
t Critical two-tail	2.0096

3. There Are Not Significant Differences Among Treatments Regarding the Numbers of Buyers who Accepted the First Offer and Rejected the Second Offer

Recalling that sellers' threats to breach were empty ones, an extraction of rents occurred whenever a buyer accepted both its seller's first and second offers. In principle, this event should be less frequent both in the penalties and in the remedies treatments than in the general one. In

the experiment, however, no significant differences among treatments aroused, as Table 20 shows.

Table 20 – Buyers Accepting their Sellers’ First Offer and Rejecting the Second One

TREATMENT	TOTAL OF PAIRS - SECOND STAGE	BUYERS REJECTING THE SECOND OFFER	ORIGINAL SELLER’S OFFER (AVERAGE)⁸⁴⁰	FINAL SELLER’S OFFER (AVERAGE)⁸⁴¹	DIFFERENCE
General	26	5.0 (19%)	\$2660	\$4050	\$1390
Penalty Clauses	24	5.0 (21%)	\$2020	\$3500	\$1480
Legal Remedies	25	7.0 (28%)	\$2084	\$3029	\$944
AVERAGE	25	5.7 (23%)	\$2235	\$3468	\$1233
Standard Deviation		1.2	\$722	\$767	\$705

Admittedly, the percentage of buyers rejecting the seller’s second offer in the penalty treatment and both the percentage and the number of buyers doing the same in the remedies treatment are higher than the figures in the general treatment. Nonetheless, the low number of pairs rejecting the second offer and, more noticeably, the small differences among treatments does not allow for concluding that either penalty clauses or a high level of remedies increase the protection to held-up buyers. To be sure, the data do not support either the opposite conclusion, that is, that penalty clauses and a high level are not useful to prevent the hold-up problem or, more particularly, to reduce the likelihood of rejecting a demand for a modification backed by an empty threat to breach. In sum, the data are inconclusive and this might be due to a small sample size.

⁸⁴⁰ This considers only the subset of buyers who accepted the first sellers’ offer and rejected the second one.

⁸⁴¹ Again, this considers only the subset of buyers who accepted the first sellers’ offer and rejected the second one.

4. There Are Descriptive but not Significant Differences Among Treatments as to the Price that Triggered the Rejection in the Second Stage

As Table 19 indicates,⁸⁴² the average price at which a seller's offer in the second stage is rejected is lower in the penalties treatment (\$3500) than in the general treatment (\$4050) and it is reduced even further in the remedies treatment (\$3029). Thus, other things being constant, either the contract providing a penalty clause or the law increasing the level of remedies for breach of contract seems to reduce the maximum price at which a held-up buyer is willing to accept an extorted renegotiation. These results are in sync with the theoretical predictions.⁸⁴³

A *t* test fails to confirm this finding in respect of penalty clauses but do so as to legal remedies. On the one hand, the *t* test does not allow for rejecting the hypothesis of equality of prices in the sellers' second offers that their buyers rejected when the general and the penalties treatment are compared ($P(T \leq t)$ value = 0.27; t stat=1.1820, and $DF=8$). On the other hand, a *t* test rejects the equality of sellers' second offers when the general and remedies treatment are compared provided that the significance level is greater than two percent; that is, the hypothesis cannot be rejected if the significance level is, say, one percent ($P(T \leq t)$ value = 0.0155); t stat=2.9137, and $DF=10$).

The empirical confirmation of the theory predicting that a higher level of legal remedies for breach of contract mitigates extorted modifications by reducing the renegotiated price is good news for the prevention of extraction of rents by the non-investing party during the renegotiation stage. This tandem of experimental results and theoretical predictions indicates that there is at

⁸⁴² See *supra* Table 19.

⁸⁴³ See *supra* §§ III.B.2; III.C.4.

least one strategy to battle the hold-up problem with good chances of obtaining a favorable outcome. Furthermore, the experimental confirmation of the theory might support future proposals to increase the level of legal remedies for breach of contract (or, in other words, to reduce the level of undercompensation).

Unfortunately, the fact that the number of seller’s offers which were rejected during the first stage did not significantly vary among treatments do not allow to conclude that the hold-up problem (that is, the issue of underinvestment) is also prevented.⁸⁴⁴ Furthermore, the low number of observations suggests caution before jumping to general conclusions unless larger samples are analyzed. This dissertation, however, speculates that the results obtained in this experiment regarding renegotiated prices in the remedies treatment will be replicated in other similar experiments.

5. There Are Descriptive but not Significant Differences Among Treatments Regarding the Prices that Sellers Offered in the Second Stage and that Their Buyers Accepted

The theory predicts that the renegotiated price should be lower in both the penalty and the remedies treatment than in the general treatment.⁸⁴⁵ On first impression, the experimental data confirm this finding in respect of penalty clauses but not regarding legal remedies. Table 21 summarizes the results.

Table 21 – Prices Offered and Accepted During the Second Stage

TREATMENT	BUYERS ACCEPTING	ORIGINAL SELLER’S	FINAL SELLER’S	DIFFERENCE
------------------	-------------------------	--------------------------	-----------------------	-------------------

⁸⁴⁴ Recall that four of thirty buyers rejected the seller’s first offer in the general treatment, six and five of thirty buyers did the same, respectively, in the penalties and remedies treatment. *See supra* Table 15.

⁸⁴⁵ *See supra* § V.D..

	SECOND OFFER	OFFER (AVERAGE)	OFFER (AVERAGE)	
General	21.0	\$1939	\$2507	\$569
Penalty Clauses	19.0	\$1814	\$2302	\$588
Legal Remedies	18.0	\$1830	\$2542	\$713
AVERAGE	19.3	\$1831	\$2451	\$620
Standard Deviation (Price)		\$590	\$820	\$564

On the one hand, the difference between the final price in the general and in the penalty treatments is 8.1771%. While not in the double digits, this percentage may mitigate the hold-up problem by reducing the renegotiated price. Unfortunately for the role of penalty clauses in the prevention of the hold-up problem, a *t* test does not allow for rejecting the hypothesis of equality of prices in the general and the penalties treatment ($P(T \leq t)$ value is 0.3743, t stat=0.8990, and $DF=38$).

On the other hand, the renegotiated price is slightly higher in the remedies treatment than in the general one (the difference is 1.3961%). At first glance, this difference might suggest that remedies would not only fail to prevent the hold-up problem but would also aggravate it. The difference, however, is not robust from a statistical standpoint since a *t* test does not allow for rejecting the hypothesis of similarity between the sellers' offers in the general treatments and in the remedies treatment ($P(T \leq t) = 0.8977$, t stat=-0.1294, and $DF=37$).

As a final note, two out of the seventy five sellers reaching the second stage (one in the penalty and another one in the remedies treatment) offered the same original price. While they did not explained the reasons to relinquish the opportunity to obtain a higher price (to be sure,

the forms did not inquire them about that), moral considerations might have motivated such decisions. In accordance with the principle *pacta sunt servanda*, deeply ingrained in civil law countries, these two participants might have regarded as unfair modifying a price that had been freely agreed some minutes before. Indeed, one of these two participants orally confirmed this reasoning. In words of this participant, the promise made in the first stage was sacred and therefore, only a mean seller would have asked for a price increase.

6. There Were Descriptive but not Significant Differences Among Treatments

Regarding the Seller's False Claim About the Thirdco's Offer for the Bauxite

As the section describing the experimental design indicated,⁸⁴⁶ sellers were allowed to falsely claim that a third-company increased its offer to buy bauxite from \$500 to a higher amount while buyers were unable to check whether or not this statement was true. Table 22 shows the false third-party offers for all pairs who reached the second stage.

Table 22 – False Third-Party Offers for Pairs Reaching the Second Stage

TREATMENT	PAIRS	THIRD-PARTY'S OFFER (A)	SELLER'S FINAL OFFER (B)	DIFFERENCE (D = B - A)
General	26	\$2673	\$2804	\$131
Penalty Clauses	24	\$2554	\$2551	-\$3
Legal Remedies	25	\$2662	\$2678	\$16
AVERAGE	25	\$2631	\$2681	\$50
Standard Deviation	1	\$1083	\$910	\$604

The false third-party's average offer in the penalty clause is slightly lower than in the general treatment (the difference is 4.4519%). The gap between this average offer in the general

⁸⁴⁶ See *supra* § V.D.

and in the remedies treatments, in turn, is negligible (the difference is 0.4115%). Both differences are not only very small but also, and not surprisingly, statistically irrelevant since the $P(T \leq t)$ value when the general and the penalties treatment are compared is 0.7088 (t stat=0.3757, and DF=48), and the same value, when the comparison is between the general and the remedies treatment, is 0.9699 (t stat=0.0380, and DF=49).

On the other hand, the sellers' average final offer is slightly higher than the false third-party's offers (the difference is 1.9004%). Indeed, the seller's offers and the third-party's false offers are so similar that their correlation coefficient is not far from the unit (it is 0.8299). These small differences between these two ranges of prices might indicate a subtle message from the sellers to their buyers, something like the following one: "I received this offer from the third-party but will prefer to keep selling the bauxite to you and, therefore, will turn such offer down if you pay just a little more than that."

7. There Was Evidence of Weak Extraction of Rents but not of Strong Extraction of Rents

The average original price for the seventy five pairs reaching the second stage was \$1923 while, as expected, the average final price was a little higher, \$2383. A t test confirms this finding of weak extraction of rents by rejecting the equality of prices when the original and final offers are compared ($P(T \leq t) < 0.01$). The hypothesis of strong extraction of rents, however, is rejected because all sellers demanded new prices equal or below than \$5000, the price at which

buyer's profits turned into net losses. Indeed, only two sellers asked for a price of \$5000 (one in the general treatment – rejected, and another in the remedies treatment, surprisingly accepted).⁸⁴⁷

In spite of these results, a strong extraction of rents might make sense not only, of course, for the non-investing party but also for the held-up party. Recall that the no recoverable losses (that is, the amount of losses that a court would not recognize as damages) are \$2500 and \$1000 in the general and remedies treatment.⁸⁴⁸ Thus, a very risk-averse buyer might prefer accepting a demand for a price slightly over \$5000 and losing some money in the performance of the contract rather than suffering some irrecoverable losses even after successfully suing the seller for breach of contract. For instance, a buyer in the general treatment might have preferred to accept a price of \$5500 triggering a net loss of \$500 rather than rejecting the offer, suffering a breach and, after suing the seller before a court, ending up with unrecoverable losses amounting to \$2500. In any event, this situation is very unlikely; assuming that the series of final prices follow a normal distribution,⁸⁴⁹ the likelihood of this price been higher than \$5000 is only 0.0004%.

8. Some Behavioral Reasons May Have Affected the Results

While behavioral law and economics is beyond the scope of this dissertation, some discussion about the effect of reputational and moral considerations on the results of the experiment is warranted. Recall that only fifteen out of ninety pairs failed to enter a contract; that

⁸⁴⁷ In any event, remember that all sellers assumed during the second stage that their buyers had accepted their first offers. Of course, if this assumption was untrue, then the respective seller's offer was moot. One of these sellers' moot offers was higher than \$5000 (\$6000, in the remedies treatment).

⁸⁴⁸ In the penalties treatment, in turn, the buyer might actually benefit from the breach provided that the original contract price is above \$2000 and that the breaching seller pays the amount of the penalty.

⁸⁴⁹ For these buyers, the average final price was \$2383 and the standard deviation was \$785. Using these data and an Excel spreadsheet, it is straightforward to calculate the likelihood of the price being above \$5000.

is, only fifteen buyers declined to make an investment. Furthermore, seventeen out of the seventy five buyers who reached the second stage rejected their sellers' demand for a price increase; in other words, these buyers were not held-up by their sellers. As to the remaining fifty eight pairs, the difference between the average final price (\$2451) and the average original price (\$1831) was only \$620 (33.8613%), a no negligible figure but not a number as high as might have been theoretically expected. Last but not the least, no buyer suffered a strong hold-up; that is, no buyer accepted a new price higher than its costs (\$5000). In sum, the hold-up problem seems to have been less frequent and harmful in the experiment than in the theoretical predictions.

Sellers might have refrained from more aggressive demands and buyers might have been willing to invest in the first stage and, some of them, to reject the renegotiations demands in the second stage for a variety of behavioral reasons. To begin with, while neither sellers nor buyers knew the identity of their pairs (recall that the experiment was anonymous), all of them knew that its counterpart was an individual participant in the same session and, therefore, a classmate and possibly a friend. This feature of the experiment might have refrained sellers from behaving more aggressively. Similar to what happened in this controlled scenario, friendship ties among business people or even courtesy may increase trust in the real business world and, as a result, act as a check against opportunistic in most cases.

As a second reason, people both in experiments and in real business life might refrain from taking advantage of hold-up opportunities on moral grounds. Recall the two participants refusing to demand a higher price during the experimental sessions claiming that it would have

been morally wrong.⁸⁵⁰ These, however, might have not been the only examples of moral restraint. Other sellers might have decided to demand a low price increase instead of a higher differential based on moral considerations. Thus, the rationale of these sellers might have been along the following lines: “It is immoral to ask for a too high price increase but maybe not wrong to demand a moderate contract change.” Of course, the experiment was not designed to verify this rationale and, therefore, other studies will be necessary to either confirm or reject such assumption.

If the hold-up problem was not as frequent and harmful in the experiment as theoretically expected, its significance might be even lower in the real business life. The experiment simulated a one-shot contract; after all, the hypothetical scenario did not mention any other future business between the parties or between the seller and other companies. Therefore, participants acting as sellers should not have been very concerned about reputational consequences of their opportunistic behavior or, more particularly, about losing future contracts with the same or with third parties due to their conduct. In real life, by contrast, the prospect of losing future ventures due to a stained reputation resulting from holding-up business partners might be a check against demanding price modifications backed by a threat of breach.⁸⁵¹

On balance, this dissertation speculates that although opportunities for a party holding-up its business partners may arise frequently, only a few percentage of these companies take

⁸⁵⁰ *See supra* p. 228.

⁸⁵¹ *See supra* §§ III.B.3; IV.B.3.

advantage of these chances to behave opportunistically due to moral and reputational reasons.⁸⁵²

To be sure, this is just a theoretical assumption which, as any theory, needs to be empirically tested. For this purpose, either experiments testing this theory or surveys asking business people about the significance of hold-up situations and the strategies to deal with them might be illustrative.⁸⁵³ Sadly, these empirical studies are not an easy task. The fact that hold-up situations might arise in practice with less frequency than expected in theory make it difficult to empirically study the hold-up problem except with unusually large numbers.⁸⁵⁴

9. Summary or the Results

For the sake of clarity and taking into account that the analysis was divided in several categories, each of them leading to different conclusions (indeed, some of them not leading to strong conclusions), Table 23 summarizes the results. In this table, GT means the General Treatment, PT means the Penalty Treatment, and RT means the Remedy Treatment.

