When Do Individuals Participate in Class Actions?

Article · July 2010

CITATIONS
2

READS
257

1 author:

Gijs van Dijck
Maastricht University
76 PUBLICATIONS **280** CITATIONS

SEE PROFILE

TILBURG LAW SCHOOL
LEGAL STUDIES RESEARCH PAPER SERIES

When Do Individuals Participate in Class Actions?

Gijs van Dijck[1]
Tilburg Law School
Tilburg Institute for Interdisciplinary Studies of Civil Law and Conflict Resolution Systems (TISCO)
G.vanDijck@tilburguniversity.edu

TISCO Working Paper Series on Civil Law and Conflict Resolution Systems
No. 007/2010
December, 2010, Version: 2.0

Tilburg Law School Legal Studies Research Paper Series
No. 013/2011

[1] Address correspondence to Gijs van Dijck, Tilburg University, The Netherlands, NL-5000LE; e-mail: G.vanDijck@tilburguniversity.edu. Van Dijck is Associate Professor, Tilburg University. The author thanks Kees van den Bos, Eric van Dijk, Karlijn van Doorn, Ianika Tzankova, and Louis Visscher for their valuable suggestions and comments, and the *Research and Documentation Centre* (WODC) of the *Ministry of Justice* of the Netherlands for funding this research project.

When Do Individuals Participate in Class Actions?

Gijs van Dijck

Abstract

Abstract: This study focuses on participation rates in class actions. Although prior research suggests that the participation rates are higher in opt out models than in opt in models, there is substantial variation. Moreover, the opt in model and opt out model are sometimes applied to different types of claims. Three experiments were conducted to test the effect of the default in opt in procedures and opt out procedures on the class size. Additionally, it was analyzed when individuals deviate from the default. The studies indicate that the default has moderate to strong effects on the decisions of (potential) class members. Study 1 demonstrates that knowledge of decisions of other (potential) class members have moderate to strong effects on the decisions of individuals. Study 2 suggests that an increase of the suffered loss causes (potential) class members to consider an individual claim, although no effect was found with respect to the actual decision. Study 3 shows that more (potential) class members decide to claim individually if they know the outcome of the class action (settlement) than if the outcome is uncertain at the time of the decision. Additional data suggest that the procedure (opt in / opt out) has an effect on the reasons individuals report for their decisions, implying that the procedure partly defines what (potential) class members consider to be important. The policy implications of the findings are discussed.

Introduction

Legal systems can adopt an opt in procedure or an opt out procedure when regulating class actions. In an opt in procedure, the claimants join the class after they explicitly have given their consent. An opt out procedure implies that all class members are bound to the outcome of the class action unless they object and exclude themselves from the class. Previous studies indicate that the class size is generally larger in opt out models than in opt in models. The participation rates, however, vary among jurisdictions and between different areas of the law. This suggests that other factors are involved in the decision making process of (potential) class members when they decide to join the class action, to withdraw themselves from the class, to individually initiate a legal procedure, or not to claim. Additionally, selection bias can not be ruled out, as opt in models may be applied to different types of cases or claims than opt out models.

This study focuses on the effect of the default on class size. In an opt in procedure, the default is to not file a claim. Being a class member is the default in opt out procedures. Prior research, which will be described below, suggests that the class size is substantially higher in opt out models than in opt in models. In addition to testing this assumption, this study identifies and experimentally tests events which causes individuals to deviate from the default, consequently lowering the default effect. In three experiments, it was found that:

- The default has moderate to strong effects on the decisions of individuals to stay in the class in opt out models and to file no claim in opt in models.
- Information about decisions of other individuals have moderate to strong effects, meaning that individuals who know which decisions other individuals made, tend to make the same decision as their peers.
- A higher claim causes (potential) class members to *consider* an individual claim, although no effect was found on the actual decision.
- Knowing the outcome of the class action (settlement) strongly influences individuals' decisions to file no claim, join the class, or initiate an individual procedure.
- The procedure (opt in / opt out) has an effect on the reasons individuals report for their decisions.

This paper starts with an overview of studies that were previously published (part I). Subsequently, the research questions (part II) and the results (part III) will be presented. Finally, this paper discusses the theoretical and practical implications of the results (part IV).

I. Prior Studies

The *Civil Justice Council of England and Wales* published a report in 2008 which compared class action participation rates of opt in procedures and opt out procedures.[1] The study reports cases where the participation rates were known, in addition to participation rates available from empirical studies that have been published. The number of cases was limited for a number of countries, as the number of class actions vary substantially between jurisdictions and because the participation rates were sometimes unknown. Moreover, the study only reported initial opt out rates and did not include take-up rates. The number of class members that actually benefitted from a class action was, therefore, not reported.

The data demonstrate higher mean participation rates in opt out procedures than in opt in procedures, with opt out rates varying between 0% and 40% and participation rates in opt in procedures varying between less than 0.03% and 100% (Table 1).

Table 1 Participation Rates (approximately)

Jurisdiction	Opt Out Rates	Opt In Rates
Victoria	87%	
United States	99,8%	27%-61%
Canada	60%-100%	
Australia	59%-98%	
Portugal	100%	
Netherlands	97%	
England[2]		0,8-100%

[1] Rachael Mulheron, Reform of Collective Redress in England and Wales: A Perspective of Need (Civil Justice Council of England and Wales 2008). Other studies exist which include differences between countries. These studies, however, do not report descriptive or inferential data. See, recently, Christopher Hodges, Collective Redress in Europe: The New Model 29 Civil Justice Quarterly 370, (2010), for example at 372.

[2] Reforms are proposed, entailing that the court must indicate whether the case is to proceed on an opt-in or opt-out basis, while the applicant will have indicated its preference when making the application

France / Italy	<0.03%

Source: Mulheron 2008, pp. 153, 156

A more detailed overview provides information about the sources and characteristics of the cases that were taken into account in the study (Table 2).

Table 2 Participation Rates (classified by jurisdiction, source, case, characteristics, and participation rate)

Jurisdiction (Model)	Source	Case	Case Characteristics	Participation Rate
Victoria (Opt Out)	Empirical study (n=11)	-	-	76% (mean) 87% (median)
United States (Opt Out)	Empirical study (n=152)	-	-	99.9%-99.8% (median) <100 opt-outers in 75% of the cases
Canada (Opt Out)	Judgments	Jeffrey v Nortel Networks Corp[3]	5,000 class members 13 opt out requests	± 100%
		Fischer v Delgratia Mining Corp[4]	5,000 class members 9 opt-outs	± 100%
		K Field Resources Ltd v Bell Canada International Inc[5]	No opt-outs	± 100%
		Nunes v Air Transat AT Inc[6]	291 class members 115 opt-outs	60%
		1176560 Ontario Ltd v Great Atlantic & Pacific Co of Canada Ltd[7]	29 class members 1 opt out	± 100%
Portugal (Opt Out)	Reporter (DECO)	DECO v Portugal Telecom	± 2 mln class members 5 opt-outs	± 100%
		DECO v Academia Opening	1,200 – 1,500 class members No known opt-outs	± 100%
		DECO v Waterleverancier	1,000 – 2,000 class members	± 100%

See Draft Court Rules for collective proceedings by the Civil Justice Council <http://www.civiljusticecouncil.gov.uk/files/CJC_Draft_Rules_for_Collective_Actions_Feb_2010.pdf >, pp. 10-11 (last accessed 8 December 2010).

[3] [2007] BCSC 69.

[4] 1999, BC SC.

[5] SCJ, 1 Sep 2005.

[6] 2005, 20 CPC (6th) 93.

[7] Ont SCJ, 4 Oct 2004.

			No known opt-outs	
Australia (Opt Out)	Judgments / Involved Law Firms	King v AG Australia Holdings Ltd[8]	67,224 class members 17,800 opt-outs	± 73%
		Guglielmin v Trescowthick (no 5)[9]	3.893 class members 61 opt-outs	± 98%
		Courtney v Medtel Pty Ltd[10]	1,048 class members 433 opt-outs	± 59%
		Reiffel v CAN 075839226 Pty Limited (no 2)[11]	146 class members 23 opt-outs	± 84%
Netherlands (Opt Out)	Report	Dexia / Legiolease	715,000 class members[12] 25,000 opt-outers	± 97%
England (Opt In)	97 Cases			<1%-100%
France / Italy (Opt In)	Report	Altroconsumo v Parmalat	>100,000 potential class members 3,000 class members	± 1%
		UFC Que Choisir v Orange France, SFR and Bouygues Telecom	20 mln potential class members 12,521 class members	<1%

Source: Mulheron 2008, pp. 17-19, 147-156

The number and percentage of opt-outs may even depend on the topic. An Eisenberg & Miller (2004) study suggests that more class members opt out in case of a mass tort class actions than in class actions in other areas of the law (Table 3). Similar results were found for the number of objectors.[13]

[8] [2002] FCA 872.

[9] [2006] FCA 1385.

[10] [2003] FCA 36; [2004] FCA 1598.

[11] [2004] FCA 1128.

[12] Sources in The Netherlands reported different numbers. See, for example, H.B. Krans, DES en Dexia: de eerste ervaringen met collectieve afwikkeling van massaschade NJB 2598, 2598-2604 (2007), that refers to 300,000 class members.

[13] Theodore Eisenberg & Geoffrey P. Miller, The Role of Opt-Outs and Objectors in Class Action Litigation: Theoretical and Empirical Issues, 57 Vanderbilt Law Review 1529, 1549-1550 (2004). The only noticeable difference with the number and percentage of opt-outs is that the number of objectors found in commercial cases (mean of 24.2%, median of 14.3%) was higher than in other cases (mean < 4.5%).

