

**2015 SENATE JUDICIARY**

**SB 2342**

# 2015 SENATE STANDING COMMITTEE MINUTES

Judiciary Committee  
Fort Lincoln Room, State Capitol

SB 2342  
2/4/2015  
23213

- Subcommittee  
 Conference Committee

Committee Clerk Signature



Minutes:

1,2,3

Ch. Hogue: We will open the hearing on SB 2342.

Sen. Tyler Axness: Prime sponsor, support (see attached #1).

Ch. Hogue: What is the current practice?

Sen. Tyler Axness: It is at the discretion of the Commissioner, Mr. Helms.

Sen. Casper: Does the Commission right now to put the fine in place. Is your bill not asking them to vote to put the fine in place, but asks them to vote if they reduce the fine.

Sen. Tyler Axness: In looking at the NDCC, 38-08-16, when I glanced at that, I believe the initial fine is put out by the Attorney General on behalf of the Commission; later in these 22 instances, the fines were reduced as a signed agreement between the director and the company. It is not taken up by the full Commission.

Ch. Hogue: Thank you. Further testimony in support. Testimony in opposition.

Todd Kranda, ND Petroleum Council: Opposed (see attached #2). The Commission doesn't look at every penalty that is assessed and this bill is asking just to look at any settlement of those penalties. Right now, as I understand it, the maximum, that \$12,500 is being enforced or at least established and then it's determined what compromises can be reached. This bill would say that maybe this leverage won't exist. The commission, through its agents, will establish a penalty of a little bit less and not negotiate and

spend the additional time. I think you are tying the hands of the agents that operate the Division. You need to allow them to do their job. You've given them the discretion of establishing the amount, why just focus on the settlement. Why just focus on the settlement of 38-08-16. I don't know the full extent of the Commission's authority, but it certainly is more than these civil penalties on 38-08-16, why are we just focusing on that little portion of their portfolio. I think the laws already provide for the reasonable and appropriate enforcement regarding the existing laws, oil and gas regulations, including the discretion for the amount to be assessed and the amount to negotiate as a reasonable settlement of any civil penalty, as may be deemed necessary and appropriate. Without delay for a rubber stamp of that discretion that's been given to the agents of the Commission.

Sen. C. Nelson: The words "compromise" and "settlement" come to mind. When I interpret what happened at Noonan, to me those are a whole bunch of individual offenses, and each one of those little socks was an offense as far as I was concerned. That would be \$12,500 times the number of socks. When you reduce something from \$800,000 down to \$20,000, who is part of that compromise. Seems to me that the city of Noonan didn't come out ahead on this deal and they should have. So where does all the money go from the fines.

Mr. Kranda: I don't know the specifics of those civil penalties that were assessed on that case. I did see that there was some compromise reached, a settlement for whatever the penalty that was imposed. I do see the individual here who will know. I think the Dept. of Health may have also been involved in that work.

Ch. Hogue: Thank you. Further testimony in opposition.

Lynn Helms, Director, Dept. of Mineral Resources: Opposed (see attached 3).

Ch. Hogue: What is the civil penalty process; who decides how much to impose, who notifies the violator, who personally makes the decision to compromise it, and how does that get reported, if at all to the Industrial Commission.

Mr. Helms: The initial proposed penalty is calculated by the Asst. Director of the Oil and Gas Division and the field supervisor, who oversees the work of our 34 field inspectors. They do that in consultation with our Asst. Attorney General. They write up a proposed penalty, our legal assistance drafts that and they bring that to me for my signature and then it is served upon the party

that violated the rule. They have 21 days to respond. If they do not respond within that 21 days, then we issue a default order and we go straight to district court to ask for the full amount of the penalty. But if they do respond, there are a couple of ways it can go. One is a response of we're not guilty of anything and we just adjudicate it. The other possible response is we would like to negotiate a settlement of this matter. If they want to negotiate then they sit down with the Asst. Director of the Oil and Gas Division and myself and we always have that AAG present and we negotiate back and forth on a final penalty. We always hold some penalty in suspension over their head for repeat violations and that suspension/probationary period can be one year or up to five years. The longest is the suspended penalty on the folks that have had a spill in Charbonneau Creek, and that's been there for 8 years to make sure that they finish the clean-up. In some cases, that suspension isn't going to be long enough because of wet conditions or something like that and will actually impose a bond requirement as part of the settlement agreement and they can post a cash bond at the Bank of ND to make sure that the clean-up is followed through on if they don't pay. Those settlements are reported quarterly to the Industrial Commission in the Oil and Gas Asst. Director's quarterly reports. Every quarterly report contains a list of all the litigation we're involved in, as well as a list of every civil penalty and the status of negotiations and/or final settlements. They see them every three months.

Ch. Hogue: So if I understand it, we have the Asst. Director and a field supervisor and they initially have a formulation of what the penalty should be. They put that in writing, you formally sign off on approval of that amount. If the violator is amenable to some type of settlement negotiation, that would involve you and the field supervisor.

Mr. Helms: Typically the field supervisor is not involved. The Asst. Director, myself and the Asst. Attorney General. We take the field supervisor and the field inspectors out of the equation at the point that we try to reach a settlement.

Ch. Hogue: Ultimately you approve the settlement.

Mr. Helms: That's correct.

Ch. Hogue: I assume because this bill is here, it doesn't really go on the agenda of the Industrial Commission for approval, it's just an FYI to them that here are the active, fines and here is what we suspended and sort of an informational piece at that point.

Mr. Helms: That is correct. If it's one that we adjudicated, they have to vote and formally approve it. If it is one that we settled, in the process you just accurately described, then it is provided to them as an informational piece once a quarter.

Sen. Armstrong: But if they didn't like what you were doing, they could take this authority away from you, now.

Mr. Helms: They certainly could. If they disagreed with what they saw in one of those quarterly reports, they could take a vote and take that delegation authority back right then and there.

Ch. Hogue: Do you know whether the Industrial Commission, I assume there are civil penalties in other industries that they regulate within the Commission, either the Bank of ND or the State Mill, or the Housing Finance Agency, do you know if they handle those penalties differently than what they handled penalties under Oil and Gas Division.

Mr. Helms: To my knowledge, none of the other Industrial Commission agencies have regulatory or civil penalty statutes or rules. I do know that the ND Dept of Health, which is a cabinet level position, under the direction of the Governor, is handling penalties the very same way. They are the ones that we work the most closely with. We really work to coordinate. They have a separate Asst. Attorney General, so they have different legal counsel and of course they have a different director, but they handle it in an identical manner.

Sen. Casper: To what extent is the business, the way in which the Industrial Commission conducts business with regard to their own rules, which is what we have before us here in this bill? To what extent is that in code elsewhere for the other areas in which they regulate?