⁸⁵² An example might have been the famous vertical integration between Fisher Body and General Motors. Presumably, General Motors, manufacturer of automobiles, bought a significant percentage of shares of Fisher Body, a supplier of car bodies, to avoid being held-up by this company. See Klein, *supra* note 51, at 444. But perhaps, and according to Nobel Laureate Ronald H. Coase's version of the story, a hold-up never occurred (even though an opportunity for it existed) and the vertical integration was based on other grounds. See Ronald H. Coase, *The Conduct of Economics: The Example of Fisher Body and General Motors*, 15 J. ECON. & MGMT. STRATEGY 255, 255 (2006) [hereinafter Coase (Conduct)]. Indeed, the vertical integration might have been based more in trust than in a desire to prevent opportunistic behavior. See Ramón Casadesus-Marsanell & Daniel Spulber, *The Fable of Fisher Body*, 43 J. L. & ECON. 67 (2000). Recall that vertical integration is one of the governance structures that might prevent the hold-up problem (and also recall that this structure is outside this dissertation's scope). See *supra* § II.B.

⁸⁵³ These surveys might compare the theoretical predictions with the real trade usages related to hold-up situations using a similar methodology of the famous study by Stewart Macaulay. See *supra* note 227, at 55.

⁸⁵⁴ See Yoshiro Miwa & J. Mark Ramseyer, *Rethinking Relationship-Specific Investments: Subcontracting in the Japanese Automobile Industry*, 98 MICH. L. REV. 2636 (2000) (arguing that the theory about the role of relationship-specific investments in the structure of firms is more tenuous than it had been assumed).

Table 23 – Summary of the Results

Item	Differences Based on Descriptive Statistics	Differences Based on a <i>t</i> Test Comparing GT and PT	Significant Differences Between GT and RT
Numbers of buyers rejecting the first offer	Negligible	Not applicable ⁸⁵⁵	Not applicable
Average price that sellers offered and that buyers rejected in the first stage	Yes (\$2963 in GT, \$2183 in PT, and \$2620 in RT)	No. $P(T \leq t) = 0.2273$	No. $P(T \leq t) = 0.6875$
Average price that sellers offered and that buyers accepted in the first stage	Yes (\$2077 in GT, \$1778 in PT, and \$1901 in RT)	Yes provided that the significance level is slightly lower than 10%. $P(T \leq t) = 0.1039$	No. $P(T \leq t) = 0.3458$
Number of buyers that accepted the first offer and rejected the second one	Negligible	Not applicable	Not applicable
Average price that sellers offered and that buyers accepted in the second stage	Yes (\$2507 in GT, \$2302 in PT, and \$2542 in RT)	No. $P(T \leq t) = 0.3743$.	No. $P(T \leq t) = 0.8977$
Average price that sellers offered and that buyers rejected in the second stage	Yes (\$4050 in GT, \$3500 in PT, and \$3029 in RT)	No. $P(T \leq t) = 0.2711$	Yes. $P(T \leq t) = 0.0155$
Average price that sellers falsely claimed the third-party offered in the second stage	Yes (\$2673 in GT, \$2554 in PT, and \$2662 in RT)	No. $P(T \leq t) = 0.7018$	No. $P(T \leq t) = 0.9699$
Evidence of weak hold-up	Yes. (Average renegotiated price = \$2383 and average original price = \$1923)	Yes. $P(T \leq t) < 0.01$. This conclusion is applicable to all treatments	
Evidence of strong hold-up	No. No buyer accepted a price higher than \$5000	Assuming a normal distribution, the likelihood of the renegotiated price being higher than \$5000 is only 0.0004%. This is applicable to all	

⁸⁵⁵ Since the number of buyers who rejected the first offer is just one observation for treatment, a *t* test cannot be run.

Section V.F - Conclusions

This experiment leads to some particular and general conclusions. As to the particular conclusions, neither penalty clauses nor remedies seem to clearly affect the willingness to invest in the first stage (that is, to enter the contract). Furthermore, the few number of observations and the small differences among treatments make unclear whether these contractual and legal devices increase the likelihood of the held-up party rejecting an extorted modification backed up by an empty threat to breach.

On the other hand, and from a descriptive statistics standpoint, both penalty clauses and remedies not only pushed downwards the original prices (in comparison with the general treatment),⁸⁵⁶ but also the sellers' false claims about the third-party's offers and, more importantly, the sellers' final offers, both when the buyers accepted and rejected them.⁸⁵⁷ These results suggest that both penalty clauses and a higher level of remedies, by reducing the amount of the extorted price, mitigate the issue of extraction of rents (or, at least, make it less ruinous for held-up buyers). The price differences among treatments, however, are not statistically significant according to the *t* tests run with the only exception of the prices that sellers offered and buyers rejected in the remedies treatment.

In any event, that the statistical tests did not allow for rejecting the hypotheses of similarity among prices in most cases do not entail that the role of both penalties and remedies in the

⁸⁵⁶ Which, as explained earlier, is surprising as to penalty clauses. *See supra* p. 222.

⁸⁵⁷ With the exception of the remedies treatment regarding the average price that sellers offered and that buyers accepted in the second stage, which was surprisingly slightly higher than the price in the general treatment).

prevention of the hold-up problem is null. These tests, to be clear, just suggest that the data is not enough to reach strong conclusions. In other words, the data did not prove the theoretical predictions but neither disproved them and, therefore, more experiments are necessary to confirm or reject the preliminary results obtained here.

In light of the above, and until other experiments indicate otherwise, the theoretical predictions stating that penalties and a higher level of remedies mitigate the hold-up problem continue being valid. As a result, courts err when they fail to understand the role of penalty clauses in the prevention of extorted modifications and mistakenly reduce their amount in hindsight under the view that it is too high in comparison with the actual damages. Courts might also err when they increase the undercompensatory nature of legal remedies in the context of complex contracts requiring idiosyncratic investments by requiring a too-high standard of evidence in respect of some kind of damages, such as future losses.

Regarding the general conclusions, this dissertation hopes to have opened the gates for a series of empirical analyses in the realm of Colombian contract law and, more particularly, in the field of hold-up situations. Such experiments might study either theories similar to the ones tested here or other hypothesis, such as the role of the rules on good-faith modifications and of economic duress on the prevention of the hold-up problem, just to give two examples. Experiments might also test theories related to the hold-up problem in contracts other than sale of goods (e.g., franchise contracts). Thus, a high number of experiments focusing on these topics during the following years would noticeably increase the importance of empirical contract law in Colombia and reinforce the theoretical conclusions that this field has reached until now.

CHAPTER VI – PROPOSALS TO EFFICIENTLY ADDRESS THE HOLD-UP PROBLEM IN COLOMBIAN CONTRACT LAW

Section VI.A – Introduction

So far, this dissertation has been descriptive, explaining the basic notions underlying the hold-up problem, analyzing how the U.S. and Colombian laws deal with it, and experimentally testing some theories related to the role of penalty clauses and the level of legal remedies for breach of contract in the prevention of the hold-up problem. This is not enough, yet. A prescriptive part explaining the proposals to efficiently address the hold-up problem is warranted. This is the purpose of the present chapter.

These proposals relate to Colombian law, where studies on the hold-up problem are an unploughed field, but not to the U.S. law. Some reasons to this omission, among others, are that the hold-up problem has been deeply discussed in the U.S. legal system, that the descriptive analysis of the U.S. laws was mainly carried out to facilitate, via comparison, the understanding of the role of Colombian laws in the prevention of the hold-up problem, and that a review of the pros and cons of the proposals that some U.S. scholars have made and the explanation of new proposals would increase too much the length of this dissertation.

This chapter is structured as follows. § VI.B briefly explains that while the hold-up problem is an economic issue, the law plays an important role in its prevention. The following section, § VI.C, the core part of this chapter, describes the proposals. Finally, § VI.D makes some concluding remarks. While the proposals presented here are organized following the sequence of chapters III and IV, this structure has some modifications. To begin with, two topics discussed in chapters III and IV are not mentioned here: (1) no modification clauses, since the proposals to

make them enforceable are not feasible (that is, it is highly unlikely that a legal rule making no modification clauses enforceable will be enacted and, in any event, even if this law was passed, its negative effects will be significant);⁸⁵⁸ and (2) reputation bonds, since its efficiency in the prevention of the hold-up problem mostly depend on markets and not on laws.⁸⁵⁹ Besides the proposals related to the other topics, this chapter also includes some general proposals, which, as their name suggest, do not fit in any particular category.

Section VI.B – Legal Intervention and the Hold-up Problem

While economic factors create the hold-up problem,⁸⁶⁰ it is the law which can avoid, solve, or mitigate it.⁸⁶¹ The law may intervene in several forms. For instance, legislators may enact mandatory rules restricting the freedom of parties to agree to some modifications in contracts with notorious bargaining asymmetries, as happen in hold-up situations.⁸⁶² In this case, the law intends to correct a market failure and to increase the aggregate welfare of the parties by curtailing their freedom.⁸⁶³ Legal rules may also make contractual safeguards to prevent the hold-up problem enforceable, as happen when the law makes penalty clauses enforceable.⁸⁶⁴

⁸⁵⁸ See *supra* §§ III.B.1; *supra* p. 31, and § IV.B.1.

⁸⁵⁹ See §§ III.B.3; IV.B.3.

⁸⁶⁰ See *supra* § II.A..

⁸⁶¹ See Shavell (Contractual), *supra* note 2, at 325; see also BAIRD, GERENTER & PICKER, *supra* note 27, at 269 (suggesting that the role of the law is significant in contracts where transactions costs are high and competition is not strong. Both factors are usually present in long-term idiosyncratic contracts); Aristides N. Hatzis, *The Anti-Theoretical Nature of Civil Law Contract Scholarship and the Need for an Economic Theory*, 42, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=228345 (last visited Nov. 19, 2013) [hereinafter Hatzis (Anti-Theoretical)] (arguing that intervention is necessary and inevitable when a bargaining asymmetry is manifest, as happens in hold-up situations).

⁸⁶² See Ugo Mattei, *Efficiency and Equal Protection in the New European Contract Law: Mandatory, Default and Enforcement Rules*, 39 VA. J. INT'L L. 537, 538 (1999).

⁸⁶³ POSNER, *supra* note 28, at 99; COOTER & ULEN, *supra* note 67 at 206.

⁸⁶⁴ See POSNER, *supra* note 28, at 94 (affirming that the basic purpose of contract law is deterring opportunism).

While the law might have a role in the prevention of the hold-up problem, the appropriate degree of legal intervention is unclear to a certain extent.⁸⁶⁵ On the one hand, too little legal intervention may fail to avoid, solve, or mitigate the hold-up problem; on the other hand, excessive legal intervention may aggravate it or, even worse, create new issues in other areas of contract law. Indeed, an excessive degree of legal intervention might not only be harmful but also likely if, as Professor Coase indicates⁸⁶⁶ and the experimental results suggest,⁸⁶⁷ hold-up situations are scarcer in practice than in theory or, in other words, if the hold-up problem is not such a big issue as the literature contends. As an example of excessive legal intervention, a new legal rule relaxing the requirements to find economic duress may prevent the hold-up problem but, at the same time, it may also make parties in context other than hold-up situations less willing to start tough but valid negotiations. Thus, legal intervention should reach an optimal point, the one where the law efficiently deals with the hold-up problem.⁸⁶⁸

At first glance, since investments under the efficient level are the main consequence of the hold-up problem,⁸⁶⁹ any legal rule preventing this problem will be efficient unless it creates additional problems generating other sorts of inefficiencies.⁸⁷⁰ In spite of this assumption, however, efficiency must be defined to avoid it being an elusive term.⁸⁷¹ Generally speaking,

⁸⁶⁵ See Scott (Conflict), *supra* note 71, at 2006.

⁸⁶⁶ See Coase (Conduct), *supra* note 855, at 255.

⁸⁶⁷ See *supra* § V.E.

⁸⁶⁸ See POLINSKY, *supra* note 27, at 7 (stating that efficiency must be the principal factor to analyze a legal system); see also MATTEI (COMPARATIVE), *supra* note 71, at 3 (contending that legal analysis should focus on efficiency).

⁸⁶⁹ See *supra* § II.A.

⁸⁷⁰ Recall that the degree of underinvestment does not depend on the hold-up problem's significance but on contracting parties' perceptions at the time of contracting of the likelihood of being held-up by its counterparty during the contract performance.

⁸⁷¹ See Eirik Furubotn, *Economic Efficiency in a World of Frictions*, 8 EUR. J. L. & ECON. 179, 179, n.1 (1999).

efficient rules are those whose aggregate benefits outweigh their aggregate costs and, therefore, increase resources, wealth, or, more colloquially, the size of the pie.⁸⁷²

The benefits of legal rules addressing the hold-up problem are, among others, lower transaction costs and stronger incentives to make relationship-specific investments.⁸⁷³ The costs, in turn, are negative consequences of the new rules in contract law's fields other than the hold-up problem.⁸⁷⁴ In more technical terms, efficiency is usually defined as either Pareto efficiency or Kaldor-Hicks efficiency. A situation is Pareto efficient or Pareto optimal when "there is no change from that situation that can make someone better off without making someone else worse off."⁸⁷⁵ In other words, a Pareto improvement "is one that makes at least one person better off and no one worse off."⁸⁷⁶

Pareto efficiency has been the target of several criticisms. Professor Posner, for instance, reminds that most of the time at least one individual is worse off since transactions usually have effects on third-parties.⁸⁷⁷ For reasons like this one, Pareto efficiency has been called a nirvana or an ideal state, possible in theory but not in practice.⁸⁷⁸ More particularly, Pareto efficiency has

⁸⁷² See POLINSKY, *supra* note 27, at 7.

⁸⁷³ See MATTEI (COMPARATIVE), *supra* note 71, at 145.

⁸⁷⁴ See Stephen E. Margolis, *Two Definitions of Efficiency in Law and Economics*, 16 J. LEGAL STUD. 471, 475 (1987) (reminding that the costs of amending inefficient legal rules may be higher than the benefits); see also Hatzis (Anti-Theoretical), *supra* note 864, at 26 (stating that legal rules should be as efficient as possible taking into account the constraints that other normative goals impose).

⁸⁷⁵ POLINSKY, *supra* note 27, at 7 n.4. For similar definitions of Pareto efficiency, see, e.g., MERCURO & MEDEMA, *supra* note 27, at 21.

⁸⁷⁶ POSNER, *supra* note 28, at 12-13.

⁸⁷⁷ See *id.* at 13. Similarly, Eirik G. Furubotn states that a first-best solution or a Pareto optimum is unfeasible in a world of bound rationality and transaction costs. See Furubotn, *supra* note 874, at 193-94.