Table 3 **Opt Out Numbers and Percentages (per Topic)**

	No. of Opt-outs			Percent Opt-outs			No. of Class Members			Recovery per Class Member		
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	Median	N
Antitrust	898.4	121.0	19	0.6	0.2	15	1,200,000.0	51,578.5	20	3555.6	1159.3	19
Civil Rights	19.5	7.5	6	0.7	0.2	6	8306.0	1500.5	8	25,557.0	1299.1	5
Commercial	67.8	36.0	4	1.4	1.2	4	3566.0	2341.0	6	9472.3	9472.3	2
Consumer	2935.3	513.0	39	0.2	0.1	39	1,800,000.0	510,000.0	45	481.5	99.7	30
Corporate	30.0	30.0	1	0.2	0.2	1	276,946.2	41,586.0	5	165.7	165.7	1
ERISA	425.0	425.0	2	0.0	0.0	2	140,689.3	7400.0	11	5998.2	1092.6	9
Employment	99.5	4.5	6	1.4	0.3	5	43,790.0	8703.0	6	1869.9	1907.5	6
Employment Discrim.	27.0	24.0	3	2.2	1.1	3	3765.9	1013.0	8	20,080.6	16299.2	5
FDCPA	2.0	1.0	9	0.0	0.0	9	9017.8	1917.0	9	44.3	24.3	9
Mass tort	19,499.3	7257.0	6	4.6	4.2	4	162,106.1	29,530.0	9	5611.3	3739.4	81
Product liability	2045	1311.0	4	0.1	0.1	4	2,500,000.0	2,000,000.0	4	90.8	90.8	2
Securities	353.2	2.0	51	0.7	0.0	43	55,324.8	13,750.0	59	1728.3	668.4	53
Other	74.6	42.0	8	0.1	0.1	8	587,495.9	27,88..0	9	1188.4	498.1	3
Total	1717.1	20.0	158	0.6	0.1	143	645,476.2	25,829.0	199	3520.7	476.1	152

Source: Eisenberg & Miller 2004, p. 1549

Additionally, the results are in accordance with a previous study conducted by Willging, Hooper and Niemic (1996), who found mean opt out rates of 1.2% in almost 75% of the class actions, and median opt out rates between 0.1% and 0.2%.[14]

The Willging, Hooper and Niemic (1996) study also made a comparison of the number of opt-outs in cases before and after a settlement. The study was conducted in four federal court districts and consisted of 407 cases that were finished in the period between 1 July 1992 and 30 June 1994. Descriptive data showed that class members opt out more frequently if the settlement is made. The opt out rate before a settlement varied between 9% and 21%, while the opt out rate after the settlement varied between 36% and 38%.[15]

Reasons to not join the class can be found in the *Civil Justice Council of England and Wales* report. A survey among practitioners (lawyers) with experience in

[14] Thomas E. Willging, et al., Empirical Study of Class Actions in Four Federal District Courts: Final Report to the Advisory Committee on Civil Rules (Federal Judicial Center 1996), pp. 52-53. It was also found that 75% of the cases accounted for 100 opt-outs or less. In two of the seven class actions with more than 100 opt-outs, the number of opt-outs was 2.500 and 5.203 respectively. The class size, however, was unfortunately unknown in these cases.

[15] Id. at 52, 134-135 . The percentages differ among court districts.

class actions resulted in a number of reasons, including that (potential) class members do not feel engaged with the legal process, have limited knowledge of the legal system, consider the system to be too costly, fundamentally oppose to involvement in litigation, feel ashamed, do not want to relive the situation that resulted in the loss, fear reprisals from the defendant, do not consider their claim to be sufficient, or expect that an individual claim will result in more compensation.[16]

Although the identified reasons are related to the opt in model applied in the United Kingdom, some of these reasons could explain why class members opt out or why they do not opt out. The Eisenberg & Miller (2004) study suggests that the recovery and, as indicated above (Table 2), mass torts have a (positive) significant effect on the number of opt-outs, although the effect of recovery is substantially larger.[17] The researchers suggested that the relationship may be attributed to the idea that

> '[t]hese larger per-member stakes cases may well be the ones in which competing counsel may try to galvanize an opt-out movement or in which the economics of the case could support individual contingent fee counsel'.[18]

Importantly, the results should be interpreted with caution, as the sample was rather small due to the low number of opt-outs. Additionally, the researchers did not take other possible reasons into account. Other reasons may as well or more strongly be related to the number of opt-outs.

Although some studies have empirically analyzed the default effects of opt in and opt out procedures, studies with respect to the take-up rate are very limited. The take-up rate reflects the number of class members that actually received compensation or, more generally, the number of class members that benefit from the class action. There is little empirical research that reports take-up rates, which may be explained by class members who come forward after the settlement is made or after the legal procedure, or by reasons of confidentiality. Moreover, take-up rates are often not published and can, consequently, not be systematically collected, particularly in tort

[16] Mulheron, 33-34 .

[17] Eisenberg & Miller, 1554-1556 .

[18] Id. at, 1555 . See also Willging, et al., 53 , and Eisenberg & Miller, 1554 .

cases where not all potential class members are identified at the start of the class action.[19]

Research results and estimations that do exist with respect to take-up rates suggest substantial variation in take-up rates. For example, Mulheron (2008) estimated that take-up rates generally do not exceed 75%, hereby referring to several Canadian judgments.[20] Hensler et al. (2000) concluded that in the ten cases that were analyzed, take-up rates vary between 30% and 100%.[21] A study focusing on insurance companies reports a mean rate of 45% where claimants actually receive (take up) compensation, with a median rate of 15%.[22] In this study, it was found that the rewards were extremely high (approximately 100%) in 10 of the 29 cases that were analyzed, although they can also be extremely low (<1%).[23]

Additionally, a Pace et al. (2007) study identified reasons for (potential) class members to claim (take up) compensation. Although the study does not provide hard statistical evidence, it identified three possible factors that cause class members to take up:

- If (potential) class members are informed about the possibility to receive compensation.
- If the proceeds generated by the class action are automatically divided among the class members, or that additional actions are required for class members in order to qualify for receiving compensation, for example cut out, fill in, and send a newspaper article or advertisement.
- The size of the claim.

---

[19] Mulheron, 153 ; Nicholas M. Pace, Class Actions in the United States of America: An Overview of the Process and the Empirical Literature 46-47 (RAND Institute for Civil Justice 2007).

[20] Mulheron, 20 . Mulheron based her estimations on Hislop v Canada, *Ont SCJ*, 30 April 2004. Vergelijk Nantais v Telectronics Proprietary (Canada) Lts (1996), 28 *OR* (3d) 523; Anderson v Wilson (1997), 32 *OR* (3d) 400.

[21] Deborah R. Hensler, et al., Class Action Dilemmas: Pursuing Public Goals for Private Gain 429 (RAND Institute for Civil Justice 2000).

[22] Nicholas M. Pace, et al., Insurance Class Actions in the United States 55 (RAND Institute for Civil Justice 2007).

[23] Reported in Pace, Class Actions in the United States of America: An Overview of the Process and the Empirical Literature 69 .

II. Research Questions

The studies that have been conducted, suggest that class sizes are larger in opt out models than in opt in models. The relationship between the type of the procedure (opt in / opt out) and the participation rates is, however, not necessarily straightforward. The differences in participation between opt in models and opt out models are based on descriptive data and may be subject to selection bias. Apart from differences between legal frameworks or cultures, opt out procedures may attract different cases than opt in procedures.

Furthermore, one would intuitively expect that individuals with small claims have little incentive to gain knowledge about the class action and about how to participate in it. A lack of interest would result in class members following the default, this is, accepting the loss and filing no claim in an opt in procedure, and joining the class action in an opt out procedure. The participation rates would then be explained not (only) by the type of the procedure, but (also) by the size of the claims that (potential) class members have.

Given the possibility of confounders and selection issues, the causal effect of the type of the procedure on the participation of individuals in class actions was examined in three experimental studies. It was expected that an opt out procedure would attract more class members than an opt in procedure, and that the procedure (opt in / opt out) would not be the only relevant factor for individuals to join a class action.

Multiple theories predict that individuals tend to stick to the default, other things equal. One explanation is that individuals tend to be rationally ignorant, meaning that the cost of obtaining information on an issue exceeds the potential benefit of the knowledge.[24] For class actions, this would result in potential class members who decide not to opt in in an opt in procedure because they expect the efforts (obtaining information) to be higher than the outcome will be. Moreover, loss aversion studies and status quo bias studies demonstrate that individuals stick to the

[24] This effect can be described as rational ignorance. For examples and further references, see Anthony Downs, An Economic Theory of Democracy (Harper and Row 1957); Mark A. Lemley, Rational Ignorance at the Patent Office, 95 Northwestern University Law Review 1495, 1495-1532 (2001), particularly footnote nr. 6; C. Martinelli, Rational ignorance and voting behavior, 35 International Journal of Game Theory 315, 315-335 (2006).

default even if there is no good reason for them to do so. Various studies have demonstrated the effect of the status quo bias[25], also in a legal context[26]. Korobkin, for example, showed that individuals did not deviate from the default rule of cost orders, even though the three conditions contained different default rules ('loser pays' / 'pay your own costs' / choose one of the two rules) and even though individuals were explicitly permitted to deviate from the default.[27] From a rational point of view, however, one would expect that one rule would be preferred above the other, irrespective of the default.

Rational ignorance and status quo bias, however, are not the only relevant elements for individuals when deciding to opt in, opt out, start an individual procedure, or when deciding to file no claim. For example, research in the field of donation decisions with respect to organs indicates that the relationship between the procedure (opt in / opt out) and the donation decisions disappears when controlling for other variables. Although studies first indicated that countries with an opt out model had significantly more donations than countries with an opt in model[28], this relationship became insignificant after controlling for mortality rates[29], suggesting that mortality rates may have influenced the number of donations as well as the decision to implement an opt in model or an opt out model. Moreover, studies among

[25] William Samuelson & Richard Zeckhauser, Status Quo Bias in Decision Making, 1 Journal of Risk and Uncertainty 7, 7-59 (1988); Daniel Kahneman & Tversky. Amos, Choices, Values and Frames, American Psychologist, 348 (1984). For other examples, see Brigitte C. Madrian & Dennis F. Shea, The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior, 116 Quarterly Journal of Economics 1149, 1149-1187 (2001); Eric J. Johnson, et al., Framing, Probability Distortions, and Insurance Decisions, 7 Journal of Risk and Uncertainty 35, 35-51 (1993).

[26] Russell Korobkin, The Status Quo Bias and Contract Default Rules, 83 Cornell Law Review 608, 608-687 (1998).

[27] The experiment(s) Korobkin conducted, did, however, not rule out a 'law' effect, implying that individuals tend to choose the default assuming there would be a good reason for this option being the default.

[28] Eric J. Johnson & Daniel G. Goldstein, Defaults and Donation Decisions, 78 Transplantation 1713, 1713-1716 (2004).

[29] Remco Coppen, et al., Opting-out systems: no guarantee for higher donation rates, 18 Transplant International 1275, 1275-1279 (2005).

internet users indicate that default effect depends on the way a proposition or question is formulated.[30]

Three experiments addressed the question if the procedure (opt in / opt out) has a causal effect on the decisions of (potential) class members to file no claim, to join (or stay in) the class action, or to start an individual procedure. Additionally, it was examined if other factors would reduce default effects. The factors that were tested, are (1) receiving information about decisions of other individuals, (2) the size of the loss, and (3) if the individual knows the outcome of the class action at the moment of the decision. More information about these factors will be provided below, where the three experiments are described and discussed.

III. Results

A. Study 1 – Procedure (Opt In / Opt Out) and Information about Decisions of Other Individuals

Hypotheses

Experimental research on the influence of social norms shows that individuals are influenced by information about what their peers do. Individuals particularly apply social norms in situations where they have information of what others do in similar situations.[31] Research indicates that the effect is so strong that information about what others do in similar situations has a stronger effect on how individuals behave than information about what one should do.[32]

---

[30] For example, Johnson & Goldstein, Defaults and Donation Decisions, 1713-1716 ; Eric J. Johnson, et al., Defaults, Framing and Privacy: Why Opting In-Opting Out?, 13 Marketing Letters 5, 5-15 (2002).

[31] Robert B. Cialdini, et al., A Focus Theory of Normative Conduct: Recycling the Concept of Norms to Reduce Littering in Public Places, 58 Journal of Personality and Social Psychology 1015, 1015-1026 (1990); Wesley H. Perkins & Alan D. Berkowitz, Perceiving the Community Norms of Alcohol Use among Students: Some Research Implications for Campus Alcohol Education Programming, 21 The International Journal of the Addictions, 961-976 (1986).