Mr. Helms: I can't answer that. But there are separate sections of Code for each one of those Industrial Commission agencies and as I stated, I'm not aware of any penalty authority or penalty assessment jurisdiction for the Commission in any of those areas.

Sen. Casper: So this bill isn't as much about penalties but how they are going to conduct their business at their meetings and conduct business of the Industrial Commission, about their rules. Who puts the rules together for how the Industrial Commission is going to conduct their business. Is that typically promulgated by the Industrial Commission and not by the Legislature?

Mr. Helms: Now I understand the question. The operation of the Industrial Commission is primarily laid out in statute. The administrative agencies under the Commission all have the authority to adopt administrative rules. The commission directs the formulation of those rules and also takes a roll call vote on those rules before they are offered for public comment and then again after they are modified after public comment; then once again after adopted by the Administrative Rules Committee of the Legislature. The governance of the committee, every vote is a roll call vote. The Exec. Dir., Carlene Fine, puts together the agenda every month or sometimes more than once a month. It's posted publicly on notices posted, so people know what items are going to come before the commission. Action items are in bold print and identified as such so the public knows that anything in bold on that agenda is going to get a roll call vote. The minutes of those decisions are posted on the Industrial Commission website as soon as Ms. Fine can get them assembled. All of the meetings are recorded and the information about the quarterly report and the discussion of penalties is a voice recording and that's accessible to the public when Ms. Fine provides that upon request.

Sen. Grabinger: You've made it clear that the Commission gives you this authority to reach these settlements. First, whether or not they question these settlements at all and whether you think it would be cumbersome for that Commission to take up that action of questioning you on these settlements and then voting on them.

Mr. Helms: The indication I got when we discussed this bill with the Commission, was that the fact that we do about one of these a month; they didn't feel like that would greatly increase the burden upon them to take a roll call vote, on one item a month. Their concern is the fact that they have delegation authority in 4.2 and now this is going to insert a clause into 16 that says "except for this" in this particular instance. They feel like the delegation authority should continue to reside with them; burdensome or not and they feel like they should maintain the decision over what they do and do not have to vote on and what they can delegate. In terms of a burden, not a great administrative burden or burden upon them; I think they did recognize that if a settlement is going to be subjected to a public vote and discussed at an Industrial Commission meeting at length, there is a much greater chance that it's going to end up in category #2, adjudicated and collecting \$0 at the end of two years and we don't know how much we'll get. That was a concern on the part of the Commission too. This inserts an exception to their delegation authority and that vote is likely to result in more adjudicated and less settled penalties.

Sen. Grabinger: So in saying that you're saying that they are not questioning you on these settlements. They are giving you that authority and just signing off cart blanche.

Mr. Helms: Actually they do spend some time on those quarterly reports discussing the individual settlements. In fact, when they looked at the report from two meetings ago, they said, "we want you to come back and give us a detailed presentation on your 2013 and 2014 settlements so we can contemplate whether we are happy with what you are doing over there at the Dept.". At the time of the quarterly reports they spend some serious time discussing them and in that case, that is the first time ever, they asked for an action item, which was for me to come back and give them a detailed report on two years of settlements so that they could think about restricting that delegation authority or whatever they might need to do.

Sen. C. Nelson: In some organizations, the executive director or the chief operating officer is given some latitude, but I'm looking at this with \$1.9 million and you settled for 12% of that. Perhaps the rules could say if the settlement is for less than half than half of what the original proposal was that it be brought to the board for discussion. You said that there hasn't been any recidivism, but I look at the first and last names on this list and there are lots of exploration companies, 22 months apart, \$412,000; obviously the hammer didn't work, they screwed up again. I guess I have a problem with that hammer. Here in the Legislature, if we don't agree with the House, it goes to conference committee and we have to actually vote and people see what we do. Why is it so hard once a month for you to talk about differences of opinion and vote?

Mr. Helms: It's not so hard to discuss it and vote once a month. It's very hard to enforce piece meal statutes that say one thing and then take a tiny bit of it away in another place. If you're going to do it, do it right. If you think it ought to be done by like speed limits, do it like speed limits. Let me talk about Schlossen, 22 months apart. The first violation was a blow-out on a well that they were completing along the lake. The second violation was their drilling company leaving a valve open and letting some oil-based mud leak out onto the well pad. They are not the same or similar violations, not at all. We don't believe that is recidivism, it happens to be the same operator but two completely different individuals doing two completely different things and one being a company employee and one being the drilling contractor employee. I would disagree with the point that that is recidivism.

Sen. Grabinger: Sen. Axness brought up the point about transparency. Don't you feel in your job, haven't you heard, I've heard it from my constituents the questioning of this process and how this is happening and what's going on. Don't you think that transparency, by having this, is a part of the transparent process allowing it to go before the full commission and having a public vote? Don't you think that would take a lot of the steam off of your position and what you are doing?

Mr. Helms: It would certainly take a lot of pressure off me and I have certainly heard the discussion in the public about this. Most of it is not educated at all about what takes place. In terms of transparency, I think the quarterly reports to the Commission and their ability to review every settlement I sign provides that transparency. I think that folks are either not aware of it or are ignoring it. I don't think a vote would get any more attention than a quarterly report. I think the transparency is there, in my opinion.

Ch. Hogue: Does the Commission have a consent agenda.

Mr. Helms: They do not. Every action item requires a roll call vote.

Sen. Armstrong: Are you comfortable with your philosophy on levying and enforcing fines as it exists now.

Mr. Helms: We definitely are. Eight years without recidivism means that we are accomplishing our number one goal. There's a lot of talk about trying to do this in a way that deters, but the studies don't support that, that's an urban myth. The studies and the facts of large civil penalties do not support that position; with a \$12,500/per day per violation fine, we could create some kind of deterrence against individuals who don't believe they are going to get caught.

Ch. Hogue: Thank you. Further testimony in opposition. Neutral testimony. We will close the hearing.

# 2015 SENATE STANDING COMMITTEE MINUTES

Judiciary Committee  
Fort Lincoln Room, State Capitol

SB 2342  
2/10/2015  
23597

- Subcommittee  
 Conference Committee

Committee Clerk Signature



## Minutes:

Ch. Hogue: We will take a look at SB 2342. What are the committee's wishes?

Sen. Grabinger: I move a Do Pass.

Sen. C. Nelson: Second the motion.

Sen. Luick: What is accomplished with this bill?

Ch. Hogue: It calls for the Industrial Commission to have a public vote whenever there is a civil penalty that is imposed and the Commission is either going to accept the penalty, reject it, or compromise it.

Sen. Grabinger: We heard testimony that this wasn't going to be that many cases of this happening. It was very few cases.

Sen. Luick: What will it accomplish?