⁸⁷⁸ See Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 12 J.L. & ECON. 1 (1969) (stating that those who adopt a nirvana viewpoint conclude that the real world is inefficient whenever it deviates from the ideal world); see also Margolis, *supra* note 877, at 482 (asserting that the nirvana mistake occurs when a change to actual institutions is proposed just because their outcome comes up short of an ideal world's outcome).

been considered an inappropriate and stringent standard for evaluating legal rules. The reason is that most legal changes, those creating winners and losers, do not satisfy the Pareto criterion.⁸⁷⁹

In respect of the hold-up problem, legal rules intended to increase the number and size of relationship-specific investments, might make some contracting parties better off. Both the investing companies, who were uneasy about incurring in sunk costs, and their contracting parties, who lacked partners willing to enter idiosyncratic contracts, would increase their business ventures after the enactment of legal rules addressing the hold-up problem. Yet, the non-investing parties who were able to find investing parties willing to enter idiosyncratic contracts even before the enactment of the new rules will be prevented of behaving opportunistically and appropriating some of the contract surplus, and therefore, worse off.

In addition, legal rules addressing the hold-up problem might have undesired consequences in other realms of contract law and, thereby, might make third parties worse off. For instance, a legal rule allowing judges to grant perfectly compensatory legal remedies for breach of contract may deter threats to breach or, at least, make them empty and, as a result prevent the hold-up problem. In contexts other than the hold-up problem, however, such a legal rule might reduce the number of efficient breaches since some of the breaches that are efficient under the current legal rules on remedies would be inefficient under perfectly compensatory remedies. Consequently, fully compensatory remedies might deter parties from entering contracts which may turn into a trap later on. It could be argued that legal rules exclusively applicable in hold-up situations might be enacted. In practice, however, it appears unlikely that

⁸⁷⁹ See MERCURO & MEDEMA, *supra* note 27, at 24, 40, 105.

legislators or judges will enact rules with such a narrow scope. In conclusion, Pareto efficiency does not appear to be a useful criterion for this dissertation.

Kaldor-Hicks is a better efficiency criterion for evaluating legal rules. According to Professors Nicholas Mercuro and Steven G. Medema, a change satisfies this principle “if and only if the gainers from the change could compensate the losers for their losses and remain better off themselves, and the losers could not have compensated the gainers to forgo their gains without being themselves worse off than in the original position.”⁸⁸⁰ In simpler words, and under a cost-benefit approach, a change is efficient if the gains to some individuals exceed the losses to the remaining people.⁸⁸¹ This principle is also known as wealth maximization because an improvement in Kaldor-Hicks increases the wealth of society.⁸⁸² Regarding the hold-up problem, wealth is maximized if the issue of investments below the efficient level is mitigated. Since most legal rules are win-lose situations, as indicated above, the Kaldor-Hicks principle is more adequate than Pareto efficiency for evaluating legal amendments. As a result, the proposals of this dissertation will be considered efficient if the benefits are greater than their costs.

Section VI.C – Proposals to Efficiently Address the Hold-up Problem in Colombian

Law

1. Particular Proposals

a. Legal Rules on Penalty Clauses

⁸⁸⁰ See *id.* at 89.

⁸⁸¹ See *id.* at 26.

⁸⁸² See POSNER, *supra* note 28, at 13.

As explained earlier in this dissertation,⁸⁸³ that penalty clauses are enforceable in Colombia makes them a useful device for investing parties intending to prevent the hold-up problem. More specifically, and although the results of the experiment were inconclusive in this regard, the theory dictates that penalty clauses are an important safeguard against a hold-up, one that maybe would not deter a renegotiation but that might reduce the size of the price change.⁸⁸⁴ Unfortunately, penalty clauses are not as efficient as they should be in the prevention of the hold-up problem due to their legal thresholds and, more noticeably, to the powers that courts have to reduce them.

Recall that pursuant to Commercial Code Art. 867, the thresholds of penalty clauses depend on whether or not the contractual duties are re-expressible in monetary terms.⁸⁸⁵ If they are, the value of the penalty clause cannot be larger than the amount of the contractual duties.⁸⁸⁶ Although this legal rule does not prevent the promisee of a penalty clause recovering both the amount of the penalty and the amount of the actual damages, this constraint is excessively restrictive of the insurance role of penalty clauses. Sometimes, a penalty (in excess of damages) equaling the amount of contractual duties may not be enough to deter a non-investing party to demand an extorted modification under threat to breach. Conversely, such an amount may not make a held-up party confident enough, first, to make a high idiosyncratic investment and, later on, to reject a demand for a modification without fearing the dreadful financial consequences of a breach.

⁸⁸³ *See supra* § IV.B.1.

⁸⁸⁴ *See supra* § V.E.

⁸⁸⁵ *See* § IV.B.2 *supra* p. 133.

⁸⁸⁶ *See* C. COM. Art. 867.

Courts should relax these legal thresholds while the judicial powers to reduce the amount of penalty clauses should be restricted or, at least, clearly delimited to ensure that penalties duly perform their insurance role not only in hold-up situations but also in other contractual scenarios.⁸⁸⁷ Thus, a modification of the Commercial Code relaxing these legal limits should be enacted. The legal modification need not go back to the radical view of the Napoleonic Codes of the nineteenth century, when penalty clauses were not subject to any restrictions.⁸⁸⁸ On the contrary, some thresholds may be useful to mitigate the undesired side effects of penalty clauses such as their promisees contriving breaches to receive a windfall or the promisors facing bankruptcy due to the larger amounts to be paid in case of breach. The issue, therefore, hinges on the level of the efficient threshold and the partial answer is that it is higher than the current one.

Nonetheless, the issue of which the optimal legal threshold of penalty clauses remains unsolved. This threshold should not depend on the amount of the breached duties because this value may be unrelated to lost profits. Thus, this dissertation proposes to establish a threshold amounting to twice the estimated damages. Admittedly, this threshold entails that if the breaching party claims that the amount is excessive, the amount of the damages needs to be estimated, vanishing out one of the advantages of penalty clauses. This, however, is a minor inconvenience in comparison with the benefits of a larger limit.

Another question still remains: why is the threshold twice the amount of damages and not another multiple, say, one and a half or three times this value? In an ideal scenario, a very careful

⁸⁸⁷ For example, when compliance is very important to the promisee from a subjective standpoint. Professors Scott and Goetz provide an example in which a group of basketball's fans planning to attend the final game of their team at a far-away city bargain for a high penalty clause in the contract to be made with the transportation company. Thus, if the bus breaks down during the road trip, the high penalty might compensate the fans' disappointment of not having arrived on time to watch their team obtaining the championship. *See* Goetz & Scott, *supra* note 134, at 570.

⁸⁸⁸ *See* Hatzis (Cake), *supra* note 155, at 381.

empirical study should be conducted to determine the optimal threshold; in absence of this analysis, however, a limit must be estimated theoretically. It is true, this threshold is arbitrary but any other threshold would also be arbitrary and the line between excessive and valid penalty clauses needs to be drawn somewhere.

On the other hand, if the breached duty is not re-expressible in monetary terms,⁸⁸⁹ a court may equitably reduce the amount of a penalty clause if it is excessive taking into account the interest of the promisee in the performance of the duty. In this dissertation's view, courts should not have any power to reduce the amount of penalty clauses. This is an unreasonable and paternalistic interference of public actors in transactions that are mainly private, especially when the parties are highly sophisticated companies.⁸⁹⁰ Furthermore, courts, and arbitrators to a lower extent, usually fail to grasp the economic roles that penalty clauses perform, such as the insurance function and, as a result, reduce their amounts not only because they are compassionate of the breaching party but also under the simple but fallacious rationale that it looks too high in comparison with the amount of damages, that it is a windfall for the promisee and, therefore, that it entails an unjust enrichment.⁸⁹¹

⁸⁸⁹ C. COM. Art. 867.

⁸⁹⁰ Hold-up situations, of course, are not limited to sophisticated parties. They might arise, for instance, in transactions between small companies provided that the amount of the sunk investment is enough large in proportion to the amount and significance of the contract for the parties. Notwithstanding, hold-up situations might be more frequent, or at least more visible, when the parties are sophisticated companies on at least two grounds. First, the strategy of holding up the non-investing party might not only be expensive but also require some legal and financial expertise. After all, the threat to breach must be carefully drafted to increase the likelihood of the demand for a contract modification being accepted and the risks of alienating a business partner must be precisely estimated. Second, hold-up situations involving sophisticated parties are more likely to be known not only by other market participants but also by scholars studying extorted modifications, as the famous business relationship between Fisher Body and General Motors illustrates. *See* Artigot I Golobardes & Gómez, *supra* note 35, at 329; Klein, *supra* note 51, at 456.

⁸⁹¹ For some examples of arbitral tribunals reducing the amounts of penalty clauses, *see supra* Table 5 *supra* p. 146.

These courts, of course, are analyzing the issue of whether a penalty clause should be reduced with the benefit of hindsight.⁸⁹² They make this mistake by considering that the amount looks very high after the breach while forgetting that this value might have been reasonable at the making of the contract and that the promisor usually received a compensation, in form of a price increase (if it was the seller) or a price reduction (if it was the buyer) for acceptance of this clause. Put it differently, neither the amount of a penalty clause is a windfall for the promisee (it just reimburses its contractual risk) nor it is an unjust enrichment (since its price was paid). This retrospective and ex post view of courts resembles an insuree claiming that the amount of an insurance policy's premium which was paid during some years without any incident happening was too high or, conversely, an insurer claiming that such premium was too low taking into account the expenses that an incident triggered.

In any event, this dissertation acknowledges that passing a bill eliminating the powers that courts have to reduce the amount of penalty clauses may be a hard, if not an impossible task. In this case, a second-best scenario still exists. Either the legislator or the courts through some tests should indicate the factors to be taken into account before reducing the amount of penalty clauses. These factors will increase the predictability of penalty clauses and enhance some of their roles, such as the insurance and signal functions. To take two examples, either the legislation or the case law may indicate when the nebulous notion of equity justifies a reduction of the penalty clauses and which the meaning, within the scope of Commercial Code Art. 867, of the interest that the promisee had in the performance of the contract is.

⁸⁹² See DANIEL KAHNEMAN, *THINKING, FAST AND SLOW* 211 (2013) (categorizing as a mental mistake the intuition according to which "what makes sense in hindsight today was predictable yesterday.").

On the other hand, the last part of Commercial Code Art. 867, providing that a court may reduce the amount of a penalty clause when the promisor has partially performed the breached duty is a fair rule and should not be changed. For instance, this rule is applicable when a buyer breaches a contract providing a penalty amounting to \$100,000 after it has received half of the units that the seller promised to deliver. In such a case, the Commercial Code provides that the amount of the penalty that the buyer shall pay to the seller equals the half the original amount: \$50,000. In any event, either the law or the case law should precise that parties may bargain around this default rule. This bargaining might make sense when partial performance or even any compliance short of full performance is as bad as no performance for a party suffering a hold-up situation. This might be the case of a held-up buyer receiving some but not all the inputs that its seller promised to deliver, being such inputs indispensable to manufacture and customize some goods for a customer downstream under a contract providing both a tight schedule and a penalty clause to be paid if the buyer-turned-into seller fails to deliver any part of the promised goods to its customer (that is, if the tender is not perfect).

Finally, it might be argued that too large penalty clauses, subject to lax thresholds, might be real “*in terrorem*” clauses scaring parties that are otherwise willing to enter contracts. This argument might be valid if large penalties were compulsory in contracts,⁸⁹³ but not taking into account that these devices are provisions that parties presumably freely agree. Therefore, large penalties should not have a harmful effect on the number of contracts and on the size of investments. After all, the marginal benefit of a penalty should be greater than its costs; otherwise, this clause would not be agreed on.

⁸⁹³ See POLINSKY, *supra* note 27, at 55.

b. The *Exceptio Non Adimpleti Contractus*

Recall that the *exceptio non adimpleti contractus* may be used either as a sword, by a non-investing party taking advantage of it to extort a modification, or as a shield, by a held-up party using the *exceptio* to protect itself against hold-up situations. In the first case, the obvious approach is neither to abrogate the *exceptio* nor to restrict its use. Otherwise, many useful legal institutions would need to be eliminated to avoid its opportunistic use. Thus, this dissertation does not propose any legal amendment to the legal rule, Civil Code Art. 1609, regulating the *exceptio non adimpleti contractus*.

A better option than amending the law is that courts duly police the opportunistic use of the *exceptio*. A predictable case law would be useful not only to reduce the chances of a party being held-up in a particular case but also to create a consistent case law deterring other parties to use this *exceptio* as a sword. As a third reason, a more foreseeable case law would also precise when the *exceptio* may be used as a shield, that is, when a held-up party who has received a demand for a one-sided modification under threat to breach may refuse to perform its duties until the non-investing party grants some security of performance. This predictability would reduce the possible gains of such a demand and, as a result, deter some non-investing parties from making it.

Since it is unlikely that this case law will appear overnight, the academy has the role of paving the way for this jurisprudential change through papers and events discussing the pros and cons of the *exceptio non- adimpleti contractus* and indicating how its good use may be promoted and its bad use restricted. This dissertation hopes to have been a first step in this direction.

c. Legal Rules on Good Faith Modifications

The notion of good faith performs a significant role in civil law countries such as Colombia and neither contract law nor, more particularly, hold-up situations, are the exception.⁸⁹⁴ More detailed tests and more predictable case law in the realm of contracts, however, are necessary to avoid that a too elusive notion of good faith works beautifully in theory but imperfectly in practice.

In this line of reasoning, courts should develop tests intended to determine whether a modification to a contract was justified due to unforeseen circumstances or was just an opportunistic attempt to recapture gains forgotten at the negotiation of the original contract. Courts should also identify some factors in order to draw the line between tough but lawful demands for a modification and extorted contractual changes. Some factors signaling that the demand for a modification is reasonable may be, among others, that the demanding party would face bankruptcy if the modification is not agreed or, in less dire circumstances that the market has significantly changed between the formation and the performance of the contract. On the contrary, some factors suggesting that the demand for a modification is not in good-faith may be an explicit threat to breach, suggesting that the party is attempting to exploit the idiosyncratic investment that the other party made, and the lack of any market reason to demand the modification.⁸⁹⁵ On a related note, and similar to what happen in respect of the *exceptio non adimpleti contractus*, scholars may prepare the ground for the tests that the case law must develop by presenting some proposals in their papers and academic events.

d. Legal Rules on Economic Duress

⁸⁹⁴ See *supra* § IV.C.2.

⁸⁹⁵ Cf. UCC § 2-209 (1) & cmt. 2 para. 3.

In theory, legal rules on economic duress may mitigate the hold-up problem. In practice, this does not happen in Colombia, a country where economic duress is a notion that codes completely ignore and also almost inexistent in the case law.⁸⁹⁶ Thus, the first step towards strengthening the role of economic duress is acknowledging that some contracts or modifications may be voided on grounds of this kind of duress and separating it from the broader but different concept of moral duress. Again, not only courts developing tests to determine whether or not economic duress arouse in a certain commercial transaction but also the academia, by explaining the key fundamentals and importance of this notion, play a big role in this context.