[32] Cristina Bicchieri & Erte Xiao, Do the Right Thing: But Only if Others Do So, 22 Journal of Behavioral Decision Making 191, 191-208 (2009).

Marketing strategists have embraced the idea that such social norms have a strong effect on decisions of individuals. Hence, they have used this finding to change individuals' behavior and to stimulate individuals to show certain behavior, with varying success. Some studies indicate that individuals behave differently after the social norms were 'imposed'[33], while other studies show no effect[34]. Additional research suggests that the effect of social norms depends on the presence of injunctive norms, which provides information about how an individual should behave.[35] The presence of injunctive norms prevents individuals to change their behavior after being confronted with a social norm if the individuals already show the desired behavior.

The effect of social norms is relevant for class actions. Lawyers and organizations that represent claimants or promote themselves as representatives can attempt to attract a number of claimants by referring to a high number of subjects who have already decided to have themselves represented by the organization. Lawyers and organizations can, therefore, use information about the choice other (potential) class members made, causing class members to opt out and start an individual procedure, or to opt out and join a different class action[36]. More specifically, a strong

[33] For example, Gina Agostinelli, et al., Effects of Normative Feedback on Consumption among Heavy Drinking College Students, 25 Journal of Drug Education 31, 31-40 (1995); Clayton Neighbors & Mary E. Larimer, Targeting Misperceptions of Descriptive Drinking Norms: Efficacy of a Computer-Delivered Personalized Normative Feedback Intervention, 72 Journal of Consulting and Clinical Psychology 434, 434-447 (2004).

[34] For example, John D. Clapp, et al., Reducing DUI among US college students: results of an environmental prevention trial, 100 Addiction 327, 327-334 (2005); Robert Granfield, Alcohol use in college: Limitations on the transformation of social norms, 13 Addiction Research and Theory 281, 281-292 (2005); Cristel Antonia Russell, et al., Done 4: Analysis of a Failed Social Norms Marketing Campaign, 17 Health Communication 57, 57-65 (2005); Colin M. Peeler, et al., An Analysis of the Effects of a Program To Reduce Heavy Drinking among College Students, 45 Journal of Alcohol and Drug Education 39, 39-54 (2000). See also Chudley E. Werch, et al., Results of a Social Norm Intervention To Prevent Binge Drinking among First-Year Residential College Students, 49 Journal of American College Health 85, 85-92 (2000).

[35] P. Wesley Schultz, et al., The Constructive, Destructive, and Reconstructive Power of Social Norms, 18 Psychological Science 429, 429-434 (2007). See also Carl A. Kallgren, et al., A Focus Theory of Normative Conduct: When Norms Do and Do not Affect Behavior, 26 Personality and Social Psychology Bulletin 1002, 1002-1012 (2000).

[36] In The Netherlands, for example, class members can start or join a different class action after they have decided to opt out of the collective settlement.

effect of social norms can lead legislators to consider regulation with respect to informing and attracting (potential) class members.

From the studies on status quo bias, loss aversion, and rational ignorance, it can be predicted that the default has an effect on the decisions of individuals. Deviating from the default requires individuals to consider other possibilities, and consequently to assess the costs and the efforts that will have to be made. The status quo bias and rational ignorance theory, for example, demonstrates that individuals stick with the default if the profits and the alternatives are uncertain, especially if the expected gains are limited compared to the costs. Consequently, it was expected that the default, this is filing no claim in an opt in model and joining the class action in an opt out model, would cause subjects in an opt in model not to file a claim (individually nor collectively) and subjects in an opt out model to stay in the class, other things equal.

> *H_1: An opt out model results in more individuals joining the class compared to an opt in model.*

> *H_2: An opt in model results in more individuals filing no claim compared to an opt out model.*

Additionally, the social norms studies suggest that information about decisions of other (potential) class members has an effect on the decisions of individuals, and that such descriptive norms may have a larger effect than legal norms. More specifically, it was expected that if individuals would receive information about other individuals choosing to claim individually, this would cause (potential) class members to deviate from the default in an opt in model as well as in an opt out model, and that they would subsequently file an individual claim.

> *H_3: Individuals who are informed that a majority of their peers decided to start an individual procedure causes them to deviate from the default and to subsequently claim individually, compared to individuals who do not receive such information.*

The reason to provide information about the individual complaint was that it was expected that the majority of the subjects would choose the default, this is, to file no complaint in an opt in procedure and to join the class action in an opt out procedure. An individual complaint was, therefore, considered to be the least attractive option. Consequently, an effect of information on the decision of the subjects would suggest a strong effect of information. Moreover, providing information about subjects who opted for an individual complaint would reduce the risk of ceiling effects. For example, ceiling effects would limit the possibility to find an increase of the number of subjects that join the class action in opt out models if information would be provided about the percentage of individuals that decided to join the class action. Given that the class size is already expected to be large in an opt out procedure, it is improbable that the information will show an effect. Similarly, ceiling effects would reduce the chance to find an increase of the number of subjects that decide not to file a complaint in opt in models if information is provided about the percentage of individuals that decided not to file a complaint.

A multinomial regression analysis was conducted to test the hypotheses, with the decision (no claim / class action / individual claim) as the dependent variable and procedure (opt in / opt out) and information (yes / no) as independent variables. This type of regression analysis, however, generally requires a large number of respondents.

To obtain more information on the expected effects, a 2 x 2 MANOVA was conducted in addition to the multinomial analysis. The MANOVA was conducted with the same independent variables (factors). The dependent variable consisted of three scores obtained from a seven-point Likert scale, representing preferences of the subjects to (1) not file a claim, (2) join the class action, and (3) to claim individually. These preferences were measured immediately before the subjects made their actual decision.

Method

Sample

The experiment was conducted with 113 second-year law students of Tilburg University. The subjects were randomly divided among the conditions and had no or little prior knowledge with respect to class actions. The subjects could earn € 10 and a

small number of credits for a second-year course, which was announced prior to the experiment.[37]

Procedure

The first part of the experiment concerned a test that consisted of eight questions. More specifically, the subjects had 30 minutes to look up where in the Dutch Civil Code (*Burgerlijk Wetboek*) certain topics are described, and to report the relevant code, section, and legal provision. The questions were the same for all subjects, who were instructed through the computer screen. At the start of the experiment, it was announced that subjects received the course credits and € 10, and that what they would earn at the end of the experiment would depend on their test score. By awarding the € 10 and the credits to the students at the start of the experiment, it was thought that this would increase the probability that the manipulation would be conceived as a loss.[38] More specifically, it was announced that only correct answers would determine the subjects' test score, and that wrong answers would have no consequences for the test scores. The purpose of this announcement was important for a successful manipulation (see below).

The subjects were informed that the examiner was in another room and that he would mark the tests from there. In reality, the outcomes were determined before the students finished the test. After they finished the test, subjects received their test results, which stated that the examiner only checked three of the eight answers and that the scores were determined based on these three answers. The outcome for all subjects was that two of the three questions were answered correctly and that they would therefore qualify for the credits and € 5 (instead of € 10). Research demonstrates that subjects to an experiment consider themselves to be treated unfairly if they are assessed based on an inaccurate grading procedure.[39] The combination of a

[37] The subjects reported after the (three) experiments that their primary reason to participate was to receive the credits, even though the credits that could be earned were very small (2% of the total number of points that student could earn during the exam.

[38] Endowment effect research demonstrates that people place a higher value on objects they possess than on objects that they do not possess. See, for example, Daniel Kahneman, et al., Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias, 5 The Journal of Economic Perspectives 193, 193-206 (1991).

[39] For example, Kees van den Bos, et al., Procedural and Distributive Justice: What Is Fair Depends More on What Comes First Than on What Comes Next, 72 Journal of Personality and Social Psychology 95, 95-104 (1997), also indicating that 'outcome favorability affects perceived fairness

limited reward and an inaccurate procedure served to cause the subjects to feel that they were treated unfairly and/or that they suffered a loss. The announcement that wrong answers would not lead to a lower reward prevented that subjects would consider the possibility that their rewards could have been lower if the examiner would have based the marks on all the answers provided by the participant (two out of three is better than four out of ten).

After they received the test results, subjects were referred to a website, which was presented as the website of the Ethical Committee of Scientific Research of the university.[40] Here, they were requested to evaluate the experiment. The evaluation was announced as a standard, obligatory procedure within the university. It was also stated that the examiner would not be able to access the evaluations of the subjects. On the website, the subjects were directed to an online questionnaire and were asked if they would like to file a complaint. Here, the subjects were randomly assigned to one of the four conditions (opt in / no information, opt in / information, opt out / no information, opt out / information). In all of the conditions, the subjects did not know the outcome of the class action. The subjects in the information conditions were informed that 82% of the other subjects (in previous sessions of the experiment) filed a complaint individually.

The questionnaire provided information about the possibilities, advantages, and disadvantages to file no complaint, an individual complaint, or to join the class action. The subjects were requested to provide a short summary of the advantages and disadvantages in order to check if subjects read and understood the differences of the three options. Subjects were subsequently asked to indicate on a seven-point Likert scale to what extent they considered to choose one of the three possibilities (no complaint, collective complaint, individual complaint). Directly after that, they made a 'final' decision, entailing that the subjects chose one of the three options, and subsequently provided scores for a number of propositions that were included to provide information about the reasons that underlay the individuals' decisions. At the

---

more strongly when the procedure is desirable, and procedural desirability affects people's fairness judgments more when the outcome is unfavorable than when the outcome is favorable'.

[40] In reality, such an institutionalized ethical committee did not exist. Considering possible negative side-effects, the studies were presented to an internal committee prior to the experiment. The ad-hoc committee assessed the ethical issues of the experiment and granted permission for conducting the experimental studies.

end of the experiment, subjects were debriefed and thanked for their participation. Finally, those who participated received the credits and € 10.

Results

The data were further inspected in case a subject failed to include a summary of the advantages and disadvantages of the various possibilities. For these subjects, it was examined if their decision corresponded to the option that they preferred the most (prior to making their decision). No data needed to be removed on the basis of this analysis.

A seven-point Likert scale was used to measure to what extent the subjects felt to be treated unfairly and felt that they suffered a loss.[41] Four subjects had very low scores on the seven-point scales and were consequently excluded from the analysis. The data for these four subjects did, however, not substantially differ from the data of other subjects. The main difference between the multinomial regression analysis with and without the four subjects is that information does not have an effect if all subjects are included in the analysis. This difference may be explained by the fact that these subjects did not feel to be harmed of treated unfairly, and therefore did not feel the need to file a (an) (individual) complaint.

A total of 109 subjects were analyzed, with 26 (opt in / no information), 28 (opt in / information), 30 (opt out / information), and 25 (opt out / information) subjects in each condition. The data reveal that the manipulation was successful, considering that they felt to have suffered a loss [M = 5.54, SD = 1.42] and felt that they were treated unfairly [M = 5.06, SD = 1.73].