Sen. Grabinger: The intent as I heard it from the prime sponsor, this is in relation to the reducing of the penalty towards the Noonan problem, the socks; and how that penalty was reduced from \$800,000 penalty to \$20,000. The point being that was made by one person determining that that's how it should be and there is no vote by the full Industrial Commission to take a vote on this. We did receive testimony that they look at it, but they don't have any vote on the reduction; they can only question it. That raises the issue that they are elected officials, maybe somebody in an elected position, that's overseeing this matter, should take a simple vote and it only happens maybe half a dozen

times that this would happen. Then it would be on record that they okay'd it too and they are the elected officials overseeing it.

Sen. Casper: I would say that the penalty is on record because the Industrial Commission is taking that action and the three member panel that oversees that entity is really responsible for any actions that take place. A fine is given to a company that is usually quite high and then is able to negotiate it down and the reduction in fine allows them to carry that amount over. If the fine was a \$1 million dollars, let's say that they reduce it to \$200,000 and that leaves \$800,000 that potentially, in the future, over the course of maybe a year that \$800,000 could kick in if they have another violation. They said that that kind of pressure over the head of a violator resulted in the least amount of recidivism and discouragement of future penalties. I think the practical effect of this is going to be giving the biggest fine and never reduce it.

Sen. Grabinger: What would be wrong with the Commission actually going on record with a vote, rather than just looking at it? It's in the book but they aren't taking action on it.

Sen. Casper: They are on record, the Industrial Commission took the decision and they oversee their employee.

Sen. Armstrong: I think this is legislative micro-management at a significant level. The Department is the department. I don't feel that when Mr. Helms makes a decision that people are off the hook. The Industrial Commission could do this by rule if they thought they had to, wanted to, or needed to. They are obviously comfortable with the policy. The guy, who put the filter socks in Noonan, has never been caught. There is a warrant out for him. That goes to the heart of the opposition of the bill. I am opposing the bill.

Ch. Hogue: We will take the vote for a Do Pass on SB 2342. The motion failed; 2 Yes and 4 No. Do we have a substitute motion?

Sen. Armstrong: I move a Do Not Pass on SB 2342.

Sen. Casper: Seconded the motion.

**4 YES 2 NO 0 ABSENT DO NOT PASS CARRIER: Sen. Armstrong**

Date: 2/10/15

Roll Call Vote #: 1

2015 SENATE STANDING COMMITTEE  
ROLL CALL VOTE

BILL/RESOLUTION NO. 2342

Senate

**JUDICIARY**

Committee

Subcommittee

Amendment LC# or Description: \_\_\_\_\_

- Recommendation:  Adopt Amendment
- Do Pass     Do Not Pass     Without Committee Recommendation
- As Amended     Rerefer to Appropriations
- Place on Consent Calendar
- Other Actions:  Reconsider     \_\_\_\_\_

Motion Made By Sen. Grabinger    Seconded By Sen. Nelson

Senators	Yes	No	Senators	Yes	No
Chairman Hogue		✓	Sen. Grabinger	✓	
Sen. Armstrong		✓	Sen. C. Nelson	✓	
Sen. Casper		✓			
Sen. Luick		✓			

Total (Yes) 2    No 4

Absent 0

Floor Assignment Motion failed

Date: 2/10/15

Roll Call Vote #: 2

2015 SENATE STANDING COMMITTEE  
ROLL CALL VOTE

BILL/RESOLUTION NO. 2342

Senate

**JUDICIARY**

Committee

Subcommittee

Amendment LC# or Description: \_\_\_\_\_

- Recommendation:
- Adopt Amendment
  - Do Pass     Do Not Pass     Without Committee Recommendation
  - As Amended     Rerefer to Appropriations
  - Place on Consent Calendar
- Other Actions:     Reconsider     \_\_\_\_\_

Motion Made By Sen. Armstrong    Seconded By Sen. Casper

Senators	Yes	No	Senators	Yes	No
Chairman Hogue	✓		Sen. Grabinger		✓
Sen. Armstrong	✓		Sen. C. Nelson		✓
Sen. Casper	✓				
Sen. Luick	✓				

Total (Yes) 4    No 2

Absent ∅

Floor Assignment Sen. Armstrong

**REPORT OF STANDING COMMITTEE**

**SB 2342: Judiciary Committee (Sen. Hogue, Chairman) recommends DO NOT PASS**  
(4 YEAS, 2 NAYS, 0 ABSENT AND NOT VOTING). SB 2342 was placed on the  
Eleventh order on the calendar.

**2015 TESTIMONY**

**SB 2342**

Senate Judiciary Committee  
Testimony SB 2342  
Senator Tyler Axness  
Feb. 4<sup>th</sup>, 2015

Good morning Chairman Hogue and members of the Senate Judiciary Committee. My name is Tyler Axness, state Senator representing District 16. I'm before you this morning to introduce Senate bill 2342 relating to settlements of civil penalties when it comes to Chapter 38-08 of the North Dakota Century Code which is control of oil and gas.

SB 2342 is a simple bill that adds three simple lines to Century Code. Passage of the bill would simply require the Industrial Commission made up of the Governor, Attorney General, and Agriculture Commissioner to take up a public roll call vote on whether to accept or reject any fine settlements agreed upon by the Department of Mineral Resources.

According to the Director of the Department of Mineral Resources, there have been 22 fine reduction settlements since January 1<sup>st</sup>, 2011. In response to my question, the Director indicated the Industrial Commission had not taken any of those settlements up for a public vote.

One of those 22 fine settlements signed into agreement by the Director was a fine reduction of \$780,000. The initial fine of \$800,000 was levied against a company that illegally dumped radioactive filter socks in the town of Noonan. The fine was later reduced to \$20,000.

Now let me be clear, this bill does not add an additional burden upon the industry nor does it add regulation in the state. This bill also does not say we cannot reduce fines. In fact, in some circumstances a reduction may be warranted. SB 2342 simply eliminates the public perception of backroom deals between the state and the industry.

In public statements leading up to this bill, members of the Department of Mineral Resources have held up the fact since 2006 there have been no repeat offenders. Rather than pointing to the success of no repeat offenders after dramatic fine reductions, I'd be curious to know how many first time offenders would have been deterred had the initial fine been upheld on previous violations. I'd contest, the purpose of these initial fines is not to prevent repeat offenders but to deter the violation in the first place.

However, if the elected officials on the Industrial Commission agree with the current practice this bill would simply ask them to vote "yes" of every fine reduction. To me, the public has a right to know if in fact their elected leaders agree with these dramatic fine reductions.

This bill should not be controversial. It is about transparency and making the buck stop with the individuals people across the state entrusted with their vote. In North Dakota, we expect our elected officials to have the final say.

It is my hope the Governor, Attorney General, and Agriculture Commissioner stand in support of this bill granting them the final authority in matters of fine reductions.