An alternative to this step is to regulate the notion of economic duress from scratch, through either a new specific commercial law or an amendment of the Commercial Code. In this case, economic duress, or a related notion such as coercion, may be subjected to less stringent requirements than its cousin, civil duress.⁸⁹⁷ Alas, since the legal rules on duress have not changed since its enactment one hundred and thirty six years ago,⁸⁹⁸ the chances of a successful modification are negligible in the short- or mid-term. Furthermore, regulating economic duress in the legislation and not in the case law, may make this concept very inflexible (the case law changes faster than the legislation and chill some tough but lawful bargaining techniques with a net negative effect for commercial transactions).

As a second step to improve the role of legal rules on economic duress in the prevention of the hold-up problem, recall that the two requirements to find duress (it must inflict in the

⁸⁹⁶ See *supra* § IV.C.3.

⁸⁹⁷ For instance, using a test similar to the one that Professor Snyder proposes, although adapted to the particularities of Colombian law. Under this test, coercion arises when a threat deprives a party of a legal right and when the victim acted reasonably. See Snyder (Modification), *supra* note 22, at 677.

⁸⁹⁸ These legal rules are part of the Civil Code, which was enacted in 1887.

victim a reasonable concern of suffering serious harm and be unfair),⁸⁹⁹ are very stringent, at least within the context of commercial transactions. As a result, courts should not only precisely determine the meaning of notions such as “serious harm” and “unfairness” in the context of transactions between sophisticated companies but also interpret these requirements and notions broadly. Otherwise, economic duress, not only in hold-up situations, but also in other scenarios would never arise. Thus, for instances, courts should precise that a demand for a modification under threat to breach when the offeree has made an idiosyncratic investment triggers a reasonable concern of suffering serious harm (that is, of suffering financial ruin) and that it is unfair because the offeror is opportunistically taking advantage of the weak bargaining position of the other party due to its sunk investment. The case law must also make clear that even highly sophisticated companies, in spite of its power and size, may be victims of economic duress.

On the other hand, recall that the consequences of a finding of economic duress (or of duress, in general) are that the extorted contract or modification is null and void, without the extortionist paying any damages, unless they are clearly proved.⁹⁰⁰ This, of course, is a perverse incentive for would-be extortionists. So, this dissertation proposes a legal amendment providing that a finding of duress obligates the losing party not only to comply with the original contract but also to pay some minimum amount of damages, which the law should presume, or some penalty.

e. Legal Rules on Remedies for Breach of Contracts

⁸⁹⁹ *See supra* § IV.C.3.

⁹⁰⁰ *See id.*

As explained earlier,⁹⁰¹ remedies for breach of contract should not be fully compensatory for both practical and legal reasons. As to the practical reasons, most of the time, some damages cannot be proved with a minimum of certainty and precision while, regarding the legal reasons, some degree of undercompensation incentives parties to enter contracts without feeling that breach is too expensive.⁹⁰² In other words, the degree of stringency should be the optimal one, the point where the marginal benefit of moving it in any direction is lower than its marginal cost. Of course, some empirical evidence would be necessary to prove that the a movement from the current point to a less stringent one will have a positive net effect.

In spite of these practical and legal limitations, the degree of undercompensation of remedies for breach of contract may be reduced with the consequent benefit for the prevention of the hold-up problem,⁹⁰³ and, furthermore, also for the benefit in other commercial transactions. Some strategies to reduce this degree of undercompensation are the following ones. First, the case law should restrict the too stringent requirements to prove with certainty some future losses, especially good will losses. If the evidence is enough to estimate that future losses were more likely than not, they should be granted adjusted by their degree of likelihood. For instance, if the good will losses were \$1000 with a likelihood of 60%, a court should grant \$600 and not reject them because the likelihood is too low. This line of reasoning also suggests that courts should accept more econometric techniques to estimate future losses. To be precise, this dissertation proposes that the requirements of proof should not be too stringent but not too relaxed either.

⁹⁰¹ See § III.C.4 *supra* p. 102.

⁹⁰² See *id.*; see also POLINSKY, *supra* note 27, at 10.

⁹⁰³ See *supra* § V.E.

Otherwise, if the degree of stringency is too low, breach might be too expensive and some parties might refrain from investing.⁹⁰⁴

Second, the reasonable costs that parties may recover regarding attorney's fees and other judgment expenses are minimal in complex commercial disputes.⁹⁰⁵ In this case, higher values should be included in the regulation of these costs or, at least, parties should be able to bargain around these rules. Third, recall that one of the most significant costs not only for aggrieved held-up parties but also for any other litigators is the protracted length of disputes. To ameliorate this cost, judicial procedures should be streamlined, although the strategies to reach this goal are beyond the scope of this dissertation.

2. General Proposals

a. For the Academia

This dissertation is not aware of any paper or research on the hold-up problem under Colombian law. So, the first step, before any legal amendment or jurisprudential change, is to increase the scholarly analysis of the hold-up problem in Colombia. This, of course, is a challenge for the academia and, more particularly, for Colombian scholars focusing on contract law and economics. Thus, seminars, courses, books, papers, other kinds of researches, and other forms of academic interaction among scholars and other legal actors are necessary.

Once the field of legal solutions to the hold-up problem begins to be theoretically ploughed, it would be easier to persuade legislators to enact bills, courts to develop tests to efficiently decide litigations related to hold-up situations, and practitioners to duly advise

⁹⁰⁴ See POLINSKY, *supra* note 27, at 52.

⁹⁰⁵ See *supra* § IV.C.4.

entrepreneurs who are afraid of being held-up after entering a contract. Unfortunately, the lack of research on hold-up problem is a significant hurdle to understand the appropriate legal approach. Another hurdle is the lack of hold-up cases in Colombia. While some cases might have elements of hold-up situations,⁹⁰⁶ they are very few and none of them, for instance, are as clear as some U.S. cases, such as *Austin Instrument, Inc. v. Loral Corp.*,⁹⁰⁷ and *Roth Steel Prods. v. Sharon Steel Corp.*⁹⁰⁸ Even worse, this dissertation is not aware of any research analyzing, from the perspective of the hold-up problem or, at least, from the more general standpoint of extorted modifications, either the facts of Colombian cases or surveying hold-up situations in the business world which did not reach courts (such as the contracts between Fisher Body and General Motors).⁹⁰⁹

The lack of research on the hold-up problem is just the consequence of a broader issue: the lack of relevance of law and economics studies in this country.⁹¹⁰ As a result, the challenge of the academia is bigger: it does not only need to be a pioneer on the theoretical understanding of the interaction between the law and the hold-up problem but, more broadly, to be a defender of the benefits of the interaction between the law and the economics.⁹¹¹ Of course, this is a strategy which will only bear fruits in the mid- or long-term.⁹¹²

⁹⁰⁶ See, e.g., *Mitsui de Colombia S.A. v. Metalec, Manufacturas Metal Eléctricas Ltda.* (septiembre 7, 1993) (J. Esguerra, J. Nárvaez, A. Mendoza, Arb.), *Constructora Mazal Ltda. v. Inversiones GBS Ltda.* (marzo 15, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.).

⁹⁰⁷ See *Austin Instrument, Inc. v. Loral Corp.*, 29 N.Y.2d 534 (1971).

⁹⁰⁸ See *Roth Steel Prods. v. Sharon Steel Corp.*, 705 F.2d 134 (6th Cir. 1983).

⁹⁰⁹ See Artigot I Golobardes & Gómez, *supra* note 35, at 329; Klein, *supra* note 51, at 456.

⁹¹⁰ See Juan A. Gaviria, *Riesgos y Obstáculos del Análisis Económico del Derecho en Colombia [Hurdles and Hazards of Law and Economics in Colombia]*, 39 CONTEXTO R. DER. Y ECON. 13, 13 (2013).

⁹¹¹ See *id.*

⁹¹² See *id.*

b. Proposals for the Judiciary

Generally speaking, the main difficulties for a successful approach to the hold-up problem from the judiciary are that Colombian courts lack either judges or, at least, clerks trained in economics, and that, as a result, Colombian case law often lacks any economic rationale.⁹¹³ This is the bad news. The good news is that, nowadays, Colombian courts have significant powers to base their decisions on notions beyond the black letter law and, therefore, to include in their analysis law and economic concepts such as efficiency.⁹¹⁴ In light of the above, a more positive stance of courts towards economic analysis is necessary. Without that, the judiciary would not have the tools required to adequately address not only the hold-up problem but also other issues related to law and economics.

The issue, then, is how to persuade courts about the importance of law and economics in general and of the hold-up problem in particular. This issue, of course, is not only very complex but also beyond the scope of this dissertation. In any event, a short answer is the training of current and future judges.⁹¹⁵ This answer confirms that the academia, by teaching and helping to understand the principles and importance of the interaction between law and economics and by persuading courts that economic analysis is a useful tool, has the key to the dismantlement of any

⁹¹³ See Gaviria, *supra* note 913, at 13.

⁹¹⁴ See *id.* at 13.

⁹¹⁵ For instance, courses designed to educate judges on economics are common in the United States. A prominent example is the so-called Mason Judicial Education Program. In this program, the Law & Economics Center of George Mason University offers seminars on economics, finance, accounting, statistics and scientific methods to federal and state judges. “[T]o date almost 4,000 sitting federal and state court judges representing all 50 states have participated in at least one” of these seminars.” MASON JUDICIAL EDUCATION PROGRAM, <http://www.masonlec.org/programs/mason-judicial-education-program> (last visited Nov. 19, 2013).

aversion of judges to this field.⁹¹⁶ In particular, this might be easy to do with future judges, which does not have preconceptions, and more difficult with present judges.⁹¹⁷ Naturally, this assumption entails that the benefits of this educational strategy will only yield benefits in the long-term.⁹¹⁸

c. Proposals for the Legislator

The particular proposals for the legislator related to penalty clauses, the *exceptio non adimpleti contractus*, good-faith modifications, economic duress, and legal remedies for breach of contract, which were described in the last section,⁹¹⁹ are summarized here. As to penalty clauses, this dissertation proposes to relax the legal thresholds and clearly delimitate the powers that courts have to reduce penalties based on equitable grounds. Regarding the *exceptio non adimpleti contractus*, while not any legal amendment is proposed, the case law should precise not only when an investing party might use the *exceptio* as a protection against a hold-up situation but also when the non-investing party should not opportunistically use this device as a means to obtain a one-sided modification.

Regarding the duty of good faith, this dissertation proposes that courts develop tests intended to distinguish between modifications based on unforeseen circumstances and contractual changes that are disguised opportunistic attempts of one party to exploit the weak bargaining power of the other party due to its sunk investment. These tests are also necessary to determine whether or not economic duress arises in a given contract modification. In this case,

⁹¹⁶ See Gaviria, *supra* note 913, at 13.

⁹¹⁷ See *id.*

⁹¹⁸ See *id.*

⁹¹⁹ See *supra* § VI.B.

however, and since economic duress is a notion underdeveloped under Colombian law, other actions are necessary, such as a relaxing of the requirement to find this kind of duress. Finally, and in respect of legal remedies for breach of contract, this dissertation proposes to relax the too stringent requirements to prove some future losses, to increase the amount of attorney's fees and other judgment costs that the party prevailing in trial may recover, and to streamline the judicial procedures in order to make them shorter and less expensive.

Some additional and general remarks are the following ones. First, some of the proposed amendments entail alterations to either the Civil Code or the Commercial Code. This, needless to say, is a hard task taking into account that, while these amendments are very relevant, they may not seem as urgent as other bills in Colombia, related to topics such as transitional justice, human rights, land development, tax amendments, and health law. Nonetheless, and although legislation related to extorted modifications might not be as attractive to politicians as the topics indicated above, the amendments intended to address the hold-up problem are pro-investment and, more particularly, pro-infrastructure. As a consequence, they might be popular among business people and, consequently, among politicians seeking the electoral support and the funding of this part of the electorate.

Last but not the least, if legislative amendments in contract law are difficult to pass, they are also difficult to repeal or modify in case the amendments do not work in practice. Because of that, at least in some cases, changes in the case law, more flexible than the legislative procedures, may be preferable.

d. Proposals for the Regulator

Recall that this dissertation focuses on private law and not on administrative law and, therefore, that the role of regulation in the prevention of the hold-up problem is beyond the scope.⁹²⁰ In any event, the role of regulation should not be discarded. For instance, regulation may be very important to prevent the hold-up problem in the energy market (e.g., electricity and gas), where an agency belonging to the executive branch enacts most of the Colombian legal rules.⁹²¹ Regulation may also be important in other industries where huge infrastructure investments are required and, therefore, where hold-up situations may also arise, such as telecommunications,⁹²² and construction of highways.⁹²³

e. Proposals for the Parties Themselves

Parties to idiosyncratic contracts should not wait until some legal amendments intended to efficiently address the hold-up problem are enacted. Meanwhile, they should use contractual safeguards to protect themselves against being held-up. Some examples are the following ones.

First and most importantly, investing parties should bargain for a penalty clause whose amount is sufficiently high.⁹²⁴ Penalties, as the theory dictates,⁹²⁵ are an effective contractual device against hold-up situations, even after taking into account possible reductions by courts.

⁹²⁰ See *supra* Chapter I

⁹²¹ Comisión de Regulación de Energía y Gas – CREG (Commission of Rules on Energy and Gas), <http://www.creg.gov.co> (last visited Jan. 19, 2013). For instance, the hold-up problem may explain why gas wells are everywhere in the Colombian hinterland but pipelines connecting these wells with the urban centers are very scarce. Perhaps, companies are afraid of building a pipeline serving one well and, after that, being extorted by its owner. Regulation giving incentives and protections to pipelines' builders may prevent this situation.

⁹²² See Comisión de Regulación de Comunicaciones – CRC (Commission of Rules on Communication), <http://www.crc.gov.co> (last visited Jan. 19, 2013).

⁹²³ See Agencia Nacional de Infraestructura, <http://www.ani.gov.co/> (last visited Jan. 19, 2013).

⁹²⁴ But not too high to reduce the risk of a court considering it disproportionate on equity grounds. A too high penalty would also increase its price too much. See Schwartz (Myth), *supra* note 155 at 370.

⁹²⁵ See *supra* § III.B.3.

While the experimental results were inconclusive in this regard, they at least showed that renegotiated prices were in average lower in the penalty treatment than in the general one.⁹²⁶

Second, the original contract should provide the circumstances entitling one of the parties to claim the *exceptio non adimpleti contractus*, i.e., to suspend its own performance until the other party performs or it is ready to do so. These provisions would make more difficult for the non-investing party to use this *exceptio* as a sword. More particularly, the investing party should bargain for a clause providing that a demand for a modification backed by a threat to breach is a factor entitling the other party to claim this *exceptio*. This would enable the potential held-up party to use the *exceptio* as a shield against hold-up situations.