Decisions to file no complaint, a collective complaint, or an individual complaint

Descriptive data demonstrate that the decisions of subjects to file no complaint, a collective complaint, or an individual complaint depends on procedure (opt in / opt out) and information (yes / no) (Table 4).

Table 4

Decision of Subjects (for each of the conditions)

	Decision

[41] A seven point Likert scale was used.

Condition	No Complaint	Collective Complaint	Individual Complaint	*Total*
Opt In / No Information	18 (69%)	7 (27%)	1 (4%)	*26*
Opt In / Information	18 (64%)	6 (21%)	4 (14%)	*28*
Opt Out / No Information	10 (33%)	19 (63%)	1 (3%)	*30*
Opt Out / Information	4 (16%)	16 (64%)	5 (20%)	*25*

Note. Percents are, in total, not 100% due to rounding differences.

A multinomial regression analysis was conducted to analyze if the differences are statistically significant, with the decision (no / collective / individual complaint) as dependent variable and procedure (opt in / opt out) and information (yes / no) as independent variables. Interaction effects were tested, although not found $\chi^2(2, N = 109) = 1.102$, $p = .58$.

The results show main effects of procedure, $\chi^2(2, N = 109) = 20.978$, $p < .001$, and information, $\chi^2(2, N = 109) = 6.198$, $p = .05$ (Table 5).

Table 5

Effect Procedure and Information on Decision

		Model	
Variable		B (s.e.)	OR
No Complaint (ref.)			
Collective Complaint	Intercept	-1.148 (.400)	
	Opt In (ref.)		
	Opt Out	1.961 (.457)	7.104***
	No Information (ref.)		
	Information	.258 (.456)	1.294
Individual Complaint	Intercept	-3.244 (.849)	
	Opt In (ref.)		
	Opt Out	1.291 (.711)	3.636†
	No Information (ref.)		
	Information	1.868 (.848)	6.478*
*-2*log likelihood (final)*		25.037	

Note. OR = odds ratio; CI = confidence interval; Reference groups: no complaint, opt in, no information.
†p< .10. *p< .05. ***p< .001.

The results confirm the first hypothesis. Compared to an opt in procedure, subjects in an opt out procedure more frequently join the collective complaint than that they file no complaint (H_1). The odds that individuals in an opt out procedure stay in the class are approximately seven times higher than the odds that individuals choose to join the class in an opt in procedure, while controlling for information. This finding also indicates that the second hypothesis is confirmed, implying that individuals in an opt

in procedure more frequently decide not to file a complaint than individuals in an opt out procedure (H_2).

Furthermore, the results suggest an effect of procedure on the decisions of individuals. The effect is, however, small, only significant at $\alpha = .10$, and therefore tentative. It suggests that the odds that individuals file an individual complaint in an opt out procedure are higher than the odds in an opt in procedure, compared to individuals who file no claim.

Finally, the third hypothesis is confirmed as well (H_3). The odds that individuals who have information about the decisions of other individuals file an individual complaint is 6.5 times higher compared to individuals who have no information and who file no complaint, controlling for procedure.

Preferences to file no complaint, a collective complaint, or an individual complaint

In addition to the subjects' decisions, it was measured to what extent subjects considered to file no complaint, a collective complaint, or an individual complaint. The preferences were measured on a seven-point Likert scale and directly before making their decision. The preferences were generally consistent with the actual decision of the subjects. A comparison shows that 90% (98 out of 109) of the subjects made a decision that represented the option they considered to be their most 'favorite'.[42] For seven of these eleven subjects, differences between the scores of the most 'favorite' option and the decision were small.[43]

In addition to the multinomial regression analysis, a 2 (procedure) X 2 (information) MANOVA was conducted, with the scores on the three items ('to what extent do you consider to [file no complaint / join the collective complaint / file an individual complaint]') as the dependent variables. The analysis confirms the two main effects (and no interaction effects) of the multinomial regression analysis.

The first main effect is found for procedure (opt in / opt out), which has an effect on the preference of subjects to join the collective claim, $F(1, 105) = 23.343$, $p < .001$, $\eta^2 = .18$) (H_1). Subjects in opt in conditions less frequently considered to join

[42] Subjects sometimes assigned equal scores to two (or three) options. In these cases, both (or all) preferences were considered to be the most 'favorite' options of subjects.

[43] In seven cases, the difference was one point on a seven points scale. In one case, a difference of two points was observed. In the other two cases, the difference was three points.

the collective claim (M = 3.20, SD = 2.24) than subjects in opt out conditions (M = 5.09; SD = 1.90) (Table 6).

Table 6

Mean Scores ('to what extent do you consider to join the collective complaint?') as a Function of Procedure and Information

	Collective Complaint		
	Opt In	Opt Out	Total
No Information	3.38	4.70	4.09a
Information	3.04	5.56	4.23a
Total	3.20a	5.09b	

Note: Different subscripts represent significant differences between means.

The factors procedure (opt in / opt out) [F(1, 105) = 2.320, $p > .13$] and information (yes / no) [F(1, 105) = .183), $p > .55$] did not have an effect on the preferences of the subjects to file no complaint, which does not confirm the second hypothesis (H_2) (Table 7).

Table 7

Mean Scores ('to what extent do you consider to file no complaint?') as a Function of Procedure and Information

	No Complaint		
	Opt In	Opt Out	Total
No Information	4.73	4.00	4.34a
Information	4.50	3.84	4.19a
Total	4.61a	3.93a	

Note: Different subscripts represent significant differences between means.

A main effect was found for the effect of information, while controlling for procedure. Subjects who received information about the decisions other (potential) class members made, were more inclined to file an individual complaint [M = 3.34] than subjects who did not receive such information [M = 2.39), F(1, 105) = 5.707, p = .02, η^2= .05] (Table 8). The results confirm the third hypothesis, meaning that individuals who are informed about the decisions of the (vast) majority of other individuals, tend to make the same decision as other individuals (H_3).

Table 8

Mean Scores ('to what extent do you consider to file an individual complaint?') as a Function of Procedure and Information

	Individual Complaint		
	Opt In	Opt Out	Total
No Information	2.65	2.17	2.39a
Information	3.32	3.36	3.34b
Total	3.00a	2.71a	

Note: Different subscripts represent significant differences between means.

Underlying Reasons

Additional data provide information about the reasons that underlie subjects' decisions and preferences. As described earlier (see 'procedure'), the subjects were requested to provide scores on a number of propositions after the experiment, which were measured on a seven-point Likert scale.

The additional data demonstrate that, controlled for information, subjects in the opt in procedure reported different reasons for their decision than subjects in opt out procedures (Table 9).

Table 9

Mean Scores (Within Opt In and Opt Out Procedure)

	Procedure	
	Opt In	Opt Out
Higher probability that ethical committee will judge favorably in collective procedure compared to an individual procedure	3.04	4.45
Importance of assistance when drafting the collective complaint[44]	3.67	4.64
Prefer not to start a legal procedure	3.28	3.96
Marks were not objectively determined	3.19	4.18

Note: Only items with significant effects are reported. The analysis controlled for information.

More interestingly, the reasons cannot be related to the manipulation that was applied, which can have two possible explanations. First, subjects in the opt in conditions may have had different motives prior to the experiment than subjects in the opt out

[44] Individuals were informed that an advantage of the collective complaint, compared to the other options, was that the class would be assisted by someone who with experience in filing claims.

conditions. Alternatively, subjects may have rationalized their decisions. The latter explanation seems more probable, considering that the subjects were randomly assigned to the conditions.

Furthermore, it was not expected that the type of procedure (opt in / opt out) had no effect on subjects' preferences not to file a complaint. Given phenomena as the status quo bias and loss aversion, it was anticipated that the subjects in opt in conditions would more often consider to file no complaint than subjects in opt out conditions. The additional data did not provide an explanation for this finding. Study 2, however, suggests that the size of the loss suffered by the subjects explains this finding. Study 2 finds that if the losses increases, less individuals will not file a complaint.

With respect to the effect of information on the decisions of the subjects, subjects in the information conditions reported that the information did not matter. They stated that they did not base their decision on the ground that others made the same decision [M = 1.93, SD = 1.22, n = 55]. Additionally, the subjects considered the information not useful when making their decision [M = 2.64, SD = 1.93, n = 55]. No differences between the opt in procedure and the opt out procedure were found, t = -.89, df = 51, p = .38 (based my decision on decisions of other subjects) and t = -1.346, df = 51, p = .18 (information was useful).

Moreover, a series of ANOVAs showed that the subjects based their decisions on grounds that were not related to the manipulation that was applied, except for the last item in Table 10, although the low mean scores do not suggest that this aspect was decisive in the information conditions or in the no-information conditions. Again, the differences may be attributed to the circumstance that the preferences and motives of subjects in the information conditions differed from preferences and motives of subjects in no-information conditions. Alternatively, the differences may be the result of rationalization by the subjects. The fact that the subjects were randomly assigned to the conditions suggests that the latter explanation is more convincing than the first explanation.

Table 10

Mean Scores ('I based my decision on the ground that …')

	Information	
	No	Yes

The Ethical Committee will check my test score (individual complaint)	2.25	3.04
The chosen procedure will maximize my proceeds	2.61	3.87
I do not want the claims to be generalized	2.36	3.15
The profits do not outweigh the efforts	3.48	4.43
I wanted to maximize the profits with minimal efforts[45]	2.62	3.53
The test scores should be based on an assessment of the same test questions	3.39	2.66
I had to much information for making an adequate decision	2.00	2.60

Note: Only items with significant effects are reported. The analysis controlled for information.

Finally, the results suggest that providing information about decisions of other (potential) class members caused the subjects to feel they had received an 'overload' of information compared to subjects who did not receive this information, [$F(1, 105) = 4.603$, $p = .03$, $\eta^2 = .04$]. The mean scores are, however, low [$M = 2.60$, $SD = 1.74$, $n = 53$]. Moreover, the Levene's test proved to be significant, $F(1, 105) = 4.290$, $p = .01$. With a significance level that is more strict, the effect becomes insignificant. Consequently, it is doubtful that information about decisions of other (potential) class members results in an information overload.

Discussion

As expected, the results suggest that the default (opt in / opt out) has an effect on the decisions and preferences of (potential) class members. More specifically, the participation rate of the collective settlement is higher in opt out procedures than in opt in procedures. Therefore, the type of procedure (opt in / opt out) has an effect on the decisions of (potential) class members to join the collective complaint (H_1). Additional data from the post-session questionnaire could, however, not really explain these effects. Subjects based their decisions on features that did not differ between the opt in procedure and the opt out procedure. This finding suggests that subjects rationalize their decisions, or that the subjects in the opt in procedures had different beliefs and preferences with respect to the features of opt in procedures and opt out procedures than subjects in the out opt out procedure. Given the random assignment of the subjects, the first explanation seems more probable than the latter.

[45] An individual complaint required more time and efforts, and would lead to higher proceeds if successful.