# 2-1

**Testimony in Opposition to  
SENATE BILL NO. 2342  
Senate Judiciary  
February 4, 2015**

Chairman Hogue, Senate Judiciary Committee members, for the record my name is Todd D. Kranda. I am an attorney with the law firm of Kelsch, Kelsch, Riff & Kranda in Mandan and I appear before you today as a lobbyist on behalf of the North Dakota Petroleum Council to oppose SB 2342.

The North Dakota Petroleum Council (NDPC) represents more than 550 companies involved in all aspects of the oil and gas industry including oil and gas production, refining, pipeline, transportation, mineral leasing, consulting, legal work, and oilfield service activities in North Dakota and has been representing the industry since 1952.

The NDPC is opposed to SB 2342 because it unnecessarily complicates the enforcement process. There are statutory provisions that already exist in law for the enforcement of the rules and orders with regard to oil and gas activity which should allow for the discretion by the Department of Mineral Resources with the civil penalty assessment and any settlement activity.

Chapter 38-08 NDCC provides authorization for the North Dakota Industrial Commission regarding the control of oil and gas resources. Additional enforcement provisions are provided for within the North Dakota Administrative Code, namely Chapter 43-02-03, regarding oil and gas conservation.

The responsibility for enforcement of the rules and orders is with the North Dakota Industrial Commission through the Department of Mineral Resources. Shown below is a portion of Section 43-02-03-05 which is the general enforcement provision for the oil and gas regulations.

**“43-02-03-05. Enforcement of laws, rules, and regulations dealing with conservation of oil and gas. The commission, its agents, representatives, and employees are charged with the duty and obligation of enforcing all rules and statutes of North Dakota relating to the conservation of oil and gas. ...”(Emphasis added).**

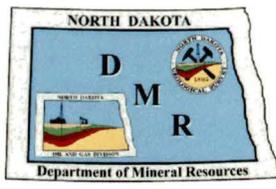
There is no reasonable justification nor need for this new legislation. The Department of Mineral Resources as an agent of the North Dakota Industrial Commission applies the existing laws for the enforcement of the oil and gas regulations. The Department of Mineral Resources Oil and Gas Division regulates the drilling and production of oil and gas in North Dakota with a stated mission to encourage and promote the development, production, and utilization of oil and gas in the state in such a manner as will prevent waste, maximize economic recovery, and fully protect the rights of all owners including the landowners, the royalty owners, the producers, and the general public regarding these vital natural resources. In doing so it may, at times, be necessary and appropriate to negotiate and settle violations which may include the settlement of the civil penalty imposed in order to facilitate and accomplish the over all goal of efficient and safe development of the resource.

The existing oil and gas regulations under Section 38-08-16 NDCC provide for a civil penalty of up to \$12,500 for each individual offense. The commission through the Department of Mineral Resources Oil and gas Division has the authority to establish a civil penalty and within that authority there should be the discretion to determine not only the appropriate amount but also any compromise and settlement without additional delay of bringing every decision to a public vote by the commission itself.

In conclusion, the laws of North Dakota already provide for a the reasonable and appropriate enforcement authority regarding the existing oil and gas regulations with the discretion for assessment of a civil penalty amount and a negotiated settlement of the civil penalty as deeded necessary without delaying the process by having a public vote by the commission. SB 2342 is simply not necessary nor appropriate.

Accordingly, I would urge a **DO NOT PASS** recommendation for **SB 2342**.  
I would be happy to try to answer any questions.

2/4/15



**Senate Bill 2342**  
**Senate Judiciary Committee**  
February 04, 2015

Testimony of Lynn D. Helms, Director

The North Dakota Industrial Commission – Department of Mineral Resources – Oil and Gas Division has had jurisdiction to propose civil penalties for violations of oil and gas statutes, rules, and orders since 1981.

N.D. Century Code.

**38-08-16. CIVIL AND CRIMINAL PENALTIES.**

1. Any person who violates any provision of this chapter, or any rule, regulation, or order of the commission is subject to a civil penalty to be imposed by the commission not to exceed twelve thousand five hundred dollars for each offense, and each day's violation is a separate offense, unless the penalty for the violation is otherwise specifically provided for and made exclusive in this chapter. Any such civil penalty may be compromised by the commission. All amounts paid as civil penalties must be deposited in the abandoned oil and gas well plugging and site reclamation fund. The penalties provided in this section, if not paid, are recoverable by suit filed by the attorney general in the name and on behalf of the commission, in the district court of the county in which the defendant resides, or in which any defendant resides, if there be more than one defendant, or in the district court of any county in which the violation occurred. The payment of the penalty may not operate to legalize any illegal oil, illegal gas, or illegal product involved in the violation for which the penalty is imposed, or to relieve a person on whom the penalty is imposed from liability to any other person for damages arising out of the violation.
2. Notwithstanding any of the other provisions of this section, a person who willfully violates any provision of this chapter, or any rule or order of the commission that pertains to the prevention or control of pollution or waste is guilty of a class C felony unless the penalty for the violation is otherwise specifically provided for and made exclusive in this chapter. The criminal penalty provided for in this subsection may only be imposed by a court of competent jurisdiction.

Please note that the Industrial Commission can only propose penalties and that there are two methods through which such penalties can be recovered. One is through the district courts and the other is through a compromise or settlement agreement.

At this time I would like to present the attachment that provides more information on the Industrial Commission's approach to recovery of penalties for the past two years.

3-2

Senate Bill 2342 creates a significant policy problem for the Industrial Commission as follows:

N.D. Century Code.

**38-08-04.2. DIRECTOR OF MINERAL RESOURCES - DIRECTOR OF OIL AND GAS - DELEGATION TO DIRECTOR OF OIL AND GAS.** The industrial commission is authorized to appoint a director of mineral resources who shall serve at the pleasure of the commission. The director of mineral resources shall carry out the duties of the director of oil and gas along with the duties of director of mineral resources. The commission may set the salary of the director of mineral resources. **The commission may delegate to the director of oil and gas all powers the commission has under this title and under rules enacted under this title.**

The current statutes allow the three statewide elected officials who are the members of the North Dakota Industrial Commission latitude to delegate authority to the director of mineral resources. Senate Bill 2342 is in direct conflict with NDCC 38-08-04.2, creating a single specific exception to this delegation authority. The Industrial Commission feels that such a piecemeal approach through conflicting sections of law is not good policy.

Mr. Chairman and members of Senate Judiciary the North Dakota Industrial Commission urges a DO NOT PASS for SB 2342.