Third, given the vagueness of the notion of good-faith and the lack of case law regarding economic duress, the original contract should precise these notions. On the one hand, the contract should provide some factors that might be a reason to request a good-faith modification, such as rising costs or a declining demand for goods to be manufactured with the inputs to be delivered under the contract. On the other hand, and to improve the chances of a court finding economic duress, the contract might also provide that a demand for a modification under threat to breach, taking into account the investment that one of the parties has made and other circumstances during the performance of the contract, might be an unfair conduct inflicting in the investing party a reasonable concern of suffering serious harm. To be sure, the success of such a provision is unclear or, to be more precise, very difficult to predict beforehand, but at least it will not harm the investing party provided that the other party accept its inclusion in the

⁹²⁶ See *supra* § V.E.

contract without increasing too much the transaction costs of negotiating and drafting the original contract.

Fourth, the parties should avoid contracting around Civil Code Art. 1616, the legal rule providing that a willful breacher shall pay not only foreseeable but also unforeseeable losses. Otherwise, the undercompensation nature of legal remedies for breach of contract will be more acute and, as a result, the held-up party would be more susceptible to accept a demand for a modification backed by a threat to breach.

Last but not the least, the parties should provide an arbitration clause considering that arbitration procedures, even after taking into account the vagaries of this alternative dispute resolution method under Colombian law,⁹²⁷ are faster than traditional judicial procedures and that arbitrators might have a better grasp of the economic notions underlying the hold-up problem. Indeed, if the contract is an international one,⁹²⁸ the parties might also provide an international arbitration forum whose tribunal might include economists (or at least attorneys with background in economics).

Section VI.D – Conclusions

A change in Colombian legal intervention would not prevent the hold-up problem either completely or overnight. In spite of these limitations in scope and time, Colombian law may efficiently address the hold-up problem, in comparison with the current legal rules, and mitigate it. This process of improvement, of course, would only bear fruits in the mid- or long-term. This long road, however, is not an excuse to postpone the task of addressing a problem that might

⁹²⁷ See Juan A. Gaviria, *A Note on the New Colombian Legal Rules on International Arbitration*, 2 (2) THE ARBITRATION BRIEF 65 (2013).

⁹²⁸ See L. 1563/12 (julio 12) [DIARIO OFICIAL]

forestall key investments that the country needs to secure a steady economic growth. After all, paraphrasing a Chinese proverb, the best moment to address this problem was yesterday but the second best moment is today.⁹²⁹ This dissertation, by being the first research on the hold-up problem under Colombian law, intended to begin this process.

⁹²⁹ Among the uncountable webpages citing this proverb, *see, e.g.*, The Changing Ways, <http://thechangingways.com/2010/11/30/the-best-time-to-plant-a-tree-quote-of-the-month-november-2010/> (last visited Nov. 19, 2013).

CHAPTER VII - CONCLUSIONS

This dissertation discussed whether the U.S. and Colombian laws efficiently address the hold-up problem and, more particularly, whether its main harmful effect, the reduction in the level of relationship-specific investments, is prevented. Unsurprisingly, this dissertation concludes that neither the U.S. law nor Colombia law completely prevent the hold-up problem. In other words, both legal systems mitigate this problem but neither avoid or solve it.⁹³⁰ The degree of mitigation, although unclear to a certain degree, depends on the kind of legal rules addressing the hold-up problem.

Some of these legal rules work very similar in both countries. For instance, no modification clauses are unenforceable in both the United States and Colombia; thereby, they do not avoid, solve, or mitigate the hold-up problem. As a second example, the rules on good-faith modifications mitigate but fail to either avoid or solve the hold-up problem in both countries due to its vagueness and lack of clarity in its application. Legal rules on remedies are a third illustration. While some differences between the United States and Colombia regarding the kind and quantity of damages that aggrieved held-up parties may recover exist, legal remedies for breach of contract are not fully compensatory and, therefore, they mitigate but neither solve nor avoid the hold-up problem in these countries.

Even different legal rules in the United States and Colombia may have similar effects on the hold-up problem. This is the case of the rules on the right to demand on adequate assurances of due performance in the United States and the so-called *exceptio non adimpleti contractus* in Colombia. In both cases, these rules have a dual effect. On the one hand, the hold-up problem is

⁹³⁰ Fortunately, these laws do not appear to aggravate the hold-up problem.

aggravated when a non-investing party opportunistically apply these legal rules to obtain an extorted modification. On the other hand, these legal rules put a check on the hold-up problem by entitling a held-up party to demand adequate assurances (in the United States) or guarantees of performance (in Colombia) in case a demand for a modification is backed by a threat to breach.

In other cases, the U.S. legal rules address the hold-up problem more efficiently than Colombian legal rules. This is the case of the rules on economic duress, which at least mitigate the hold-up problem in the former country. In sheer contrast, economic duress in Colombia is a doctrine with minimal development in contract law and so, its role in the mitigation of the hold-up problem is minimal or almost negligible. As another illustration, the hold-up problem may be more acute in Colombia due to the protracted length of trials in this country, at least in comparison with the United States, and also because of the recoverable attorney's fees are usually very low.

The inverse is also true. Some Colombian laws address the hold-up problem more efficiently than the U.S legal rules. Stipulated damages clauses are the quintessential example since penalty clauses, which may avoid or solve this problem, are enforceable in Colombia while only liquidated damages clauses, which may only mitigate the hold-up problem, are enforceable in the United States. As two other examples, Colombian laws entitle a winning party to recover a pre-judgment interest as of the time of breach, and not as of the time of the trial as in the United States, and provide that a willful breaching party must pay not only foreseeable but also unforeseeable damages. A last kind of device, reputation bonds, may work differently in the United States and Colombia but not due to the legal rules but to other factors such as the features of the industries where the hold-up problem arises.

The theory about the role of the U.S. and Colombia laws in the prevention of the hold-up problem was coupled with an experimental analysis. Of course, the limited scope of this dissertation did not allow testing all the theories and legal rules discussed here and so, the experimental design focused on the role of penalty clauses and on the level of legal remedies for breach of contract in the prevention of the hold-up problem.

On the hand, the theory predicted that penalty clauses prevent the hold-up problem by entitling a held-up party to supra-compensatory level of private remedies. The experiment results may be divided into two categories. First, the experiment did not confirm that penalty clauses increase the willingness to make idiosyncratic investments (although the experiment neither confirm the opposite conclusion). Second, the renegotiated prices were in average lower in the penalty treatment than in the general one although these results were not robust from a statistical standpoint.

On the other hand, the theory dictates that the higher the level of remedies (i.e., the lower the difference between the fully compensatory and the actual level of remedies), the lower the impact of the hold-up problem in the level of investments. Similar to what happened as to the penalties treatment, the experiment did not confirm that a high level of remedies increase the number of idiosyncratic investments. Also similar to the results in the penalties treatment, the renegotiated prices were lower in the remedies treatment in comparison with the general one although the results of the experiment were not robust from a statistical standpoint.

Based on an understanding that the law has a role to play in the prevention of the hold-up problem, this dissertation proposed a three-step legal strategy to address it. The first step consists of proposals for the scholarly world, to be implemented in the short-term, and whose goal is to

make law and economics professors aware of the importance of the hold-up problem. As a second step, a critical mass of scholars who have understood the fundamentals and significance of the hold-up problem may influence or train judges who, in turn, would change the case law related to hold-up situations. As a third-step, in the long-term, Congress should enact some legal rules.

This dissertation, of course, is just a first and short step in the still unexplored world of the legal rules on the hold-up problem. Therefore, the opportunities in this field for future scholars are huge, both regarding theoretical studies and experimental analyses. As to the theory, it may be refined regarding the topics discussed here and, furthermore, new theories may be stated in respect of either sales law or topics of contract law that were beyond the scope of this dissertation. Two illustrations are an analysis of the hold-up problem under the Convention on International Sale of Goods, as a bridge between the U.S. and the Colombian law, and a study of hold-up situations in Colombian franchise law, which regulates contracts where the franchisee usually makes idiosyncratic investments prior to starting sales.

Regarding experiments, the field is almost completely unploughed and, therefore, uncountable opportunities for future researches exist. For instance, some papers might report the results of experiments testing the theories predicting how legal rules on no modification clauses, the *exceptio non adimpleti contractus*, good-faith modifications, and economic duress prevent the hold-up problem. Thus, this dissertation hopes to have opened a new field, as a pioneer, and be the first but not the unique work on the hold-up problem under Colombian commercial contract law.

The hold-up problem, however, is also important beyond commercial law. Indeed, hold-up situations are everywhere, as happen in family law when one of the partners is a stay-at home spouse who makes a relationship-specific investment by sacrificing his/her career; in labor law whenever the employee has invested a significant amount of time and money to learn skills necessary for the current job but worthless in any other employment; or in administrative law, when the government or any other public body enter a contract with a private entity in charge of building some infrastructure, such as highways, dams, or pipelines. Nonetheless, many other examples in a wide array of legal fields exist. Thus, and hopefully, this dissertation will not only motivate further studies on the hold-up problem under commercial law but also under other legal areas.

BIBLIOGRAPHY

This bibliography follows the same chapters' structure of the dissertation. References used in two or more chapters are located in the first chapter in which they are used. U.S. cases, Colombian cases, and Internet sources are shown in an aggregated form.

Chapter I – Introduction

Books

OLSON, MANCUR, *POWER AND PROSPERITY: OUTGROWING COMMUNIST AND CAPITALIST DICTATORSHIPS* (Basic Books, 2000).

WILLIAMSON, OLIVER E., *THE ECONOMIC INSTITUTIONS OF CAPITALISM* (The Free Press, 1985).

Chapter II – The Economics of the Hold-up Problem

Books

BAIRD, DOUGLAS G., GERTNER, ROBERT H. & PICKER, RANDAL C., *GAME THEORY AND THE LAW* (Harvard University Press, 1994).

BOLTON, PATRICK & DEWATRIPONT, MATHIAS, *CONTRACT THEORY* (The MIT Press, 2005).

COOTER, ROBERT & ULEN, THOMAS, *LAW AND ECONOMICS* (Addison Wesley, 3d ed. 2000).

DE GREGORIO, JOSÉ, *MACROECONOMÍA [MACROECONOMICS]* (Pearson Prentice Hall, 2007).

HOMER, *THE ODYSSEY: THE FITZGERALD TRANSLATION* (Farrar, Straus and Giroux, 1998) (n.d.)

JEHLE, GEOFFREY A. & RENY, PHILIP J., *ADVANCED MICROECONOMIC THEORY* (Addison Wesley, 2d ed. 2001).

MATTEI, UGO, *COMPARATIVE LAW AND ECONOMICS* (The University of Michigan Press, 1996).

MERCHURO NICHOLAS & MEDEMA, STEVEN G., *ECONOMICS OF THE LAW, FROM POSNER TO POSTMODERNISM AND BEYOND* (Princeton University Press, 2d ed. 2006).

POLINSKY, A. MITCHEL, *AN INTRODUCTION TO LAW AND ECONOMICS* (Aspen Publishers, 4th ed. 2003).

POSNER, RICHARD A., *ECONOMIC ANALYSIS OF THE LAW* (Aspen Publishers, 7th ed. 2007).

PUZO, MARIO, *THE GODFATHER* (NAL Trade Reissue, 2002).

SCOTT, ROBERT E. SCOTT & STEPHAN, PAUL B., *THE LIMITS OF LEVIATHAN: CONTRACT THEORY AND THE ENFORCEMENT OF INTERNATIONAL LAW* (Cambridge University Press, 2011).

SIMON, HERBERT A., *MODELS OF MAN: SOCIAL AND RATIONAL* (John Wileys & Sons, 1959).

WILLIAMSON, OLIVER E., *THE MECHANISMS OF GOVERNANCE* (Oxford University Press, 1996).

Chapters in Books

Artigot I Golobardes, Mireia & Gómez, Fernando, *Long-term Contracts in the Law & Economics Literature*, in 6 *CONTRACT LAW & ECONOMICS, ENCYCLOPEDIA OF LAW & ECONOMICS* 314 (Gerrit De Geest ed., 2d ed. 2011).

Hatzis, Aristides N., *Civil Contract Law and Economic Reasoning – An Unlikely Pair?*, in *THE ARCHITECTURE OF EUROPEAN CODES AND CONTRACT LAW* 159 (Stefan Grundmann & Martin Schauer eds., The Hague: Kluwer, 2006).

_____, *The Anti-theoretical Nature of Civil Law Contract Scholarship and the Need for an Economic Theory*, in 2 *COMMENTARIES IN LAW & ECONOMICS* (Robert W. McGee ed. 2002).

Van der Beek, Nick, *Long-term Contracts and Relational Contracts*, in 6 *CONTRACT LAW & ECONOMICS, ENCYCLOPEDIA OF LAW & ECONOMICS* 281 (Gerrit De Geest ed., 2d ed. 2011).

Articles in Reviews and Journals

Aghion, Phillipe & Bolton, Patrick, *Contracts as a Barrier to Entry*, 77 *AM. ECON. REV.* 388 (1987).

Ayres, Ian & Gerner, Robert Gerner, *Contractual Inefficiency and the Optimal Choice of Legal Rules*, 101 *YALE L. J.* 729 (1992).

Coase, Ronald H., *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937).

Edlin, Aaron S. & Reichelstein, Stefan, *Holdups, Standard Breach Remedies, and Optimal Investment*, 86 *AMER. ECON. REV.* 478 (1996).

Galanter, Marc, *Justice in Many Rooms: Courts, Private Ordering and Indigenous Law*, 19 *J. L. PLURALISM*, 1 (1981).

Graham, Daniel A. & Peirce, Ellen R., *Contract Modification: an Economic Analysis of the Hold-Up Game*, 52 *LAW & CONTEMP. PROB.* 9 (Winter, 1989).

- Hatzis, Aristides N., *Having the Cake and Eating it Too: Efficient Penalty Clauses in Common and Civil Contract Law*, 22 INT'L REV. L. & ECON 381 (2006).
- Holden, Steinar, *Renegotiation and the Efficiency of Investments*, 30 RAND J. ECON., 106 (1999).
- Kahneman, Daniel & Tversky, Amos, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263 (1979).
- Klein, Benjamin, Crawford, Robert G. & Alchian, Armen A., *Vertical Integration, Appropriable Rents, and the Competitive Contracting Process*, 21 J. L. & ECON. 297 (1978).
- Klein, Benjamin, *Why Hold-Ups Occur: The Self Enforcing Range of Contractual Relations*, 34 ECON. INQUIRY, 444 (1996).
- Lyon, Thomas P. & Rasmusen, Eric, *Buyer-option Contracts Restored: Renegotiation, Inefficient Threats, and the Hold-up Problem*, 20 J.L. ECON. & ORG. 148 (2004).
- MacLeod, W. Bentley, *Reputations, Relationships, and Contract Enforcement*, 45 J. ECON. LITERATURE 595 (2007)
- MacLeod, W. Bentley & Malcomson, James M., *Investments, Holdup, and the Form of Market Contracts*, 83 AMER. ECON. REV. 811 (1993).
- Rogerson, William P., *Contractual Solutions to the Hold-up Problem*, 59 REV. ECON. STUD. 777 (1992).
- Scalise, Ronald J., *Why No "Efficient Breach: in the Civil Law?: A Comparative Assessment of the Doctrine of Efficient Breach of Contract*, 55 AM. J. COMP. L. 721 (2007).
- Scott, Robert E., *Conflict and Cooperation in Long-Term Contracts*, 75 CAL. L. REV. 2005 (1987).
- Shavell, Steven, *Contractual Holdup and Legal Intervention*, 36 J. LEGAL STUD. 325 (2007).
- Spier, Kathryn E. Spier & Whinston, Michael D., *On the Efficiency of Privately Stipulated Damages for Breach of Contract: Entry Barriers, Reliance, and Renegotiation*, 36 RAND J. ECON. 180 (1995).
- Tirole, Jean, *Incomplete Contracts: Where do we stand?* 67 ECONOMETRICA 741 (1999).
- Wickelgren, Abraham L., *The Limitations of Buyer-option Contracts in Solving the Hold-up Problem*, 23 J.L. ECON. & ORG. 127 (2007).
- Williamson, Oliver E., *Credible Commitments: Using Hostages to Support Exchange*, 73 AM. ECON. REV. 519 (1983).