In addition to the effect of the procedure (opt in / opt out) on the number of subjects that decides or considers to join (or stay in) the class action, it was also expected that opt in procedure would result in more subjects not filing a claim compared to an opt out procedure (H_2). This effect is, however, not straightforward. Although the results of the multinomial regression analysis suggest an effect, the MANOVA shows that subjects in an opt in procedure more often consider to file no claim than subjects in an opt out procedure. This somewhat ambiguous finding may be related to reference point issues in multinomial regression. It will be interesting to discover if the effect will be observed in the other two studies, where the losses are higher compared to this study.

Furthermore, information about decisions of other (potential) class members also proved to have an effect on the decisions of the subjects (H_3). Subjects who are told that a majority of their peers have decided to file an individual complaint, are more likely to file an individual complaint themselves. This implies that an increasing number of opt-outs could cause a domino effect, entailing that more class members will opt out if they discover that other class members decided to opt out. Moreover, representatives could (mis)use this information to attract individuals currently involved in a class action.

In this study, it was announced that the vast majority of the (potential) class members decided to file an individual claim. It is possible that the effect becomes small or even disappears if the number of (potential) class members that file an individual claim decreases. Moreover, the effect of information may also be different if subjects are informed that a majority of the (potential) class members decided to join the class or to file no complaint, although the last possibility (majority files no complaint) seems unrealistic, as it seems improbable that, in practice, individuals are informed that other individuals decided to not start an individual procedure.

B. Study 2

Hypotheses

The € 5 loss that individuals suffered in study 1 was relatively low, as it represents the wage students earn for an half hour of work. Presumably, an increase of the loss that individuals suffer causes them to make different decisions compared low-loss

situations. For example, a substantial loss may cause individuals to start (or join) a procedure (individually or collectively) more often compared to situations where the loss is relatively small.

The second study therefore focused on the relationship between the size of the loss (high / low) and the type of the procedure (opt in / opt out) on the one hand and the decisions and preferences of individuals to file no complaint, a collective complaint, or an individual complaint on the other hand. As in the first study, it was expected that an opt out procedure would result in a higher participation to the collective procedure compared to an opt in procedure.

H_1: An opt out model results in more individuals joining the class compared to an opt in model.

Additionally, it was interesting to discover if an opt in procedure would result in more individuals filing no claim than in an opt out procedure. The evidence for this effect was not straightforward in the first study. There, it was hypothesized that the effect may have to do with the relatively low losses that the subjects suffered in the first study. Therefore, it was tested if the procedure (opt in / opt out) would result in less individuals considering and filing no claim if the loss increases.

H_2: An opt in model results in more individuals filing no claim compared to an opt out model.

Furthermore, it was expected that individuals with a substantial loss would more often decide to claim individually than individuals who did not suffer a substantial loss.

H_3: An increase of the suffered loss results in more individuals opting for an individual procedure.

The analyses used to test the hypotheses were identical to those used in the first study.

Method

Sample

The experiment was conducted with 107 first and second year law students at Tilburg University. The subjects, who had no or very little prior knowledge about class actions and who did not participate in the first study, were randomly assigned to the conditions. As in the first study, subjects were informed prior to the experiment that they could earn € 10 and a small amount of credits for a first or second year course.

Procedure

The procedure was almost identical to the procedure in the first study. The difference is that, in this study, the manipulation involved the loss (high / low) instead of information about decisions of other individuals. Half of the subjects were informed that the test scores resulted the refusal of awarding the credits in addition to a loss of € 5. The other subjects were told that they lost € 5, and that they could keep the credits as well as the other € 5. The subjects were randomly assigned to the 'small loss' and 'substantial loss' groups.

Directly after the subjects received and read the test results, they were directed to the website of the 'Ethical Committee', where they evaluated the test. Here, the subjects were randomly assigned to one of the four conditions, consisting of an opt in / small loss condition, an opt in / substantial loss condition, an opt out / small loss condition, and, finally, an opt out / substantial loss condition. Subjects were not informed about the outcome of the collective complaint.

As in the first study, the subjects were requested to indicate on a seven-point Likert scale to what extent they considered to file no complaint, join the collective complaint, or file an individual complaint. The subjects subsequently made their 'final' decision. After they completed the post-session questionnaire, all subjects were debriefed and thanked for their participation. Eventually, all subjects were awarded the credits and the € 10.

Results

Data of subjects who did not provide the requested summary were further inspected. The analysis showed that the decisions of these subjects were consistent with the option they had indicated as their 'favorite' option. Consequently, no subjects (data) had to be removed from the dataset.

Additionally, eleven subjects stated in the post-session questionnaire that they not feel that they had suffered a loss or that they were unfairly treated. Most of these subjects (n=6) belonged to the opt in / small loss condition. Remarkably, the other

subjects who did not feel to have suffered a loss or to be unfairly treated (n=5) belonged to conditions where the loss was substantive. One would expect that subjects in the substantive loss conditions would have felt that they had been treated unfairly of suffered a loss. An explanation for this finding was not found.

The eleven subjects were not included in the analysis. The results, however, would not have differed substantially is the eleven excluded subjects would have been included in the analysis. Ultimately, the analysis was conducted on a total of 96 subjects, consisting of 22 (opt in / small loss), 22 (opt in / substantive loss), 27 (opt out / small loss), and 25 (opt out / substantive loss) subjects in each condition. The subjects generally felt that they suffered a loss [M = 5.72, SD = 1.50] and/or that they were treated unfairly [M = 5.38, SD = 1.81]. The subjects in the substantive loss conditions more heavily felt that they had suffered a loss [M = 5.94] than the subjects in the small loss conditions [M = 4.84], $F(1, 93) = 9.994$, $p = .002$, $\eta^2 = .10$, controlled for procedure (opt in / opt out).

Decisions to file no complaint, a collective complaint, or an individual complaint

Descriptive data on the distribution of the subjects among the conditions suggests that procedure (opt in / opt out) results in subjects sticking with the default. This finding implies that individuals more often tend to file no complaint in an opt in procedure, depending on the size of the loss, and tend to join the collective complaint in an opt out procedure (Table 11).

Table 11
Decision of Subjects (for each of the conditions)

	Decision			
Condition	No Complaint	Collective	Individual	*Total*
Opt In / Small Loss	14 (64%)	4 (18%)	4 (18%)	*22*
Opt In / Substantive Loss	8 (36%)	9 (41%)	5 (23%)	*22*
Opt Out / Small Loss	4 (15%)	19 (70%)	4 (15%)	*27*
Opt Out / Substantive Loss	6 (24%)	17 (68%)	2 (8%)	*25*

A multinomial regression analysis was conducted to analyze which of the differences are statistically significant. In this analysis, the decision (no complaint / collective complaint / individual complaint) was regressed on procedure (opt in / opt out) and loss (small / substantial). A model with 'no complaint' as reference category and which contains the main effects of these two elements, shows significant results for

procedure, $\chi^2(2, N = 96) = 16.075$, $p < .001$, not for loss, $\chi^2(2, N = 96) = 1.004$, $p = .63$. Interaction effects were not found, $\chi^2(2, N = 96) = 3.385$, $p = .15$.

The odds for (potential) that class members in an opt out procedure decide to file or join the collective complaint are significantly higher than in opt in procedures, controlled for loss (small / substantive) and compared to subjects who file no complaint, OR = 6.285, p < .001 (Table 12).

Table 12

Effect Procedure and Information on Decision

		Model	
Variable		B (s.e.)	OR
No Complaint (ref.)			
Collective Complaint	Intercept	-.777 (.440)	
	Opt In (ref.)		
	Opt Out	1.838 (.505)	6.285***
	Small Loss (ref.)		
	Substantive Loss	.485 (.498)	1.624
Individual Complaint	Intercept	-.961 (.499)	
	Opt In (ref.)		
	Opt Out	.392 (.652)	1.480
	Small Loss (ref.)		
	Substantive Loss	.141 (.631)	1.151
*-2*log likelihood (final)*		28.545	

Note. OR = odds ratio; CI = confidence interval; Reference groups: no complaint, opt in, small loss.
***p< .001.

As in study 1, the results confirm the hypothesis that individuals in an opt out procedure more often join (or stay in) the class than individuals in an opt in procedure (H_1). Additionally, the results suggest that individuals in an opt in model more often file no claim compared to individuals in an opt out procedure (H_2).

The descriptive data as well as the results of the multinomial regression analysis suggest that there is no effect the size of the loss suffered by the individuals on the decision to file no complaint, join (or stay in) the collective complaint, or file an individual complaint. From this, it follows that decisions of individuals who suffered a relatively substantial loss do not differ from the decisions individuals make who suffered a small loss. Consequently, the results suggest that the third hypothesis cannot be confirmed, implying that an increase of the loss results in more individuals filing an individual complaint (H_3).

Preferences to file no complaint, a collective complaint, or an individual complaint

As in the first study, subjects provided information about to what extent they considered to file no complaint, to join the collective complaint, or to file an individual complaint directly before they made their decisions. The decisions made were for 89% consistent with the option the subjects considered to be their most 'favorite'.[46]

The effects of procedure (opt in / opt out) and loss (small / substantial) were measured according to a 2 (procedure) X 2 (loss) MANOVA, with the preferences ('to what extent do you consider to [file no complaint / join the collective complaint / file an individual complaint]') as dependent variables and procedure and loss as factors (independent variables). The results confirm the hypothesis that individuals in an opt in procedure more often consider to join (or stay in) the class than individuals in an opt out procedure (H_1) (Table 13). The effect was significant and strong, $F(1, 92) = 18.258$, $p < .001$, $\eta^2 = .17$.

Table 13

Mean Scores ('to what extent do you consider to join the collective complaint?') as a Function of Procedure and Loss

	Collective Complaint		
	Opt In	Opt Out	Total
Small Loss	3.14	5.26	4.31a
Substantive Loss	4.59	5.80	5.23b
Total	3.86c	5.52d	

Note: The differences between the means reflect to what extent the subjects considered to join (or stay in) the class. Different subscripts represent significant differences between means.

Interestingly, the size of the loss also had an effect on the decisions of individuals to join (or stay in) the class, $F(1, 92) = 6.547$, $p = .01$, $\eta^2 = .07$, controlled for procedure (opt in / opt out). Although the multinomial regression analysis showed no effect, here

[46] Subjects sometimes assigned equal scores to two (or three) options. In these cases, both (or all) preferences were considered to be the most 'favorite' options of subjects. In five cases, the difference was one point on a seven points scale. In three case, a difference of two points was observed. In one case, the difference was three points. In the two other cases, the differences between the 'favorite' option and the chosen option was five points.

it is found in both the opt in conditions and the opt out conditions that more individuals decide to join (stay in) the class if the loss is substantial compared to when the loss was relatively small (Table 13).

Additionally, it was hypothesized that the procedure (opt in / opt out) would have an effect on the number of individuals who considered to file no complaint (H_2). In contrast with the first study, an effect is found, $F(1, 92) = 5.571$, $p = .02$, $\eta^2 = .06$. Individuals in the opt in procedures were more inclined to file no complaint than individuals in opt out procedures, which confirms the hypothesis (H_2) (Table 14).

Table 14

Mean Scores ('to what extent do you consider to file no complaint?') as a Function of Procedure and Loss

	No Complaint		
	Opt In	Opt Out	Total
Small Loss	4.86	3.52	4.12a
Substantial Loss	3.14	2.32	2.70b
Total	4.00c	2.94d	

Note: Different subscripts represent significant differences between means.