2/4/15

**38-08-16. CIVIL AND CRIMINAL PENALTIES.**

1. **Any person who violates** any provision of this chapter, or any rule, regulation, or order of the commission is **subject to a civil penalty** to be imposed by the commission **not to exceed twelve thousand five hundred dollars for each offense**, and **each day's violation is a separate offense**, unless the penalty for the violation is otherwise specifically provided for and made exclusive in this chapter. **Any such civil penalty may be compromised by the commission.** All amounts paid as civil penalties must be deposited in the abandoned oil and gas well plugging and site reclamation fund. The penalties provided in this section, if not paid, are **recoverable by suit filed by the attorney general in the name and on behalf of the commission, in the district court** of the county in which the defendant resides, or in which any defendant resides, if there be more than one defendant, or in the district court of any county in which the violation occurred. The payment of the penalty may not operate to legalize any illegal oil, illegal gas, or illegal product involved in the violation for which the penalty is imposed, or to relieve a person on whom the penalty is imposed from liability to any other person for damages arising out of the violation.

2. Notwithstanding any of the other provisions of this section, **a person who willfully violates** any provision of this chapter, or any rule or order of the commission that pertains to the prevention or control of pollution or waste **is guilty of a class C felony** unless the penalty for the violation is otherwise specifically provided for and made exclusive in this chapter. **The criminal penalty provided for in this subsection may only be imposed by a court of competent jurisdiction.**

SB 2342  
2/4/15

## 2013 – 2014 Penalties

3-4  
SB 2342  
2/4/15

- 1) Total penalties proposed \$5,700,000
- 2) Total expenses proposed \$42,470
- 3) Settled
  - A. Proposed penalties \$1,950,000
  - B. Proposed expenses \$20,225
  - C. Penalty reductions \$893,305
  - D. Penalties suspended \$822,500
  - E. Penalties and expenses collected \$234,195
- 4) Adjudicated through OAH
  - A. Proposed penalties \$2,462,500
  - B. Proposed expenses \$11,924
  - C. Penalty reductions \$0
  - D. Penalties suspended \$0
  - E. Penalties and expenses collected \$0
- 5) Default order
  - A. Proposed penalties \$87,500
  - B. Proposed expenses \$2,515
  - C. Penalty reductions \$20,006
  - D. Penalties suspended \$0
  - E. Penalties and expenses collected \$20,006
- 6) Active
  - A. Proposed penalties \$1,200,000
  - B. Proposed expenses \$7,806
  - C. Penalty reductions \$0
  - D. Penalties suspended \$0
  - E. Penalties and expenses collected \$0

Case No.	Respondent	Complaint Date	Penalty Proposed	Reasonable Fees and Expenses Proposed	Collected	Suspended Penalty		
						Amount Suspended	Suspended Period	Same or Similar Violation Committed
20012	SLAWSON EXPLORATION COMPANY, INC.	03/2013	375,000.00	4,025.00	66,525.00	50,000.00	1 YEAR	NO
20013	NEWFIELD PRODUCTION COMPANY	03/2013	100,000.00	5,380.00	30,380.00	75,000.00	1 YEAR	NO
20210	OIL FOR AMERICA EXPLORATION, LLC	04/2013	925,000.00	1,500.00	<i>OAH Hearing Pending - 6 wells PA - Reclamation in Progress</i>			
20408	JAYHAWK ENERGY, INC.	08/2013	525,000.00	2,320.00	107,320.00	420,000.00	1 YEAR	NO
20409	RIO PETRO LTD	10/2013	75,000.00	1,479.00	20,006.36	<i>Default Order for Full Penalty - Abandoned Operation Confiscation</i>		
20585	LIBERTY RESOURCES LLC	08/2013	25,000.00	300.00	10,300.00	15,000.00	1 YEAR	NO
21019	REDEMPTION ENERGY, LLC	10/2013	687,500.00	3,143.00	<i>OAH Recommended Order for Full Penalty - Filing with District Court to Collect</i>			
21020	DAKOTA DISPOSALS, LLC	10/2013	25,000.00	1,155.00	<i>OAH Recommended Order for \$25,000 Penalty - Filing in District Court to Collect</i>			
21214	CONTINENTAL RESOURCES, INC.	10/2013	75,000.00	3,058.00	10,558.00	67,500.00	1 YEAR	NO
21747	SAM HOUSTON SWD LLC; RES REDELL ENERGY SERVICES; CHARLES REDELL; RALPH REDELL	01/2014	<i>Combined with Case 21020</i>					
22057	BLACK HILLS TRUCKING INC	03/2014	950,000.00	1,526.00	<i>Settlement Negotiations in Progress</i>			
22448	ZENITH PRODUCED WATER, LLC	06/2014	800,000.00	1,600.00	20,795.00	150,000.00	1 YEAR	NO
22765	ZAVANNA, LLC	08/2014	150,000.00	4,000.00	<i>OAH Hearing Requested</i>			
22766	MUREX PETROLEUM CORPORATION	08/2014	25,000.00	3,275.00	5,775.00	22,500.00	1 YEAR	NO
22952	EMERALD OIL, INC.	09/2014	137,500.00	2,176.00	<i>Settlement Negotiations in Progress</i>			

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Case No.	Respondent	Complaint Date	Penalty Proposed	Reasonable Fees and Expenses Proposed	Collected	Suspended Penalty		
						Amount Suspended	Suspended Period	Same or Similar Violation Committed
23085	GADECO, LLC	09/2014	262,500.00	544.00	<i>OAH Hearing Requested</i>			
23086	PETRO-HUNT, LLC	10/2014	25,000.00	267.00	2,767.00	22,500.00	1 YEAR	NO
23087	BLACK GOLD ENERGY RESOURCE DEVELOPMENT, LLC	10/2014	325,000.00	661.00	<i>OAH Hearing Requested</i>			
23088	BLACK GOLD ENERGY RUSSIAN CREEK FACILITY, LLC	10/2014	12,500.00	661.00	<i>OAH Hearing Requested</i>			
23230	PRIDE ENERGY	11/2014	75,000.00	260.00	<i>OAH Hearing Requested</i>			
23361	MID-CON ENERGY OPERATING, LLC	11/2014	12,500.00	1,036.00	<i>No Response to Complaint</i>			
23362	RANCH OIL COMPANY	11/2014	37,500.00	1,368.00	<i>Settlement Negotiations in Progress</i>			
23515	SLAWSON EXPLORATION COMPANY, INC.	01/2015	37,500.00	1,368.00	<i>Complaint Served</i>			
23516	OASIS PETROLEUM NORTH AMERICA, LLC	01/2015	37,500.00	1,368.00	<i>Complaint Served</i>			

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## The deterrent effect of higher fines on recidivism: Driving offences

Steve Moffatt and Suzanne Poynton

*Each year in New South Wales more than 50,000 persons convicted by a court receive a fine as their principal penalty. Little is known about the deterrent efficacy of these penalties. This study investigates whether fine amount has an impact on reoffending. The study examines the history and subsequent reoffending of 70,000 persons who received a court imposed fine for a driving offence between 1998 and 2000. The problem of selection bias that has handicapped deterrence research in the past has been addressed by the use of two-stage models. The results provide little evidence to suggest the presence of marginal deterrent effects from court-imposed fines on driving offenders; the most consistent predictors of returning to court were individual attributes of offenders. As a result, it is suggested that substantial increases in fines and licence disqualifications would have limited potential in deterring recidivist offenders.*

### INTRODUCTION

Fines are the most common penalty imposed in New South Wales for criminal convictions. In 2005, a total of 56,528 people appearing before NSW Local Courts received a fine as their principal penalty. This represents just over half of all persons appearing before the Local Courts. The average fine amount imposed by the Local Courts has increased at double the inflation rate over the last decade, rising from \$358 in 1993 to \$608 in 2005 (NSW Bureau of Crime Statistics and Research 2006). Despite the frequency with which fines are imposed and the increase in their magnitude, we know very little about the effectiveness of financial penalties in reducing recidivism rates of convicted offenders. Few studies have been conducted in this area and those that have been conducted have produced equivocal findings.