_____, *Transaction-Cost Economics: the Governance of Contractual Relations*,
22 J. LAW & ECON. 233 (1979).

Chapter III – The Hold-up Problem in U.S. Law

Books

FARNSWORTH, E. ALLAN, *CHANGING YOUR MIND, THE LAW OF REGRETTED DECISIONS* (Yale University Press, 2000).

FARNSWORTH, E. ALLAN, *CONTRACTS* (Foundation Press, 7th ed. 2008).

HALE, ROBERT L. *FREEDOM THROUGH LAW* (Columbia University Press, 1952).

LLEWELLYN, KARL N., *THE COMMON LAW TRADITION: DECIDING APPEALS* (Wolters Kluwer Law & Business, 1960).

SCHELLING, THOMAS, *THE STRATEGY OF CONFLICT* (Harvard University Press, 1981).

SNYDER, DAVID V. & DAVIES, MARTIN, *INTERNATIONAL TRANSACTIONS IN GOODS* (Oxford University Press, 2013).

WERTHEIMER, ALAN, *COERCION* (Princeton University Press, 1990).

WHITE, JAMES J. & SUMMERS, ROBERT R., *UNIFORM COMMERCIAL CODE* (West Publishing Co., 5th ed. 2000).

Chapters in Books

Cserne, Péter, *Duress in Contracts: an Economic Analysis*, in 6 *CONTRACT LAW & ECONOMICS, ENCYCLOPEDIA OF LAW & ECONOMICS* 57 (Gerrit De Geest ed., Edward Elgar Publishers, 2d ed. 2011).

Dalzell, John, *Duress by Economic Pressure*, in *THE ECONOMICS OF CONTRACT LAW* 67 (Anthony T. Kronman & Richard A. Posner eds., Little Brown & Co Law & Business, 1979).

De Geest, Gerrit, *Penalty Clauses and Liquidated Damages*, in 6 *CONTRACT LAW & ECONOMICS, ENCYCLOPEDIA OF LAW & ECONOMICS* 141 (Gerrit De Geest ed., Edward Elgar Publishers, 2d ed. 2011).

Grief, Avner, *Informal Contract Enforcement: Lessons from Medieval Trade*, in 2 *THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND LAW* 287 (Peter Newman ed., Palgrave, Macmillan, Hampshire, 1998).

Hadfield, Gillian, *The Public and the Private in the Provision of Law for Global Transactions*, in CONTRACTUAL CERTAINTY IN INTERNATIONAL TRADE: EMPIRICAL STUDIES AND THEORETICAL DEBATES ON INSTITUTIONAL SUPPORT FOR GLOBAL ECONOMIC EXCHANGES 239 (Volkmar Gessner, ed., Hart Publishing, 2009).

Posner, Eric A., *Efficient Statute Law*, in 2 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND LAW 19 (Peter Newman ed., Palgrave, Macmillan, Hampshire, 1998).

Schwartz, Alan, *Incomplete Contracts*, in 2 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND LAW 277 (Peter Newman, ed., Palgrave, Macmillan, Hampshire, 1998).

Wagner, Richard E., *Common Law, Statute Law and Economic Efficiency*, in 1 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND LAW 313 (Peter Newman ed., Palgrave, Macmillan, Hampshire, 1998).

Walt, Steven, *Penalty Clauses and Liquidated Damages*, in 6 CONTRACT LAW & ECONOMICS, ENCYCLOPEDIA OF LAW & ECONOMICS 178 (Gerrit De Geest ed., Edward Elgar Publishers, 2d ed. 2011).

Articles in Reviews and Journals

Ayres, Ian, *Empire or Residue: Competing Visions of the Contractual Canon*, 26 FLA. ST. U. L. REV. 897 (1999).

Bar-Gill, Oren & Ben-Shahar, Omri, *Credible Coercion*, 83 TEX. L. REV. 717 (2005).

_____, *The Law of Duress and The Economics of Credible Threats*, 33 J. LEGAL STUD. 391 (2004).

Ben-Shahar, Omri & Bernstein, Lisa, *The Secrecy Interest in Contract Law*, 109 YALE L.J. 1885 (2000)

Bernstein, Lisa, *Merchant Law in A Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765 (1996).

_____, *Opting Out of the Legal System: Extracontractual Relations on the Diamond Industry*, 21 J. LEGAL STUD. 115 (1992).

_____, *Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions*, 99 MICH. L. REV. 1724 (2001).

Borden, Michael J., *The Promissory Character of Adequate Assurances of Performance*, 76 BROOK. L. REV. 167 (2010).

Brooks, Richard R. W., *The Efficient Performance Hypothesis*, 116 YALE L.J. 568 (2006).

- Brinkley, Martin H., *The Regulation of Contractual Change: A Guide to No Oral Modification Clauses for North Carolina Lawyers*, 81 N.C. L. REV. 2239 (2003).
- Charny, David, *Nonlegal Sanctions in Commercial Relationships*, 104 HARV. L. REV. 373 (1990).
- Clarkson, Kenneth W., Miller, Roger L & Muris, Timothy J., *Liquidated Damages v. Penalties: Sense or Non-sense*, 1978 WIS. L. REV. 351.
- Craswell, Richard, *Contract Remedies, Renegotiation, and the Theory of Efficient Breach*, 61 S. CAL. L. REV. 629 (1988).
- _____, *Contract Law, Default Rules, and the Philosophy of Promising*, 88 MICH. L. REV. 489 (1989)
- Crespi, Gregory S., *The Adequate Assurances Doctrine After U.C.C. S 2-609: A Test of the Efficiency of the Common Law*, 38 VILL. L. REV. 179 (1993).
- Dalzell, John, *Duress by Economic Pressure I*, 20 N.C. L. REV. 237 (1941).
- _____, *Duress by Economic Pressure II*, 20 N.C. L. REV. 341 (1941).
- Davis, Kevin E., *The Demand for Immutable Contracts: Another Look at the Law and Economics of Contract Modifications*, 81 N.Y.U. L. REV. 487 (2006).
- Dawson, John P., *Economic Duress: An Essay in Perspective*, 45 MICH. L. REV. 253 (1947).
- DeNooyer, Dena, *Remedying Anticipatory Repudiation-Past, Present, and Future?*, 52 SMU L. REV. 1787 (1999).
- DiMatteo, Larry A., *A Theory of Efficient Penalty: Eliminating the Law of Liquidated Damages*, 38 AM. BUS. L.J. 633 (2001).
- _____, *Penalties as Rational Response to Bargaining Irrationality*, 2006 MICH. ST. L. REV. 883.
- Dressler, Jeffrey M., *Good Faith Rejection of Goods in A Falling Market*, 42 CONN. L. REV. 611 (2009).
- Edlin, Aaron S. & Schwartz, Alan, *Optimal Penalties in Contracts*, 78 CHI.-KENT L. REV. 33 (2003).
- Eisenberg, Melvin A., *Actual and Virtual Specific Performance, the Theory of Efficient Breach, and the Indifference Principle in Contract Law*, 93 CAL. L. REV. 975 (2005).
- Friedman, Milton, *The Role of Monetary Policy*, 58 AM. ECON. REV. 1 (1968).

- Garvin, Larry T., *Adequate Assurance of Performance: Of Risk, Duress, and Cognition*, 69 U. COLO. L. REV. 71 (1998).
- Goetz, Charles J. & Scott, Robert E., *Liquidated Damages, Penalties and the Just Compensation Principle: Some Notes on an Enforcement Model and a Theory of Efficient Breach*, 77 COLUM. L. REV. 554 (1977).
- Hadfield, Gillian K., *Privatizing Commercial Law*, 24 REGULATION 40 (2001).
- _____, *Privatizing Commercial Law: Lessons from ICANN*, 6 J. SMALL AND EMERGING BUS. L. 257 (2002).
- _____, *Privatizing Commercial Law: Lessons from the Middle and Digital Ages* (Stanford Law Program in Law & Econ., Working Paper No. 195, 200), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=220252
- Hillman, Robert A., *Contract Modification and “Self-Help Specific Performance” A Reaction to Professor Narasimhan*, 75 CORNELL L. REV. 62 (1989).
- _____, *Policing Contract Modification Under the U.C.C.: Good Faith and the Doctrine of Economic Duress*, 64 IOWA L. REV. 849 (1979).
- _____, *Standards for Revising Article 2 of the U.C.C.: the NOM Clause Model*, 35 WM. & MARY L. REV. 1509 (1994).
- Holmes, Oliver W., *The Path of the Law*, 10 HARV. L. REV. 457 (1897)
- Johnston, Jason Scott, *Default Rules/Mandatory Principles: A Game Theoretic Analysis of Good Faith and the Contract Modification Problem*, 3 S. CAL. INTERDIS. L.J. 337 (1993).
- Jolls, Christine, *Contracts as Bilateral Commitments: A New Perspective on Contract Modification*, 26 J. LEGAL STUD. 203 (1997).
- Keating, Daniel, *Measuring Sales Law Against Sales Practice: A Reality Check*, 17 J.L. & COM. 99 (1997).
- Klein, Benjamin & Leffler, Keith B., *The Role of Market Forces in Assuring Contractual Performance*, 89 J. POL. ECON. 615 (1981).
- Knoeber, Charles, *An Alternative Mechanism to Assure Contractual Reliability*, 12 J. LEGAL STUD. 333 (1983).
- Kronman, Anthony T., *Specific Performance*, 45 U. CHI. L. REV. 351 (1978).
- Macneil, Ian R., *Economic Analysis of Contractual Relations: Its Shortfalls and the Need for a “Rich Classificatory Apparatus”* 75 NW. U. L. REV. 1018 (1981).

- Macaulay, Stewart, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55 (1963).
- Mahoney, Paul G., *Contract Remedies and Options Pricing*, 24 J. LEGAL STUD. 139 (1995).
- Mather, Henry, *Contract Modification Under Duress*, 33 S. C.L. REV. 615 (1982).
- Milikowsky, Matthew, *A Not Intractable Problem: Reasonable Certainty, Tractebel, and the Problem of Damages for Anticipatory Breach of A Long-Term Contract in A Thin Market*, 108 COLUM. L. REV. 452 (2008).
- Narasimhan, Subha, *The Self-Help Specific Performance Remedy*, 97 YALE L.J. 61 (1987).
- Nathan, Richard, *Grappling with the Pre-existing Duty Rule: A Proposal for a Statutory Amendment*, 23 AM. BUS. L.J. 509 (1986).
- Posner, Richard A., *Some Uses and Abuses of Economics in Law*, 46 U. CHI. L. REV. 281 (1979).
- Rea, Samuel A., Jr., *Efficiency Implications of Penalties and Liquidated Damages*, 13 J. LEGAL STUD. 147 (1984).
- Richman, Barak D., *Firms, Courts, and Reputation Mechanisms: Towards a Positive Theory of Private Ordering*, 104 COLUM. L. REV. 2328 (2004).
- Rothermel, Frank A., *Comment: Role of Course of Performance and Confirmatory Memoranda in Determining the Scope, Operation and Effect of "No Oral Modification" Clauses*, 48 U. PITT. L. REV. 1239 (1987).
- Rowley, Keith A., *A Brief History of Anticipatory Repudiation in American Contract Law*, 69 U. CIN. L. REV. 565 (2001).
- Rubin, Paul H., *Unenforceable Contracts: Penalty Clauses and Specific Performance*, 10 J. LEGAL STUD. 237 (1981).
- Russell, Irma S., *Reinventing the Deal: A Sequential Approach to Analyzing Claims for Enforcement of Modified Sales Contracts*, 53 FLA. L. REV. 49 (2001).
- Schwartz, Alan, *The Myth that Promisees Prefer Supracompensatory Remedies* 100 YALE L.J. 369 (1990).
- Schwartz, Alan & Scott, Robert E., *Contract Theory and the Limits of Contract Law*, 113 YALE L.J. 541 (2003).
- Schwartz, Alan, *The Case for Specific Performance*, 89 YALE L.J. 271 (1979).

Schwartz, Alan & Watson, Joel C., *Economic and Legal Aspects of Costly Recontracting*, (Yale Law School, Law & Economics, Working Paper No. 242, 2000), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=224444.

_____, *The Law and Economics of Costly Contracting*, 20 J.L. ECON. & ORG. 2 (2004).

Scott, Robert E., *A Theory of Self-Enforcing Indefinite Agreements*, 103 COLUM. L. REV. 1641, 1692 (2003).

Shavell, Steven, *Damage Measures for Breach of Contract*, 11 BELL J. ECON. 466 (1980).

Snyder, David V., *Private Lawmaking*, 64 OHIO ST. L.J. 371 (2003).

_____, *The Law of Contract and the Concept of Change: Public and Private Attempts to Regulate Modification, Waiver, and Estoppel*, 1999 WIS. L. REV. 607.

Summers, Robert S., *The General Duty of Good Faith – Its Recognition and Conceptualization* 67 CORNELL L. REV. 810 (1981).

Telser, L.G., *A Theory of Self-Enforcing Agreements*, 53 J. BUS. (1980).

Chapter IV – The Hold-Up Problem in Colombian Contract Law

Books

FRANK, JEROME, *COURTS ON TRIAL: MYTH AND REALITY IN AMERICAN JUSTICE* (Princeton, 1973).

HINESTROSA, FERNANDO, *TRATADO DE LAS OBLIGACIONES* [TREATY ON OBLIGATIONS] (Universidad Externado de Colombia, 3d ed. 2007).

LÓPEZ, HERNÁN F., *IV LA JURISPRUDENCIA ARBITRAL EN COLOMBIA* [THE ARBITRAL JURISPRUDENCE IN COLOMBIA] (Universidad Externado de Colombia, 2007).

LÓPEZ, HERNÁN F., *III LA JURISPRUDENCIA ARBITRAL EN COLOMBIA* [THE ARBITRAL JURISPRUDENCE IN COLOMBIA] (Universidad Externado de Colombia, 2002).