Additionally, the results indicate that the size of the loss has an effect on the extent individuals consider to file no complaint, $F(1, 92) = 10.208$, $p = .002$, $\eta^2 = .10$. More specifically, individuals with a small loss leaned more towards filing no complaint than individuals with a substantial loss.

Finally, the size of the loss suffered by subjects affected individuals' preferences to file an individual complaint. Although the multinomial regression analysis showed no significant results, the analysis conducted here suggests a positive relationship between the loss and the preferences of individuals to file an individual complaint, $F(1, 92) = 5.696$, $p = .02$, $\eta^2 = .06$. Subjects more often considered to file an individual complaint if the loss was substantial compared to when the loss was small (Table 15), which confirms H_3.

Table 15

Mean Scores ('to what extent do you consider to file an individual complaint?') as a Function of Procedure and Loss

	Individual Complaint		
	Opt In	Opt Out	Total

Small Loss	2.73	2.96	2.86a
Substantial Loss	4.18	3.56	3.85b
Total	3.45a	3.25a	

Note: Different subscripts represent significant differences between means.

Underlying Reasons

The post-session questionnaire provided information on the reasons the subjects based their decisions on. The additional data may explain the results that were found, or may provide more insight in why (potential) class members make certain decisions.

As in study 1, the subjects in the opt in conditions reported different reasons for their decisions than subjects in opt out procedures, controlled for differences in the losses suffered by the subjects. Three of the four items in study 1 that were related to the type of the procedure (opt in / opt out) are also related to the procedure in this study (Table 16). Additionally, differences between opt in conditions and opt out conditions were found for reasons that are related to the extent subjects considered to be treated unfairly (Table 16). A possible explanation is that the subjects rationalized their decisions by referring to the losses they suffered. The fact that the losses were higher for half of the subjects in this study compared to study 1 could explain why these reasons were reported in this study but not in study 1. Alternatively, the differences may be explained by differences in prior beliefs between the subjects who were assigned to each of the conditions, although this explanation seems less convincing due to the random assignment of subjects to the conditions.

Table 16

Mean Scores (Within Opt In and Opt Out Procedure)

	Procedure	
	Opt In	Opt Out
Importance of assistance when drafting the collective complaint	3.84	4.67
Too much effort to file a complaint	2.84	3.58
Marks were not objectively determined	2.68	4.35
Treated unfairly	3.32	4.65
Disappointed about the event	2.68	3.75
Angry about the event	3.59	4.50

Desire to grasp all	3.20	4.10

Note: Only items with significant effects are reported. The analysis controlled for loss.

Furthermore, one item of the post-session questionnaire suggests that not awarding the credits had an important effect on the preferences of the subjects, given the differences between small loss conditions (M = 4.51) and the substantive loss conditions (M = 1.47), F(1, 93) = 59.956, $p < .001$, $\eta^2 = .39$, while controlling for procedure. The results suggest that an increase of the loss suffered influences the individual's decision to start no procedure, join (or stay in) the class, or start an individual procedure. The descriptive data and the multinomial regression analysis, however, did not support this finding, which entails that the effect of an increase of the loss suffered by an individual is doubtful or somewhat ambiguous.

Discussion

Again, the type of procedure (opt in / opt out) has a large effect on the decisions and preferences of individuals. This finding confirms H_1. Additionally, a default effect was found with respect to individuals filing no claim, which entails that individuals in an opt in procedure more often choose to start a procedure than individuals in an opt out procedure. This confirms H_2. That this effect was not found in the first study could be explained by the fact that the losses suffered in this study are, for half of the subjects, higher than in the first study. The assumption that individuals are more inclined to start a legal procedure (collectively) is supported by the descriptive and by additional data based on the post-session questionnaire. These data reveal that individuals tend to join (or stay in) the class more often if the loss increases and, conversely, less often consider and decide to start no procedure.[47]

Furthermore, the results indicate that the size of the loss that individuals suffer, does not have an effect on their decisions (H_3). This finding is interesting, as the study that was conducted contained an incentive for the subjects to file an individual complaint. The subjects were informed that a successful individual complaint would result in awarding the credits to the individuals who filed an individual complaint, and that this outcome would be improbable in the collective complaint. Possibly, the subjects in the substantive loss conditions expected that the

[47] The descriptive data suggest that the loss only has an effect in opt in conditions, and not in opt out conditions.

ethical committee would consider the test as highly unfair and would award them the credits.

Although an increase of the loss suffered by the individuals did not affect their decisions, the increase did result in more individuals who considered to start an individual procedure. In addition to reasons that are presumably related to a rationalization process, subjects in the substantive loss conditions reported that they based their decisions on reasons of self-interest (higher proceeds) and unfair treatment (procedural injustice), suggesting an effect of the outcome on how procedural justice is perceived.

A possible cause for the fact that a relationship between the loss individuals suffered and their decisions was not found, is that individuals apparently experience a threshold that prevents them from starting an individual procedure, causing subjects in an opt in model not to start (or join) an individual or collective procedure in opt in models, and causing subjects in opt out models not to opt out. An alternative explanation may be that the power of the multinomial regression is too low. This explanation, however, seems rather improbable, as it is not supported by the descriptive data.

It is not certain that this explanation also applies to other situations. The losses that the subjects suffered may be not have been considered to be substantial in comparison to losses that are suffered in reality. Consequently, the results could be limited to class actions related to (a number of) small claims. For obvious financial and ethical reasons, it was not possible to include substantial losses in the experiments. On the other hand, the actions subjects should take in order to receive compensation (credits, monetary reward) were limited as well. Compared to reality, particularly to individual procedures, subjects did not have to put lots of effort in writing a complaint (approximately 20 minutes). The balance between efforts and rewards in the experiment was not considered to be unrealistic.

C. Study 3

Hypotheses

Given the results of study 1 and study 2, it was expected that there would be a relationship between the procedure (opt in / opt out) and the number of (potential) class members participating in the class action.

> *H_1: An opt out model results in more individuals joining the class compared to an opt in model.*

Study 1 suggested and study 2 indicated that the procedure (opt in / opt out) has an effect on the number of individuals deciding to not start a procedure (collectively or individually). It was therefore expected that the procedure (opt in / opt out) would have an effect on the number of subjects filing no claim.

> *H_2: An opt in model results in more individuals filing no claim compared to an opt out model.*

Additionally, it was expected that knowledge of the outcome of the class action would affect the decisions and preferences of (potential) class members. Knowing the outcome provides certainty about the outcome of one of the two unknowns, namely the collective procedure. If the outcome of the class action is known, only the outcome of the individual procedure remains uncertain. Consequently, knowing the outcome of the class action (settlement) presumably helps individuals in their cost-benefit analysis when assessing which of the three options (no procedure, class action, individual procedure) would be the best option. This assumption finds support in the Willging, Hooper and Niemic (1996) study, where descriptive data showed that the opt out rate before a settlement varied between 9% and 21%, while the opt out rate after the settlement varied between 36% and 38%.[48] It was therefore expected that individuals would more often deviate from the default if they were informed about the outcome of the class action and if they would be provided an incentive to start an individual procedure compared to individuals who were not informed about the outcome of the class action. Individuals who were not informed were expected to more often stick to the default, this is filing no claim in an opt in procedure and staying in the class in an opt out procedure.

[48] Willging, et al., 52, 134-135 .

$H_{3:}$ Individuals who know the outcome of the class action (settlement) more often start an individual procedure if they have an incentive to start an individual procedure.

It was not expected that differences would be found between the opt in model and the opt out model in the conditions where the outcome was known (certain). In the experiment (see the 'procedure' section), the only difference between the two conditions where the outcome of the class action (settlement) was certain, was that one mouse-click was required in the opt in condition in order to receive the awards of the collective complaint. Consequently, one mouse-click would result in a better outcome for the subjects. This effort would presumably outweigh the profit. The effect of knowing the outcome was therefore expected to depend on the procedure (opt in / opt out).

$H_{4:}$ The effect of (un)certainty of the outcome on the decisions and preferences of individuals depends on procedure (opt in / opt out).

The same analyses were used as in study 1 and study 2 to test the hypotheses.

Method

Sample

The study was conducted with 115 first year and second year law students of Tilburg University, who did not participate in the first or second study. The subjects were randomly assigned to one of the four conditions. Subjects had no or little prior knowledge about class actions. They were told they could earn € 10 and a small amount of credits for either a first year course or a second year course, which was announced prior to the experiment.

Procedure

The procedure is similar to those of study 1 and study 2. Subjects made a test, received the test scores, and were informed that only 3 of the 8 questions were checked. Contrary to study 1 and study 2, the subjects were awarded half of the credits and half of the monetary reward (i.e. € 5). The reason to award half of the credits was that by doing so, subjects would still have an incentive to file an

individual complaint after they would have learned that the collective complaint yielded € 3. Consequently, subjects in the conditions where the outcome of the collective complaint was known had an incentive to file an individual complaint in order to claim the credits and the remaining € 2, as the individual complaint would remain the only possibility to receive the remaining credits and the remaining amount. Alternatively, subjects who were satisfied with the additional compensation (€ 3) had the possibility not to take any further steps.

The subjects were, as in the previous studies, directed to the website of the fictitious *Ethical Committee of Scientific Research* after they received the test results. Again, subjects had the possibility to file a complaint, individually or collectively. The effects of procedure and certainty about the outcome of the collective complaint were tested by randomly assigning the subjects to the conditions, this is, opt in / uncertainty, opt in / certainty, opt out / uncertainty, and opt out / certainty. In the conditions where the outcome of the collective complaint was known (certain), the subjects were informed that the ethical committee had determined that irregularities had taken place with a number of subjects in some of the sessions, although not in all sessions and not with all subjects. In the conditions where the outcome of the collective complaint was known (certain), it was announced that the committee had determined that the experiment could continue and that all subjects should receive an additional compensation of € 3. In the opt out / certainty condition, it was assumed that subjects desired the € 3, unless they indicated otherwise. In the opt in / certainty condition, the subjects qualified for the additional compensation if they applied for it, which required a small effort (one mouse-click).

As in the previous studies, the subjects were requested to indicate on a seven-point Likert scale for each of the three options [no complaint, collective complaint, individual complaint] to what extent they considered to choose these options. They subsequently made their 'final' decision. After the post-session questionnaire was completed, the subjects were thanked and debriefed. Ultimately, all subjects received € 10 and the credits for either the first year course or the second year course.

Results

The data of subjects who did not summarize the options were further inspected. The inspection showed that their decisions were consistent with, what they reported to be, their favorite option. Additionally, thirteen subjects had low scores on

the propositions relating to unfair treatment and the perception of being harmed. These subjects were removed from the dataset and the analyses, although the analyses showed similar results when these persons were included in the analyses.