Gordon and Glaser (1991) note several reasons why financial penalties are an appealing alternative to other sanctions. Firstly, fines are generally less costly to administer and can provide revenue

that, in some cases, exceeds their administrative costs. Secondly, monies paid to the court can be redirected to the victim of an offence in order to pay financial restitution for any physical or psychological harm incurred. Thirdly, fines are a flexible penalty that can be adjusted to reflect both the severity of the crime and the offender's financial circumstances. In doing so, they provide an effective sanction for retribution but one which does not place an unjust burden on the offender. Finally, the use of financial penalties avoids many of the debilitating social costs that are attached to incarceration. For example, an individual who is imprisoned for an offence will often have to give up their job, leaving dependents with reduced income and making it more difficult for the offender to successfully return to the community. Fines, on the other hand, permit the offender to remain in the community and in employment, and in doing so, reduce the need for social support.

The purpose of the present study is to investigate the efficacy of financial penalties in reducing recidivism rates of

offenders convicted of driving offences. Driving offences can be considered a good offence type to test deterrence hypotheses because they do not attract the same moral condemnation as other types of crime (such as assault or robbery) and are therefore potentially more responsive to changes in the probability and severity of formal punishment (Andenaes 1966; Chambliss 1967; Nagin 1998; Zimring & Hawkins 1973). Furthermore, because very few people in Australia are gaoled for driving offences, we can be confident that any reduction in recidivism is due to deterrence rather than incapacitation.

This bulletin begins by outlining the major tenets of deterrence theory before reviewing previous empirical research that has examined the deterrent effect of punishment severity. Because few studies have considered the effect of financial penalties on recidivism, the literature reviewed in this section is a broad overview of work that has been conducted on the marginal deterrent effect of different sanctions and/or sanction levels. The limitations

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of previous research in this area are identified and methods for overcoming these problems are discussed. The data and statistical techniques used in the current study are then presented, followed by a summary and discussion of the major findings of this work.

### DETERRENCE RESEARCH

Deterrence theory, based on a rational choice paradigm of decision making, proposes that an offender will engage in criminal behaviour if they believe that the benefits they will derive from the crime outweigh the costs associated with legal sanctioning if caught. The effectiveness of legal sanctions in achieving a deterrent effect is thought to depend upon the certainty, severity and celerity of punishment. If people perceive it likely that they will be caught for an offence and receive harsh and swiftly delivered punishment upon conviction then they will be less likely to offend (Becker 1968; Gibbs 1975; Zimring & Hawkins 1973). A vast number of studies, of varying quality, have been undertaken to test hypotheses generated by deterrence theory. These studies have provided good evidence for a deterrent effect created by increases in the certainty of punishment, at least in the short-term (e.g. Henstridge, Homel & MacKay 1997; Ross 1984; Sherman 1990; Voas and Hause 1987; Voas, Holder & Gruenewald 1997). The deterrent efficacy of increases in punishment severity, however, is very much less clear.<sup>1</sup>

#### Deterrence and punishment severity

Earlier studies on deterrence and the severity of formal punishment dealt predominantly with the impact of capital punishment on homicide rates and most of them were conducted in the United States (US). This focus on the US stems primarily from the fact that (1) there is variability across US States in the uptake and application of the death penalty which allows for cross-sectional comparisons across jurisdictions and (2) a moratorium on executions existed in the US from 1968 through to 1977,

after a US Supreme Court decision ruled capital punishment unconstitutional, thus permitting longitudinal, time-series analyses of the effectiveness of different punishment regimes. The majority of these studies have found little evidence that the use of capital punishment can have a positive impact on murder and/or manslaughter rates (for a review see Chan & Oxley 2004).

In light of these findings, many criminologists, sociologists and behavioural scientists have been quick to dismiss the severity of punishment as unimportant in deterring offenders (e.g. Sanson et al. 1996). This would seem somewhat premature. The fact that capital punishment is not effective in reducing homicides says nothing about the deterrent effect of milder forms of punishment or about the deterrent efficacy of other types of legal sanctions. Capital punishment is, in most cases, reserved only for the most serious crimes, such as murder, which violate the moral code of society. Most people refrain from committing these types of crimes, not because the costs associated with the formal sanctioning process are too great, but because they believe the act to be immoral or inherently wrong and one that will be harshly judged by other members of society (Andenaes 1966; Gibbs 1975). Other less serious types of crime may not invoke the same moral contempt and it is therefore possible that increases in penalty severity for these offences do exert a significant deterrent effect.

Most studies of the deterrent effect of non-capital sanctions investigate the effect on aggregate crime rates of changes in the likelihood of prison or prison sentence length. A review of this research by von Hirsch and his colleagues (1999) found only weak, negative correlations. Von Hirsch et al. (1999), however, were cautious in their conclusions regarding the marginal deterrent effect of imprisonment because the majority of studies they reviewed suffered from several methodological weaknesses. Some studies failed to control for factors other than punishment severity that are known to influence crime. Other studies

used poor measures of the factors they were trying to control for. Many studies used the size of the prison population as a measure of penalty severity, but this variable confounds punishment certainty and severity. A tough jurisdiction, where a large proportion of offenders are sentenced to custody and to long prison terms, could still have a relatively small prison population if the risk of detection, apprehension and conviction is low. Finally, the bulk of the empirical research available on the effectiveness of imprisonment as a deterrent has adopted an ecological approach and a major problem with this type of research is the reciprocal relationship that potentially exists between sanction levels and crime rates (i.e. simultaneity bias, see Nagin 1998 for further explanation).