LÓPEZ, HERNÁN F., *II LA JURISPRUDENCIA ARBITRAL EN COLOMBIA* [THE ARBITRAL JURISPRUDENCE IN COLOMBIA] (Universidad Externado de Colombia, 1996).

OSPINA, GUILLERMO & OSPINA, E., *TEORÍA GENERAL DEL CONTRATO Y DEL NEGOCIO JURÍDICO* [GENERAL THEORY OF THE CONTRACT AND OF THE LEGAL TRANSACTION] (Temis, ed. 1998).

SUESCÚN, JORGE, I-II DERECHO PRIVADO, ESTUDIOS DE DERECHO CIVIL Y COMERCIAL CONTEMPORÁNEO [PRIVATE LAW, STUDIES ON CONTEMPORANEOUS CIVIL AND COMMERCIAL LAW] (Universidad de los Andes, 2003).

TAMAYO, JAVIER. , LA RESPONSABILIDAD CIVIL [TORTS] (Legis, 1986).

TAMAYO, JAVIER. , LA CULPA CONTRACTUAL [CONTRACTUAL FAULT] (Temis, 1990).

Chapters in Books

Posner, Eric A., *Fault in Contract Law*, in *FAULT IN AMERICAN CONTRACT LAW 69* (Omri Ben-Shahar and Ariel Porat eds., Cambridge University Press 2010).

Soto, Carlos A., *Inmutabilidad de las penas convencionales* [Inmutability of Conventional Penalties], in *3 DERECHO PRIVADO Y GLOBALIZACIÓN: CONTRATOS* [PRIVATE LAW AND GLOBALIZATION: CONTRACTS] (Jorge Oviedo ed., Grupo Editorial Ibáñez, 2008).

Articles in Reviews and Journals

Farnsworth, E. Allan, *Precontractual Liability and Preliminary Agreements: Fair Dealing and Failed Negotiations*, 87 COLUM. L. REV. 217 (1987).

Hadfield, Gillian K., *Weighing the Value of Vagueness: An Economic Perspective on Precision in The Law*, 82 CAL. L. REV. 541 (1994).

Katz, Ellen D., *Private Order and Public Institutions*, 98 MICH. L. REV. 2481 (2000).

McMillan, John & Woodruff, Christopher, *Private Order Under Dysfunctional Public Order*, 98 MICH. L. REV. 2421 (2000).

Muñoz, Edgardo, *Right to Withhold Performance Under Ibero-American Law*, 1 CUADERNOS MAESTRÍA D. 379 (2010).

Pérez, Yaneth, *Análisis Económico de los Vicios del Consentimiento en el Régimen Colombiano y en los Principios sobre los Contratos Comerciales Internacionales UNIDROIT* [Economic Analysis of Vices of Consent in Colombian Law and in the UNIDROIT Principles on International Commercial Contracts], 21 R. DÍKAION, 179 (2007).

Chapter V – An Experiment on the Hold-up Problem

Chapters in Books

Arlen, Jennifer Arlen & Talley, Eric L., *Introduction to Experimental Law and Economics*, in *EXPERIMENTAL LAW AND ECONOMICS* (Jennifer Arlen & Eric Talley eds., Edward Elgar Publishers, 2008).

Camerer, Colin & Talley, Eric L., *Experimental Study of Law*, in 2 HANDBOOK OF LAW and ECONOMICS 1619 (Mitchel A. Polinsky & Steven M. Shavell eds., 2007).

Roth, Alvin E., *Bargaining experiments*, in HANDBOOK OF EXPERIMENTAL ECONOMICS 253 (John H. Kagel & Alvin E. Roth eds., North Holland, 1995).

Articles in Reviews and Journals and Working Papers

Bearden, Joseph N., *Ultimatum Bargaining Experiments: The State of the Art* (INSEAD - Decision Sciences, Nov. 2001) (unpublished manuscript) (available at <http://ssrn.com/abstract=626183>).

Carpenter, Jeffrey P., *Bargaining Outcomes as the Result of Coordinated Expectations: An Experimental Study of Sequential Bargaining* 47 J. CONFLICT RESOLUTION 119 (2003).

Casadesus-Marsanell, Ramón & Spulber Daniel, *The Fable of Fisher Body*, 43 J. L. & ECON. 67 (2000).

Coase, Ronald H., *The Conduct of Economics: The Example of Fisher Body and General Motors*, 15 J. ECON. & MGMT. STRATEGY 255 (2006).

Crosen, Rachel, *Why and How to Experiment: Methodologies from Experimental Economics*, 2002 U. ILL. LAW REV. 921.

Eckel, Catherine, Johnson, Martin & Wilson, Rick K., *Fairness and Rejection in the Ultimatum Bargaining Game*, 10 EXPERIMENTAL METHODS IN POL. SCI. 376 (2002).

Ellingsen, Tore & Johannesson, Magnus, *Is There a Hold-up Problem?*, 106 SCAND. J. OF ECON., 475 (2004).

Epstein, Lee & King, Gary, *The Rules of Inference*, 69 U. CHI. L. REV. 1 (2002).

Güth, Werner, Schmittberger, Rolf, & and Schwarze, Bernd, *An Experimental Analysis of Ultimatum Bargaining*, 3 J. ECON. BEHAVIOR & ORG. 367 (1982).

Hackett, Steven C., *Incomplete Contracting: A Laboratory Experimental Analysis*, 31 ECON. INQUIRY 274 (1993).

Hoppe, Eva I. & Schmitz, Patrick W., *Can contracts solve the hold-up problem? Experimental evidence*, 73 GAMES & ECON. BEHAVIOR 186 (2011).

Kahn, Lawrence M. & Murnighan, J. Keith, *A General Experiment on Bargaining in Demand Games with Outside Options*, 83 AM. ECON. REV. 1260 (1993).

Kennan, John & Wilson, Robert, *Bargaining with Private Information*, 31 J. ECON. LITERATURE 45 (1993).

- Korobkin, Russell B., *Symposium: Empirical and Experimental Methods of Law: Empirical Scholarship in Contract Law: Possibilities and Pitfalls*, 2002 U. ILL. L. REV. 1033 (2002).
- _____, *The Status Quo Bias and Contract Default Rules*, 83 CORNELL L. REV. 608 (1998).
- Miwa, Yoshiro & Ramseyer, J. Mark, *Rethinking Relationship-Specific Investments: Subcontracting in the Japanese Automobile Industry*, 98 MICH. L. REV. 2636 (2000).
- Moraes, Jose R., Maria S. Macchioni & Sergio G. Lazzarini, *'Hold-Up' in Negotiations Involving Specific Investments: An Experimental Investigation* (Jan. 20, 2007) (unpublished manuscript) (available at <http://ssrn.com/abstract=957790>).
- Neumann, Richard K., Jr. & Krieger, Stefan H., *Empirical Inquiry Twenty-Five Years After the Lawyering Process*, 10 CLINICAL L. REV. 349 (2003).
- Oosterbeek, Hessel, Sonnemans, Joep & Van Velzen Susan, *Bargaining with Endogenous Pie Size and Disagreement Points*, 1999 J. POPULATION ECON. 1.
- Sloof, Randolph, Leuven, Edwin, Sonnemans, Joep & Oosterbeek, Hessel, *An Experimental Comparison of Reliance Levels under Alternative Breach Remedies*, 34 RAND J. ECON. 205 (2000).
- Sloof, Randolph, Oosterbeek, Hessel, Riedl, Arno & Sonnemans, Joep, *Breach Remedies, Reliance and Renegotiation*, 26 INT'L REV. L. & ECON. 264 (2006).
- Sloof, Randolph, Sonnemans, Joe & Oosterbeek, Hessel, *Specific Investments, Holdup, and the Outside Option Principle: An Experimental Study*, 48 EUROP. ECON. REV. 1399 (1999).
- Sonnemans, Joep, Oosterbeek, Hessel & Sloof, Randolph, *On the Relation Between Asset Ownership and Specific Investments*, 111 ECON. J. 791 (2001).
- Snyder, David V., *Go Out and Look: The Challenge and Promise of Empirical Scholarship in Contract Law*, 80 TUL. L. REV. 1009 (2006).
- Thaler, Richard H., *Anomalies The Ultimatum Game*, 2 J. ECON. PERSPECTIVES 195 (1988).
- Wilkinson-Ryan, Tess & Hoffman, David A., *Breach Is For Suckers*, 63 VAND. L. REV. 1003 (2010).
- Zeiler, Kathryn, *Cautions on the Use of Economics Experiments in Law*, 166 J. INST. & THEORETICAL ECON. 178 (2010).

Chapter VI—Proposals to Efficiently Address the Hold-up Problem in Colombian Contract Law

Books

KAHNEMAN, DANIEL, *THINKING, FAST AND SLOW* (FARRAR, STRAUS AND GIROUX, 2013).

Articles in Reviews and Journals and Working Papers

Demsetz, Harold, *Information and Efficiency: Another Viewpoint*, 12 J. LAW & ECON. 1 (1969).

Furubotn, Eirik G., *Economic Efficiency in a World of Frictions*, 8 EUR. J. L. & ECON. 179 (1999).

Gaviria, Juan A., *A Note on the New Colombian Legal Rules on International Arbitration*, 2 THE ARBITRATION BRIEF 65 (2013).

Gaviria, Juan A., *Riesgos y Obstáculos para una Exitosa Interacción entre Derecho y Economía en Colombia [Hurdles and Hazards to a Thriving Interaction Between Law and Economics in Colombia]*, 39 CONTEXTO REV. D. Y ECON. 13 (2013).

Margolis, Stephen E., *Two Definitions of Efficiency in Law and Economics*, 16 J. LEGAL STUD. 471 (1987).

Mattei, Ugo, *Efficiency and Equal Protection in the New European Contract Law: Mandatory, Default and Enforcement Rules*, 39 VA. J. INT'L L. 537 (1999).

Chapter VII - Conclusions

This chapter does not have any references.

WEBPAGES

AGENCIA NACIONAL DE INFRAESTRUCTURA [NATIONAL AGENCY OF INFRASTRUCTURE], <http://www.ani.gov.co> (last visited Nov. 19, 2013).

COMISIÓN DE REGULACIÓN DE ENERGÍA Y GAS [REGULATORY AGENCY ON ENERGY AND GAS], <http://www.creg.gov.co> (last visited Nov. 19, 2013).

COMISIÓN DE REGULACIÓN DE COMUNICACIONES [REGULATORY AGENCY ON COMMUNICATIONS], <http://www.crc.gov.co> (last visited Nov. 19, 2013).

International Institute for the Unification of Private Law, *UNIDROIT Principles of International Commercial Contracts, UNIDROIT Principles 2010*, <http://www.unidroit.org/english/principles/contracts/main.htm> (last visited Nov. 19, 2013).

MASON JUDICIAL EDUCATION PROGRAM, <http://www.masonlec.org/programs/mason-judicial-education-program> (last visited Nov. 19, 2013).

MINISTERIO DE COMERCIO, INDUSTRIA Y TURISMO (COLOMBIAN MINISTRY OF COMMERCE, INDUSTRY, AND TOURISM), <https://www.mincomercio.gov.co/publicaciones.php?id=10422> (last visited Nov. 19, 2013).

Moore, Elaine, *CIVETS, BRICS, and the Next 11*, THE FINANCIAL TIMES, June 8, 2012, <http://www.ft.com/intl/cms/s/0/c14730ae-aff3-11e1-ad0b-00144feabdc0.html#axzz2Qq69NzFe>.

THE CHANGING WAYS, *available at*: <http://thechangingways.com/2010/11/30/the-best-time-to-plant-a-tree-quote-of-the-month-november-2010/> (last visited Nov. 19, 2013).

THE WORLD BANK, *Doing Business Colombian Report 2012*, *available at*: <http://www.doingbusiness.org/data/exploreconomies/colombia/#enforcing-contracts> (last visited Nov. 19, 2013)

THE WORLD BANK, *Doing Business 2011, Colombia, Comparing Business Regulations in 183 Economies*, <http://espanol.doingbusiness.org/~media/FPDKM/Doing%20Business/Documents/Profiles/Country/DB11/COL.pdf> (last visited Nov. 19, 2013).

U.S.–Colombia Trade Agreement, *available at* <http://www.ustr.gov/uscolombiatpa> (last visited Nov 19, 2013).

XM COMPAÑÍA DE EXPERTOS EN MERCADOS S.A. E.S.P. [XM COMPANY OF EXPERTS IN MARKETS] (last visited Nov. 19, 2013), <http://www.xm.com.co>

BRITISH CASES

Hadley v. Baxendale, 9 Exch. 341, 156 Eng. Rep. 145 (1854).

U.S. CASES

1. Federal Cases

a. Supreme Court of the United States

Dingley v. Oler, 117 U.S. 490 (1886).

Hartsville Oil Mill v. United States, 271 U.S. 43 (1926).

Union Pac. R.R. Co. v. Pub. Serv. Comm'n of Mo., 248 U.S. 67 (1918).

b. Courts of Appeals

Alaska Packers' Ass'n v. Domenico, 117 F. 99 (9th Cir. 1902).

Agroindustrias Vezel, S.A. de C.V. v. H.P. Schmid, Inc., 15 F.3d 1082 (9th Cir. 1994).

Am. Exploration Co. v. Columbia Gas Transmission Corp., 779 F.2d 310 (6th Cir. 1985).

AMF Inc. v. McDonald's Corp., 536 F.2d 1167 (7th Cir. 1976).

Cargill, Inc. v. Stafford, 553 F.2d 1222 (10th Cir. 1977).

Cent. Coal & Coke Co. v. Hartman, 111 F. 96 (8th Cir. 1901).

Consol. Data Terminals v. Applied Digital Data Sys., Inc., 708 F.2d 385 (9th Cir. 1983).

Cosden Oil & Chem. Co. v. Karl O. Helm Aktiengesellschaft, 736 F.2d 1064 (5th Cir. 1984).

Cont'l Grain Co. v. McFarland, 628 F.2d 1348 (4th Cir. 1980).

Ctr. Chemical Co. v. Avril, Inc., 392 F.2d 289 (5th Cir. 1968).

Energy Plus Consulting, LLC v. Ill. Fuel Co., LLC, 371 F.3d 907 (7th Cir. 2004).

Fredonia Broad. Corp. v. RCA Corp., 481 F.2d 781 (5th Cir. 1973).

Hawthorne Indus. v. Balfour Maclaine Intern., Ltd., 676 F.2d 1385 (11th Cir. 1982).

Facebook, Inc. v. Pac. Nw. Software, Inc., 640 F.3d 1034 (9th Cir. 2011).

Jamestown Farmers Elevator, Inc. v. Gen. Mills, Inc., 552 F.2d 1285 (8th Cir. 1977).

Kaiser-Francis Oil Co. v. Producer's Gas Co., 870 F.2d 563 (10th Cir. 1989).

Laclede Gas Co. v. Amoco Oil Co., 522 F.2d 33 (8th Cir. 1975).