The analyses were, therefore, conducted with 102 subjects, with 24 (opt in / uncertainty), 25 (opt in / certainty), 27 (opt out / uncertainty), and 26 (opt out / certainty) subjects in the conditions. Descriptive data indicate that the subjects considered themselves to be treated unfairly [M = 5.65, SD = 1.59] and that they felt the situation was detrimental to them [M = 5.56, SD = 1.50].[49]

Decision to file no complaint, a collective complaint, or an individual complaint

The descriptive data suggest that subjects tend to stick to the default, this is, file no complaint in an opt in model and stay in the class in an opt out model (Table 17). Additionally, knowing the outcome of the collective complaint at the time a subject is required to make his/her decision results in more individuals filing an individual claim compared to situations where this outcome is not known (Table 17).

Table 17

Decision of Subjects (among the conditions)

	Decision			
Condition	No Complaint	Collective Complaint	Individual Complaint	*Total*
Opt In / Uncertainty	15 (63%)	4 (17%)	5 (21%)	*24*
Opt In / Certainty	6 (24%)	9 (36%)	10 (40%)	*25*
Opt Out / Uncertainty	3 (11%)	21 (78%)	3 (11%)	*27*
Opt Out / Certainty	0 (0%)	15 (58%)	11 (42%)	*26*

Note. Percents are, in total, not 100% due to rounding differences.

A multinomial regression analysis was conducted to test whether the differences are statistically significant. The model that was tested only contained main effects. A model with interaction effects could not be tested, as one cell did not contain observations.

The results demonstrate that both procedure [$\chi^2(2, N = 102) = 27.743$, $p < .001$] and (un)certainty has an effect on the subjects' decisions [$\chi^2(2, N = 102) = 13.787$, $p = .001$] (Table 18).

[49] The means among the conditions did not differ significantly. A seven point Likert scale was used to measure the items.

Table 18

Effect Procedure and (Un)certainty on Decision

		Model	
Variabele		B (s.e.)	OR
No Complaint (ref.)			
Collective Complaint	Intercept	-1.087 (.461)	
	Opt In (ref.)		
	Opt Out	3.152 (.725)	23.375***
	Uncertainty (ref.)		
	Certainty	1.431 (.640)	4.185*
Individual Complaint	Intercept	-1.552 (.526)	
	Opt In (ref.)		
	Opt Out	2.183 (.774)	8.874**
	Uncertainty (ref.)		
	Certainty	2.306 (.671)	10.038**
*-2*log likelihood*		26.379	

Noot. OR = odds ratio; CI = confidence interval; Reference groups: no complaint, opt in, uncertainty. *p< .05. *p< .01. ***p< .001.

The odds that an individual chooses the collective complaint in an opt out procedure are 23.375 [OR = 23.375, p <.001] compared to individuals who file no complaint and to an opt in procedure, and controlled for (un)certainty. This confirms the hypothesis that individuals in an opt out model more often stay in the class compared to individuals who join the class in an opt in model (H_1), and that individuals in an opt in model more often file no claim compared to individuals in an opt out procedure (H_2).

The results also show an effect of procedure on subjects' decisions to file an individual complaint [OR = 8.874, p = .005], which could be a hidden interaction effect (H_4) which could not be tested here due to an empty cell. The MANOVA will learn if this finding should be interpreted as a main effect or as an interaction effect.

As expected, the results further indicate an effect of (un)certainty on the decisions of subjects to file an individual complaint, compared to no complaint and while controlling for procedure [OR = 10.038, p = .001] (H_3). In other words, subjects more often file an individual complaint if they know the outcome of the collective complaint compared to when they do not know the outcome, given that they have an incentive to start an individual procedure. Because this conclusion is based on a comparison with the reference category (no complaint), it will be important to discover if a MANOVA supports this finding.

Preferences to file no complaint, a collective complaint, or an individual complaint

The subjects' decisions were for 86% (95 of 109) consistent with the option they considered to be their 'favorite' option.[50] A 2 (procedure) X 2 ((un)certainty) MANOVA was used to measure main and interaction effects. The preferences were measured by using a seven-point Likert scale.

Several main and/or interaction effects were found. Firstly, it was found that the opt out procedure causes individuals to consider a collective complaint more often than individuals in the opt in conditions, F(1, 98) = 8.881, p = .004, η^2= .08. The means [M = 4.16 versus M = 5.38] differ significantly, which is in line with the findings of the multinomial regression analysis and with H_1 (Table 19).

Table 19

Mean Scores ('to what extent do you consider to join the collective complaint?') as a Function of Procedure and (Un)certainty

	Collective Complaint		
	Opt In	Opt Out	Total
Uncertainty	3.67a†	5.67b†	4.73
Certainty	4.64a	5.08a	4.86
Total	4.16a	5.38b	

Note: Different subscripts represent significant differences between means. † implies a difference with a significance level of .10.

The effect of (un)certainty is not significant [F(1, 98) = .220, p = .64, η^2= .00], which implies that there is no main effect. The results, however, suggest an interaction effect, although at a significance level of alpha = .10, F(1, 98) = 3.654, p = .06, η^2= .04. The interaction between procedure and (un)certainty supports for H_3 and H_4, implying that the effect of (un)certainty depends on the procedure (H_4), and that individuals more often tend to choose an individual procedure if the outcome of the collective action (settlement) is known and if they have an incentive for starting an individual procedure (H_3). Table 19 illustrates that the effect of (un)certainty with

[50] Subjects sometimes assigned equal scores to two (or three) options. In these cases, both (or all) preferences were considered to be the most 'favorite' options of subjects. In seven cases, the difference was one point on a seven points scale. In four case, a difference of two points was observed. In three case, the difference was three points. In the other case, the differences between the 'favorite' option and the chosen option was six points.

respect to the outcome of the collective complaint on the decisions of individuals depends on procedure.

Furthermore, the results suggest a main effect of the procedure (opt in / opt out) on the preferences of the subjects to not file a complaint, F(1, 98) = 2.984, p = .09, η^2= .03 (H_2), although the effect is small and only significant at the .10 level (Table 20). A medium to large effect was found for (un)certainty on the subjects' preferences not to file a complaint, F(1, 98) = 12.003, p = .001, η^2= .11 (H_2) (Table 20).

Table 20

Mean Scores ('to what extent do you consider to file no complaint?') as a Function of Procedure and (Un)certainty

	No Complaint		
	Opt In	Opt Out	Total
Uncertainty	4.33	3.37	3.82a
Certainty	2.64	2.15	2.39b
Total	3.47c†	2.77d†	

Note: Different subscripts represent significant differences between means. † implies a difference with a significance level of .10.

Additionally, knowledge of the outcome of the collective complaint caused individuals to consider to file an individual complaint (H_3), F(1, 98) = 4.499, p = .04, η^2= .04 (Table 21). Not surprisingly, no effect is found for procedure (opt in / opt out). The procedure tends to direct individuals to the default. As filing an individual claim or complaint is not the default in either opt in models or opt out models, an effect of procedure on the decision to file an individual complaint was highly improbable.

Table 21

Mean Scores ('to what extent do you consider to file an individual complaint?') as a Function of Procedure and (Un)certainty

	Individual Complaint		
	Opt In	Opt Out	Total
Uncertainty	3.42	3.22	3.31a
Certainty	4.32	4.23	4.27b

Total	3.88a	3.72a

Note: Different subscripts represent significant differences between means.

Underlying Reasons

Again, the post-session questionnaire provided information about the reasons that underlie the subjects' decisions and preferences. As in the previous two studies, differences were found for a number of items that are not related to the differences between the conditions (Table 22).

Table 22

Gemiddelde scores motieven (afhankelijk van het type procedure)

	Procedure	
	Opt in	Opt out
Higher probability that ethical committee will judge favorably in collective procedure compared to an individual procedure	3.69	4.68
Fundamentally opposed to legal procedures	2.12	1.53
Ashamed to file a complaint	1.88	1.40
The examiner was rude	1.86	2.40
I had too much information for making an adequate decision	2.02	2.51

Note: Only items with significant effects are reported. The analysis controlled for (un)certainty.

Similar to the previous two studies, the question arises if the differences are coincidence, or that they are the result of rationalizations by the subjects. The latter explanation seems more probable, given the findings in the previous studies and given the random assignment of subjects to the conditions.

With respect to the effect of (un)certainty, the additional data reveal that time preferences were more important for individuals in the conditions where the outcome of the class action (settlement) was uncertain [M = 3.51] compared to the conditions where the outcome of the class action (settlement) was known [M = 2.71], $F(1, 99) = 3.816$, $p = .05$, $\eta^2 = .04$, while controlling for procedure (opt in / opt out). This result suggests that individuals are more willing to put additional efforts in a claim if the outcome of the class action is known and if they have an incentive to start an individual procedure.

Discussion

This study confirms some of the results found in the previous two studies. For example, individuals in opt out procedures more often stay in the class than individuals who join the class in opt in procedures (H_1). Secondly, the results indicate that individuals in an opt in model more often file no claim compared to individuals in an opt out procedure (H_2). In addition to these results, this study finds that the effect of knowing the outcome of the class action (settlement) on the decisions of individuals depends on procedure (opt in / opt out) (H_4). This finding is consistent with the expectation that the benefits to join the class would outweigh the efforts (costs) by far in the opt in condition where the outcome of the collective complaint was known at the moment the subjects made their decision.

Furthermore, it was found that knowledge of the outcome of the class action has an effect on individuals' decisions and preferences, which confirms H_3. More specifically, individuals more often consider and decide to file an individual complaint if they know the result of the class action compared to individuals who do not know the result. Similarly, they decide and consider less often to file no complaint compared to individuals who do not know the outcome.

Although it is found that certainty about the outcome of the class action results in more individuals filing an individual complaint, the findings do not suggest that this effect will always be present. In the design of this study, subjects were provided incentives to file an individual complaint and to stay in the class. If class members are, for example, (almost) fully compensated, they have little incentive to start an individual procedure. Vice versa, if the recovery of the class action is low, class members will presumably opt out and join another class action (if possible) or start an individual procedure. The effect of (un)certainty, therefore, presumably also depends on the extent the class action is capable of compensating the losses suffered by the individual class members.

D. Effect of Procedure on Reasons that Underlie Individuals' Decisions

The three studies that were conducted indicated that the subjects in the experiments may have rationalized their decisions, as reasons differed among the conditions, although these could often not be related to the manipulation. For example, subjects in

opt out procedures considered it more important that they would be assisted by someone who had experience in filing claims than subjects in opt in procedures. Even though subjects would be assisted in both the opt in conditions and the opt out conditions, subjects in opt out procedures attached higher value to this element than subjects in opt in procedures.

Rationalization suggests that there is an effect of the subjects' decisions on the reasons they report after the decisions are made. Another explanation is that the procedure (opt in / opt out) has an effect on what individuals consider to be important within the context of class actions. A third explanation is that the differences with respect to the reported reasons merely are coincidence. This explanation seems unlikely due to random assignment of the subjects and given the fact that the three studies provide a similar pattern.

The former gave cause to test if the procedure (opt in / opt out) has an effect on the reasons individuals have to file no claim, join (or stay in) the class, or start an individual procedure. In other words, it was tested if the legal context, more specifically the type of procedure (opt in / opt out), influences individuals' beliefs and opinions. If such would be the case, it implies that what individuals consider to be important in an procedure, depends on (or: is shaped by) the procedure itself.