Spelman (2000), in his review of the literature on imprisonment and crime, identifies four recent studies that successfully dealt with many of the problems associated with earlier ecological research on the efficacy of prison. All four of these studies found that higher rates of imprisonment were associated with reduced crime levels. On the basis of these studies Spelman concluded that a one per cent increase in the US prison population would reduce aggregate-level crime rates from anywhere between 0.16 and 0.31 per cent. These results appear to support the deterrence hypotheses but they might be a result of incapacitation. In other words, the lower crime rates found in States that have higher prison populations may be due to the fact that these States have a larger proportion of their offender population behind bars where they cannot offend.

Given the methodological problems encountered when attempting to assess the deterrent efficacy of imprisonment, it is useful to consider the impact of non-custodial penalties on the likelihood of reoffending. The evidence supplied by these few studies is, however, far from conclusive.

For example, Yu (1994) examined the court files of almost 14,000 New York drivers with at least one conviction for

drink-driving and found evidence to suggest that financial sanctions are the most effective and consistent factor in reducing recidivism. In contrast, Mann et al. (1991) observed in their sample of Ontario drink-drivers that higher fines, at least for first-time offenders, were associated with an increase in the number of accidents and charges during the follow-up period. Similarly, a matching study conducted by Kraus (1974), which examined the efficacy of fines relative to probation for male juvenile offenders in NSW, found no significant deterrent effect of financial penalties. In fact, this analysis showed that some juveniles (viz. those charged with stealing offences) who received a monetary penalty tended to have higher rates of offending after sentencing and were committed to detention more often than those who received probation only. Additional research reveals that higher fines are associated with decreased recidivism but only for certain groups of offenders (viz. those with concurrent convictions; Homel 1980).

Each of the studies described in the previous paragraph examines the effect of judicial penalties on reoffending rates by comparing different degrees or types of sanctions rather than examining alternatives to legal sanctions or the imposition of sanctions where none existed previously. Thus, they present evidence on the marginal (rather than the absolute) deterrent effects of punishment. One problem confronting this type of research is that many of the factors influencing the type and severity of the penalty imposed upon a particular offender can also affect reoffending. For example, an offender given a high monetary penalty or a long supervision order could have numerous prior convictions of a serious nature and therefore be at a greater risk of reoffending, irrespective of the penalty amount they receive. To conclude that higher fines or longer probation periods are ineffective deterrents, because recidivism rates are higher amongst these groups of offenders, is problematic.

Gordon and Glaser (1991) highlight this issue in their research on the use and effects of financial penalties in Los Angeles municipal courts. In this study, the authors used information contained in probation files to examine the imposition of different penalties and their relative effectiveness in deterring further offending. Their sample was restricted to 824 cases where a person was sentenced to probation alone or probation in combination with another sanction (e.g. fine or gaol). Regression models were constructed to predict three post-sentencing outcomes (rearrest within two years, incarceration within two years and probation revocation before the end of the term) using information on characteristics of the offender, the nature of the offence and the type of sanction imposed by the court. These analyses showed that fines were associated with a lower likelihood of post-sentencing arrest or probation revocation relative to a gaol term and to probation alone. However, the fine amount (amongst those receiving a fine) showed no statistically significant relationship with post-sentencing arrest or incarceration. Further analyses conducted by Gordon and Glaser (1991) also showed that, on the whole, less severe penalties tended to be given to offenders who were considered 'low risk' (i.e. those with no prior convictions and no drug problems), while offenders who were at higher-risk of further offending – younger, poorly educated, with drug problems or with prior convictions – received harsher penalties. Given these latter findings, the deterrent effects attributed to penalties may in fact have been due, in part, to the characteristics of the individuals receiving those sanctions. That is, those receiving more severe penalties may have also been at a higher risk of reoffending.

This methodological problem, known as selection bias, is thought to be widespread in the criminological literature (Smith & Paternoster 1990) and is a likely reason for the inconsistencies found in deterrence research on punishment severity, particularly those which have considered the extent to which financial penalties are an effective deterrent. The only way to conclusively establish a causal

relationship between penalty severity and recidivism would be to conduct an experiment in which different sanctions and/or sanction levels are randomly allocated to offenders. This would ensure that offenders receiving different penalties do not vary systematically and that any subsequent reduction in recidivism could be accurately attributed to the penalty type assigned. Although experiments are the most methodologically sound means by which to investigate the differential impact of penalties on reoffending rates, ethical concerns and practical difficulties in randomising punishment prevent the use of this paradigm in recidivism research. Most studies have employed statistical controls to separate out the effects of penalties from those exerted by offender characteristics or have attempted to match offenders on extraneous characteristics thought to influence the likelihood of re-offending. The validity of these methods relies on the extent to which the variables included in the regression models or in the matching process control for all relevant differences between the offender groups receiving various treatments.

One of the more rigorous Australian studies is that conducted by Tait (2001). He argued that (1) the random allocation of defendants to magistrates in a large proportion of NSW local criminal courts and (2) the variability across magistrates in the type and magnitude of penalties they impose made it possible to conduct an indirect experimental approach to assess the effects of different penalties on recidivism. After controlling for a range of extraneous factors, he found evidence of a relationship between the sentence imposed and reoffending, but the effect of different sanctions varied by the type of offence. For more serious offences, magistrates using a lower ratio of prison to supervisory orders (community service or probation) had, on average, a three per cent lower reconviction rate, suggesting that prison is less effective than community sanctions in reducing reoffending for this offender group. For less serious offences, bonds and dismissals were more effective in preventing an offender from returning to

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court than were low-level fines. For the middle offence severity group, however, there appeared to be no relationship between the kind of sanction imposed and the likelihood of reoffending (though Tait acknowledges that this latter result is most likely due to the fact that there was insufficient variation in the penalties imposed by the magistrate for this middle-group of offenders). Tait concluded from his analysis that, in general, the level of the fine did not matter and for some offences, higher fines actually increased the odds of an offender returning to court.

While this indirect experimental approach overcomes many of the methodological weaknesses that plague other research on the deterrent effect of criminal sanctions, only broad comparisons across courts in terms of the proportion of sentences involving particular penalties (e.g. high-level v low-level fines) could be made. Furthermore, Tait's analysis assumed that cases were randomly allocated to magistrates. Tait confirmed that magistrates within each court had a similar mix of cases in terms of the distribution of offence types, but it is possible that the offender cohorts varied systematically on other extraneous factors. It is also possible, as Tait (2001) notes in his discussion of the study's findings, that any effects attributable to the sanctions imposed may in fact be due to magistrate style. For example, magistrates who provide a fairer process by listening to defendants might also be more likely to impose bonds or dismissals without convictions rather than fines, and it may be this perception of fairness that produced the observed difference in reoffending, rather than the sanction itself. This would be particularly relevant to lower level non-custodial penalties.