Lake River Corp. v. Carborundum Co., 769 F.2d 1284 (7th Cir. 1985).

McDermott v. Middle East Carpet Co., 811 F.2d 1422 (11th Cir. 1987).

McCran v. U.S. Lines, Inc., 803 F.2d 771 (2d Cir. 1986).

Nobs Chem., U.S.A., Inc. v. Koppers Co., 616 F.2d 212 (5th Cir. 1980).

N. Ind. Pub. Serv. Co. v. Carbon Cnty. Coal Co., 799 F.2d 265 (7th Cir. 1986).

Nyquist v. Randall, 819 F.2d 1014 (11th Cir. 1987).

Palmer Barge Line, Inc., v. S. Petroleum Trading Co., 776 F.2d 502 (5th Cir.1985).

Pirrone v. Monarch Wine Co. of Georgia, 497 F.2d 25 (5th Cir. 1974).

Rock-Ola Mfg. Corp. v. Leopold, 98 F.2d 196 (5th Cir. 1938).

Roth Steel Prods. v. Sharon Steel Corp., 705 F.2d 134 (6th Cir. 1983).

Selmer Co. v. Blakeslee-Midwest Co., 704 F.2d 924 (7th Cir. 1983).

T & S Brass & Bronze Works, Inc. v. Pic-Air, Inc., 790 F.2d 1098 (4th Cir. 1986).

Tractebel Energy Mktg., Inc. v. AEP Power Mktg., Inc., 487 F.3d 89 (2d Cir. 2007).

U.S. Naval Inst. v. Charter Commc'ns, Inc., 936 F.2d 692 (2d Cir. 1991).

United States v. Griffith, Gornall & Carman, Inc., 210 F.2d 11 (10th Cir. 1954).

United States v. Stump Home Specialties Mfg., 905 F.2d 1117 (7th Cir. 1990).

Weisberg v. Handy & Harman, 747 F.2d 416 (7th Cir. 1984).

Wisconsin Knife Works v. Nat'l Metal Crafters, 781 F.2d 1280 (7th Cir. 1986).

XCO Int'l Inc. v. Pac. Sci. Co., 369 F.3d 998 (7th Cir. 2004).

c. District Courts

Argo Welded Prod., Inc. v. J. T. Ryerson Steel & Sons, 528 F. Supp. 583 (E.D. Pa. 1981).

Bus. Incentives Co., Inc. v. Sony Corp. of Am., 397 F. Supp. 63 (S.D.N.Y. 1975).

Colorado-Ute Elec. Ass'n v. Envirotech Corp., 524 F. Supp. 1152 (D. Colo. 1981).

Creusot-Loire Int'l, Inc. v. Coppus Eng'g Corp., 585 F. Supp. 45 (S.D.N.Y. 1983).

Erie County Water Auth. to Use & Benefit of Price Bros. Co., Dayton, Ohio v. Hen-Gar Const. Corp., 473 F. Supp. 1310 (W.D.N.Y. 1979).

In re A.J. Lane & Co., Inc., 113 B.R. 821 (Bankr. D. Mass. 1990).

Kelsey-Hayes Co. v. Galtaco Redlaw Castings Corp., 749 F. Supp. 794 (E.D. Mich. 1990).

La. Power & Light Co. v. Alleghany Ludlum Indus., Inc., 517 F. Supp. 1319 (E.D. La. 1981).

Petroleo Brasileiro, S. A., Petrobras v. Ameropan Oil Corp., 372 F. Supp. 503 (E.D.N.Y. 1974).

Rowe v. Shehyn, 192 F. Supp. 428 (D.D.C 1961).

U. S. for Use & Benefit of Crane Co. v. Progressive Enter., Inc., 418 F. Supp. 662 (E.D. Va. 1976).

Zim Israel Navigation Co. v. 3-D Imp., Inc., 29 F.Supp.2d 186 (S.D.N.Y. 1998).

2. State Cases

Ashland Mgmt. v. Janien, 624 N.E.2d 1007 (N.Y. 1993).

Austin Instrument, Inc. v. Loral Corp., 272 N.E.2d 533 (N.Y. 1971).

Banta v. Stamford Motor Co., 92 A. 665 (Conn. 1914).

Bartlett v. Stanchfield, 19 N.E. 549 (Mass. 1889).

Beatty v. Guggenheim Exploration Co., 122 N.E. 378 (N.Y. 1919).

Big Bear Prop., Inc. v. Gherman, 157 Cal. Rptr. 443 (Cal. Ct. App. 1979).

Bomberger v. McKelvey, 220 P.2d 729 (Cal. 1950).

Centric Corp. v. Morrison-Knudsen Co., 731 P.2d 411 (Okl. 1986).

Constr. Contracting & Mgmt., Inc. v. McConnell, 815 P.2d 1161 (N.M. 1991).

Delano Growers' Co-op. Winery v. Supreme Wine Co., Inc., 473 N.E.2d 1066 (Mass. 1985).

Ellis Mfg. Co. v. Brant, 480 S.W.2d 301 (Tex. Civ. App. 1972).

Erwin Weller Co. v. Talon, Inc., 295 N.W.2d 172 (S.D. 1980).

Evergreen Amusement Corp. v. Milstead, 112 A.2d 901 (Md. 1955).

Field v. Golden Triangle Broad., Inc., 305 A.2d 689 (Pa. 1973).

Hackley v. Headley, 8 N.W. 511 (Mich. 1881).

Jankowski v. Mazzotta, 152 N.W.2d 49 (Mich. Ct. App. 1967).

Kenford Co., Inc. v. Erie Cnty., 493 N.E.2d 234 (N.Y. 1986).

Lumber Enters. v. Hansen, 846 P.2d 1046 (Mont. 1993).

Mich. Sugar Co. v. Falkenhagen, 220 N.W. 760 (Mich. 1928).

Miller v. Eisele, 168 A. 426 (N.J. 1933).

Norcon Power Partners v. Niagara Mohawk Power Corp., 705 N.E.2d 656 (N.Y. 1998).

Norwalk Door Closer Co. v. Eagle Lock & Screw Co., 220 A.2d 263 (Conn. 1966).

Or. Pac. R. R. v. Forrest, 28 N.E. 137 (1891).

Pantano v. McGowan, 530 N.W.2d 912 (Neb. 1995).

Rose v. Vulcan Materials Co., 194 S.E.2d 521 (N.C. 1973).

Rubenstein v. Rubenstein, 120 A.2d 11 (N.J. 1956).

Top of Iowa Coop. v. Sime Farms, Inc., 608 N.W.2d 454 (Iowa 2000).

Trinidad Bean & Elevator Co. v. Frosh, 494 N.W.2d 347 (Neb. App. 1992).

Varnell v. Henry M. Milgrom, Inc., 337 S.E.2d 616 (N.C. App. 1985).

Vernitron Corp. v. CF 48 Associates, 104 A.D.2d 409 (N.Y. App. Div. 1984).

Vick v. Shinn, 4 S.W. 60 (Ark. 1887).

Wassenaar v. Panos, 331 N.W.2d 357 (Wis. 1983).

W. Park Ave., Inc. v. Ocean Tp., 224 A.2d 1 (N.J. 1966).

Wolf v. Marlton Corp., 154 A.2d 625 (N.J. Super. Ct. App. Div. 1959).

Yonan v. Oak Park Fed. Sav. & Loan Ass'n, 326 N.E.2d 773 (Ill. App. Ct. 1975).

COLOMBIAN CASES

CORTE SUPREMA DE JUSTICIA (COLOMBIAN SUPREME COURT)

Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., mayo 31, 1938, M.P. J. Mujica, Gaceta Judicial [G.J.] (No. XLVI, p.541) (Colom).

Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., octubre 5, 1939, M.P. A. Gómez, Gaceta Judicial [G.J.] (No XLVIII p. 720) (Colom.).

Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., abril 15, 1969, M.P. B. Pérez, Gaceta Judicial [G.J.] (No. CXXXII, p. 273) (Colom.).

Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., septiembre 27, 1974, M.P. G. Álvarez, Gaceta Judicial [G.J.] (No. CXXXIV, p. 126) (Colom.).

- Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., septiembre 3, 1977, M.P. V. Betancur, Gaceta Judicial [G.J.] (No. CXLII, p. 657) (Colom.).
- Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., septiembre 29, 1984, M.P. J. Escobar, Gaceta Judicial [G.J.] (No. CLXXVI, p. 288) (Colom.).
- Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala Civ., junio 12, 1990, M.P. C. Hernández, Gaceta Judicial [G.J.] (No. CLXXXVIII, p. 283 (Colom).
- Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., marzo 4, 1998, M.P. C. Jaramillo, Gaceta Judicial [G.J.] (No. CCXVIII, p. 450) (Colom).
- Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., junio 23, 2000, M.P. J. Ramírez, Expediente C-4823, Gaceta Judicial [G.J.] (No. CCXII, p. 482) (Colom.).
- Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., mayo 16, 2002, M.P. J. Santos, Expediente 6877, Gaceta Judicial [G.J.] (No. CCXV, p. 163) (Colom.).
- Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., junio 30, 2005, M.P. E. Villamil, Gaceta Judicial [G.J.] (No. CCXXIII, p.313) (Colom.).
- Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., enero 30, 2007, M.P. E. Villamil, Gaceta Judicial [G.J.] (No. CCXXVII, p. 108) (Colom.).
- Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., octubre 24, 2009, M.P. W. Namén, Gaceta Judicial [G.J.] (No. CCXXXII, p. 120) (Colom.).
- Corte Suprema de Justicia [C.S.J.] [Supreme Court], Sala. Civ., septiembre 9, 2010, M.P. W. Namén, Gaceta Judicial [G.J.] (No. CCXXXIV, p. 563) (Colom.).

CORTE CONSTITUCIONAL (CONSTITUTIONAL COURT)

- Corte Constitucional [C.C.] [Constitutional Court], febrero 2, 2009, M.P.: J. Araujo, Sentencia T-058-2009, Gaceta de la Corte Constitucional [G.C.C.] (vol. XLIX, p. 223) (Colom.).
- Corte Constitucional [C.C.] [Constitutional Court], diciembre 9, 2010, M.P.: L. Vargas, Sentencia C-1008-2010, Gaceta de la Corte Constitucional [G.C.C.] (vol. LI, p. 53) (Colom.).

LAUDOS (ARBITRAL AWARDS) - available on commercial subscription at:

http://www.legis.com.co/Producto/L/laudos_arbitrales_colombianos_-_internet/laudos_arbitrales_colombianos_-_internet.asp?CodObjetoSE=9540&CodObra=220&Codlinea=36&NomMateria=&Id_Materia=&NomLinea=

Mitsui de Colombia S.A. v. Metalec, Manufacturas Metal Eléctricas Ltda. (septiembre 7, 1993) (J. Esguerra, J. Nárvaez, A. Mendoza, Arb.).

Instituto de Mercadeo Agropecuario, IDEMA, v. Americana de Gestiones Comerciales, AMERCO Ltda. (julio 13, 1996) (L. Alvarado Arb.).

Icollantas S.A. v. Auto Mundial Ltda., Auto Mundial del Valle Ltda., y Reencauchadora Auto Mundial Ram Ltda. (febrero 26, 1999) (J. Nárvaez, S. Rodríguez y R. Madriñán Arb.).

Compañía Central de Seguros S.A. y Compañía Central de Seguros de Vida S.A. v. Maalula Ltda. (agosto 31, 2000) (J. Suescún, J. Cárdenas, A. De Irisarri Arb.).

Impsa Andina S.A. v. Argosy Energy International (diciembre 12, 2000) (J. Cabrera, R. Núñez, H. Chaux Arb.).

Proctor Ltda. v. Caja de Compensación Familiar Campesina, Comcaja (enero 26, 2001) (N. Gamboa, J. Cubides y L. Salazar Arb.).

Constructora Mazal Ltda. v. Inversiones GBS Ltda. (marzo 15, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.).

Unión Temporal Distral S.A., CMD S.A. y Consorcio Tito Marcelo, Pabición Ltda. y Primont Ltda. v. Empresa Colombiana de Petróleos – Ecopetrol (junio 20, 2001) (J. Caro, D. Muñoz, A. Tobón Arb.).

Granjas El Socorro Ltda., v. Colombiana de Incubación S.A. Incubacol (agosto 5, 2002) (H. Mora, A. Hernández, H. Romero Arb.).

Comercial Okasa Ltda., v. Banco Colpatria Red Multibanca Colpatria S.A. (mayo 27, 2004) (C. Torrente Arb.).

Gallo's Comunicaciones E.U. v. Super 9 Comunicaciones S.A. (noviembre 17, 2004) (C. de la Torre, H. Cardozo y F. Santos Arb.).

Empresa de Telecomunicaciones de Valledupar, Teleupar S.A. ESP, en liquidación v. Angelcom S.A. (mayo 18, 2005) (F. Sarmiento, M. Pretelt y L. Dávila Arb.).

Astecnia S.A. v. Francocolombiana de Construcción Ltda. (junio 14, 2005) (A. Pabón, L. Neira y J. Cárdenas Arb.).

Consorcio CCIM v. Ecopetrol S.A. (noviembre 24, 2005) (C. Manrique, C. Arrieta, W. Namén Arb.).

Concentrados El Pijao Ltda. v. Finca S.A. (febrero 18, 2008) (C. Useche, F. Silva, C. Calderón Arb.).

Mina Canales Limitada v. Interamerican Coal N.V. y C.I. Exportadora Interamerican Coal Colombia S.A. (septiembre 9, 2008) (J. Santos, J. Benetti, L. López Arb.).

Transportadora de Gas del Interior S.A. E.S.P. –T.G.I. S.A. E.S.P. v. Empresa Colombiana de Gas – Ecogás (septiembre 2, 2009) (J. Cárdenas, M. Monroy, A. Linares Arb.).

Formametal E.U. v. Compañía Internacional de Alimentos Ltda. (septiembre 8, 2008) (H. Bueno, F. Puerta, C. Valencia Arb.).

Aire Ambiente S.A. v. Concreto S.A. y BRG Sociedad de Inversiones Ltda., BRG Ltda. (marzo 10, 2010) (J. Cárdenas Arb.).

Electrificadora del Caribe S.A. E.S.P. v. Energía Confiable S.A. E.S.P. (agosto 27, 2010) (G. Diago, F. Royet, A. Uribe Arb.).

Productora Tabacalera de Colombia S.A.S. Protabaco S.A.S. (Protabaco) v. División Mayor del Fútbol Colombiano (Dimayor) (septiembre 9, 2011) (M. Castro, E. Rengifo, L. Salazar Arb.).

INTERNATIONAL ARBITRATION CASES

Beijing Light Automobile Co., Ltd. v. Connell Limited Partnership, Arbitration Institute of the Stockholm Chamber of Commerce (Arb. T. Leijonhielm, R. Romlöv, and Johan Gernandt), Jun. 5, 1998 <http://cisgw3.law.pace.edu/cases/980605s5.html>