Essentially, it was measured if individuals who made identical decisions would report different grounds for their decisions in opt in procedures than in opt out procedures. Data from the post-session questionnaire were used to measure if the procedure has an effect on the opinions and beliefs of the subjects. To prevent that differences would be caused or mediated by the decisions the subjects made, the analysis controlled for the decisions that subjects made. Additionally, the analysis controlled for the other factors that were tested in the previous studies, this is information (study 1, yes/no), loss (study 2, small/substantive), and (un)certainty (study 3, certainty/uncertainty). Hence, a series of ANCOVAs was conducted, with the (approximately 50) items of the post-session questionnaires as dependent variable, procedure (opt in / opt out) as the factor that was tested, and a dummy variable representing the subjects' decisions as well as information, loss, and (un)certainty, respectively, as covariates. Table 23 shows the results.

Table 23

F values and p values of the reasons of a function of procedure (opt in / opt out)

Item	Study 1	Study 2	Study 3
'I based my decision on the ground that …' (1=totally not, 7=totally)			
I am satisfied with what was awarded to me	$F(1, 104) = 5.647$, $p = .02$, $\eta^2 = .05$		
I prefer not to start a legal procedure	$F(1, 104) = 5.085$, $p = .03$, $\eta^2 = .05$		
It is a matter of principle to me	$F(1, 104) = 5.331$, $p = .02$, $\eta^2 = .05$		
I was treated unfairly	$F(1, 104) = 6.412$, $p = .01$, $\eta^2 = .06$	$F(1, 91) = 5.448$, $p = .02$, $\eta^2 = .06$	
I am disappointed at what happened to me in the experiment	$F(1, 104) = 7.837$, $p = .01$, $\eta^2 = .07$	$F(1, 91) = 3.979$, $p = .05$, $\eta^2 = .04$	
I am angry at what has happened to me in the experiment	$F(1, 104) = 5.072$, $p = .03$, $\eta^2 = .05$		
I did not want to think about what would be the best alternative		$F(1, 91) = 4.705$, $p = .03$, $\eta^2 = .05$	
I considered failing a complaint to be too much effort		$F(1, 91) = 6.713$, $p = .01$, $\eta^2 = .07$	
The marks were not objectively determined		$F(1, 91) = 8.778$, $p = .004$, $\eta^2 = .09$	
I fundamentally oppose to legal procedures			$F(1, 97) = 7.458$, $p = .01$, $\eta^2 = .07$
I feel ashamed if I would file a complaint			$F(1, 97) = 10.061$, $p = .002$, $\eta^2 = .09$
'To what extent do you agree with the following propositions?' *(1=do totally not agree, 7=totally agree)*			
All of the answers that I provided should be checked			$F(1, 97) = 4.041$, $p = .05$, $\eta^2 = .04$
Ethical and moral norms were violated in this experiment	$F(1, 104) = 4.663$, $p = .03$, $\eta^2 = .04$		
The announced duration of the experiment was consistent with the actual duration			$F(1, 97) = 4.677$, $p = .03$, $\eta^2 = .05$
The examiner approached me in a polite way			$F(1, 97) = 6.472$, $p = .01$, $\eta^2 = .06$
The examiner made inappropriate comments			$F(1, 97) = 3.961$, $p = .05$, $\eta^2 = .04$

Note: Controlled for decision (no complaint, collective complaint, individual complaint), with individual complaint as reference category, for information (study 1), loss (study 2), and (un)certainty (study 3), respectively. Only significant results are reported.

The results suggest that if individuals would have made the same decision, the procedure (partly) is related to the reasons individuals report for their decision. In the experiments that were conducted in this study, this observation at least applies to the subjects' frame of mind (satisfaction, discontent etc), the extent to which subjects felt that they were treated unfairly, and the extent to which subjects are reluctant to file a claim given the efforts that filing a claim required. These results indicate that the procedure (opt in / opt out), controlled for other elements, have an effect on the reasons individuals report to not start a procedure, to join (or stay in) a class action, or to start an individual procedure. In other words, what individuals consider to be important in class actions seems to be shaped by the procedure itself. Although this effect depends on the context, most of the items relate to aspects of procedural justice (unfair treatment, marks not objectively determined, …), suggesting that the procedure (opt in / opt out) has an effect on how procedural justice is perceived.

IV. General Discussion

Prior studies suggested that opt out procedures attracted more individuals to class actions than opt in procedures. This effect, however, could not be causally determined due to possible selection issues in the prior studies. All of the three experiments conducted in this study generally showed strong effects of the procedure (opt in / opt out) on the number of subjects joining the class action. The effect of procedure on the number of individuals starting no procedure was, however, not straightforward. The effect was found in one study (study 2), indicated in another study (study 3), and not found in the other study (study 1). This ambiguity can be explained by the losses individuals suffered. The loss suffered in study 1 was generally lower than in study 2 (and study 3). Furthermore, study 2 demonstrates that an increase of the loss causes individuals to (consider to) start or join a procedure, collectively or individually.

Additionally, and not surprisingly, no effects were found for procedure on the number of individual complaints, as an individual claim is not the default in either opt in procedures or opt out procedures. The findings are consistent with the predictions based on rational ignorance and status quo bias research.

Although an opt out procedure results in more class members compared to an opt in procedure, it is not obvious that a class action in an opt out model actually

benefits more class members than in an opt in model. In a successful class action, class members may have to take up their reward, particularly in tort cases, where the (potential) class members are often unknown at the start of the procedure or at the moment a settlement is made, or in other cases where the class representative does not have the necessary information to actually compensate individuals. The default effects found in the three studies, in addition to the take-up rates found in previous studies[51], suggest that the default may result in little differences between opt in procedures and opt out procedures with respect to the number of class members that actually benefit from the class action. This issue should be addressed in future research.

Effects were also found for information. Theory predicted that information about decisions of other individuals would have an effect on individuals' decisions and preferences. Consistent with this prediction, study 1 shows that if individuals are informed that a majority of the other individuals chose to start an individual procedure, these individuals themselves tend to deviate from the default and start an individual procedure themselves. This effect size can be considered to be medium to large.

Furthermore, study 2 found an effect for the losses that individuals suffered. Individuals who suffered a substantial loss more often considered to start an individual procedure than those who suffered a small loss. This effect was, however, only found for their preferences; no effect was found of the size of the loss on the actual decision to start an individual procedure. Apparently, (potential) class members consider to start an individual procedure if the suffered loss increases, and still experience a barrier to actually start the procedure, even if individuals think they have been treated highly unfairly. Presumably, the barrier will disappear if the losses that individuals suffer increase substantially.

The third study demonstrates an effect of (un)certainty of the outcome on the decisions and preferences of (potential) class members. More specifically, it was found that individuals tend to start an individual procedure if they know the outcome of the class action (settlement) at the time of their decision and if they have an incentive to start an individual procedure, compared to the situation that they do not

[51] Mulheron, 20 ; Hensler, et al., 429 ; Pace, et al., Insurance Class Actions in the United States 55 ; Reported in Pace, Class Actions in the United States of America: An Overview of the Process and the Empirical Literature 69 .

know they outcome. An earlier study suggested that the opt out rate before a settlement varied between 9% and 21%, while the opt out rate after the settlement varied between 36% and 38%.[52] Study 3 confirms the descriptive results, although the effect presumably also depends on the level of compensation that the class action provides. A low level of compensation of the class action provides a higher incentive to start an individual procedure than a high level of compensation. From a theoretical perspective, the results suggest that a choice under uncertainty leads individuals to stick with the default. To put it differently, information about the outcome of the class action improves the cost-benefit analysis of individuals and, consequently, makes it easier for individuals to determine the optimal decision. The uncertainty of the outcome of the class action in opt in procedures, compared to the certainty that often exists in opt out procedures, could partly explain that opt in procedures generally attract less class members than opt out procedures, in addition to status quo (default) effects of opt in produces and opt out procedures.

Some of the reasons that explain the effects, may be rationalizations of the subjects who justified their decisions on grounds that were unrelated to the manipulations. Additional data also reveal that the reasons reported by the individuals may have been affected by the procedure (opt in / opt out) itself. This implies that what (potential) class members consider to be important, depends on the procedure.

From a practical point of view, the results seem of particular interest for class actions that predominantly, or to an important extent, consist of small claims, as the credits that were awarded were relatively low and the monetary reward represented approximately the mean hourly wage of students, although the results might be relevant for substantial claims as well. The results provide support for adopting an opt out model, as it was found that individuals experience a threshold to join the class action or to file an individual claim, even if the loss that individuals suffer increases. In an opt out model, this threshold is removed, implying that more (potential) class members will join the class (or opt out and start an individual procedure). Even if take-up rates are low, entailing that relatively few class members actually benefit from the class action, an opt out model still provides an incentive for representatives to initiate a class action and to remedy unlawful acts. Nuisance suits or blackmail

[52] Willging, et al., 52, 134-135 .

settlements are considered to be negative side-effects, although these claims are, to my knowledge, not supported by empirical evidence.

Furthermore, it seems recommendable from a class member point of view to implement the possibility to opt out after a collective settlement is made, instead of prior to the settlement. The results of the third study suggest that knowledge of the outcome of the class action (settlement) enables the class members to be more confident to assess the potential benefits and risks of the various alternatives. If the result (or outcome) of the class action as well as of the 'no claim option' is known, the only unknown outcome is the individual claim, although individuals may consider the outcome of the class action (settlement) as the minimum award they will receive in an individual procedure.

The effects found for information are of importance for regulating representation. Aggressive marketing campaigns can lead individuals to opt out from class actions and start individual procedure or to join a different class action. This effect should not be underestimated, given the moderate to strong effects that were found in study 3 for providing information about the decisions other (potential) class members made. Policy makers or courts may, therefore, take marketing campaigns into consideration when assessing class representation.[53] Particularly groups who are not involved in the class action (settlement) will encourage class members to opt out and start an individual claim or an additional class action. Given the effect of information about decisions of others, law firms and interest groups may sometimes have to be discouraged to stimulate individuals to opt out.

In sum, the default of opt in and opt out procedures has important effects on individuals' decisions, which is consistent with earlier findings. The default effect, however, also depends on other factors, for example if class members know the outcome of the class action (settlement) at the moment they make their decision to opt out or not, and on the information they receive of the decisions other individuals made.

Even though the experimental studies seem to provide interesting information about the decisions individuals make, it should be recognized that the results have

[53] See also I.N. Tzankova & J. Kortmann, Remedies for consumers of financial services: collective redress and improvement of class representation, 1 European Journal of Consumer Law 117, 117-140 (2010).

some limitations. Certain limitations, such as the relatively low losses that the subjects suffered, have already been discussed. Additionally, subjects in the experiments all knew that they had a possibility to file a claim, which will not always be the case in practice. The results are, as often is the case, sensitive to the context. For example, a low number of opt-outs is expected if the class action (settlement) results in full compensation or if the losses suffered by the class members is too low to have an incentive to start an individual procedure. Finally, the take-up rates were not included in the studies, as this would require a different design. Future research could further address take-up rate issues.