### THE CURRENT STUDY

The purpose of this study is to contribute to the debate on punishment severity by assessing the deterrent effect of fines. It should be emphasized from the outset that the present study looks only at the effect of higher fines on the people who receive those fines. It is, in other words, a test of specific deterrence rather than

of general deterrence. The study results can tell us nothing about whether higher fines result in generally higher compliance with the law. As discussed above, a major problem faced by researchers attempting to assess the relative effectiveness of different penalties or penalty amounts is that factors influencing the type and severity of the penalty imposed on a particular offender can also affect reoffending. Past studies have attempted to deal with this problem by including statistical controls in multivariate regression models predicting reoffending. However, if the control variables included in these regression models are inadequate, the omitted variables will be reflected in the model's residuals and any correlated variable (such as the level of a sanction imposed at the reference offence) will be capturing part of the effect of the omitted or mismeasured variables.

The implications of this bias for deterrence research can be made clearer through the following example. Suppose that a defendant's level of social support in the community is an important factor in the risk of reoffending. Because this information is not easily measurable, it would be rarely included in regression models as a control variable. However, a magistrate may have access to this type of information at the time of sentencing and could impose a monetary penalty that reflects the extent to which such support is available (e.g. we might expect that a defendant who has more social support would be less motivated to reoffend and would therefore receive a lower penalty). If social support significantly affects recidivism risk and is also correlated with the fine imposed by the court, then the variable measuring 'fine amount' in a regression model predicting reoffending would act as a proxy for social support. The extent to which this type of missing information affects our conclusions regarding the deterrent efficacy of more severe penalties depends on the magnitude of the selection effect. If the omitted or mismeasured information is substantial and also correlated with recidivism, then any inferences drawn from the analysis could be biased or even spurious.

The current study employs statistical techniques which have been specifically designed to capture the influence of unmeasured variables related both to the sanction level imposed by a court and the likelihood of reoffending. These techniques, used by Smith and Paternoster (1990) but developed by Heckman (1979), generally consist of a two-stage process (i.e. estimation of simultaneous regression models). Note that the techniques employed here also deal with the problem of endogeneity<sup>2</sup>. The first stage involves the construction of a selection equation that utilises information about the process by which defendants are 'selected' on the variable of interest. In our study, a probit regression model is specified which predicts the severity of the penalty imposed by the court and includes variables thought to affect this process. Information derived from this first equation is then included in an outcome equation predicting recidivism, in order to correct for potential biases arising from mismeasured or omitted variables. In employing these statistical techniques, this research constitutes a more valid test of deterrence hypotheses regarding punishment severity.

### DATA AND VARIABLES

Data used in this analysis comes from the Bureau of Crime Statistics and Research's Reoffending Database (ROD). This database includes information on all criminal court appearances determined in the NSW Supreme, District, Local and Children's Court (excluding appearances for minor regulatory offences such as parking fines) and links court appearance records for the same individual (for further discussion of this matching process see Weatherburn, Lind & Hua 2003). For the current study, only court appearance records for persons convicted in the Local Court between 1998 and 2000 of a driving offence were examined. This included drink-driving (low-range, mid-range and high-range prescribed concentration of alcohol (PCA) offences)<sup>3</sup>, drive whilst disqualified, speeding and 'other driving' offences<sup>4</sup>. If an offender appeared on

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more than one occasion during the study period for one of these driving offences, the most recent appearance was selected as the reference offence. The sample was further restricted to persons convicted of one of these offences as their principal offence and who received a fine as their most serious penalty (for further discussion of the Bureau's penalty hierarchy see NSW Criminal Courts Statistics 2005, p. 141). The number of persons included in each of the resulting offender subsets ranged from 7,000 to 15,000.

While the primary focus of this analysis was the efficacy of fines, many of the offenders included in our sample also received a licence disqualification penalty from the court. In the case of drink-driving and drive whilst disqualified, almost all offenders received a licence disqualification in addition to their fine<sup>5</sup>. Given the frequency with which licence sanctions are imposed for driving offences and evidence suggesting that licence disqualification is an effective sanction for deterring driving offenders from further offending (Mann et al. 1991; Siskind 1996; Zaal 1994), the impact of

this penalty type on reoffending rates is considered alongside fines.

The independent variables used in the analysis are shown in Table 1. Means of the independent variables are presented separately for each of the six offender groups. As can be seen from Table 1, the gender and age composition of the offender groups is similar, with the vast majority of offenders being male and the average age of offenders ranging between 29 and 36 years. Relative to other offences, the drive whilst disqualified and 'other driving' offender groups include a higher proportion of Indigenous people and a higher proportion of people with a previous appearance for a driving offence. The drive whilst disqualified and exceed speed limit offender groups contain fewer people from regional areas. Other individual-level variables include: the number of charges in the current court appearance and the number of prior court appearances for driving offences within five years of the reference offence. Offence-relevant variables include total fine amount imposed for the reference offence, total licence disqualification

period imposed for the reference offence, delay (number of days from offence to determination) and a binary variable indicating whether or not the offender pleaded guilty to the reference offence. In addition to these individual variables, aggregate data were available to measure the level of disadvantage<sup>6</sup> and the charge rate index (based on the number of charges determined in the Local Court per 100,000 population) in the postcode where the defendant resided.

The outcome measure used in this study was a count variable indicating the number of reappearances before the court for any new driving offences within five years of their reference offence being determined.

### BIVARIATE RESULTS BY REAPPEARANCE

Tables contained in the Appendix (see Tables A1-A2) show a comparison of means by reappearance for the variables used in the models. When grouped by reoffending status observed over the five

**Table 1: Means of variables used in the analysis by offender group**

Variable	Low-range PCA (n=7,072)	Mid-range PCA (n=21,610)	High-range PCA (n=10,145)	Drive whilst disqualified (n=11,978)	Exceed speed limit (n=7,383)	'Other driving' offences (n=15,353)
Total fine (\$)	437	696	1031	767	291	698
Total disqualification (mths)	4.83	9.42	19.63	14.11	0.67	5.19
Prior driving offences (0=no, 1=yes)	0.17	0.13	0.13	0.43	0.18	0.26
Age (years)	30	31	34	29	36	30
Gender (0=female, 1=male)	0.88	0.86	0.86	0.87	0.90	0.83
Disadvantage	994	995	988	971	1006	967
Indigenous (0=Non-Indigenous, 1=Indigenous)	0.05	0.06	0.08	0.10	0.01	0.12
Regional (0=metro, 1=regional)	0.42	0.41	0.44	0.32	0.32	0.37
Delay (days)	48	51	61	87	210	122
Plead guilty (0=no, 1=yes)	0.91	0.92	0.92	0.73	0.55	0.61
Charge rate index	38.4	38.6	39.8	41.2	35.1	43.0
Concurrent offences	1.21	1.26	1.33	1.67	1.11	2.12
No. of prior driving offences (5yr)	0.21	0.15	0.15	0.61	0.25	0.40
<b>No. of subsequent driving offences within 5 yrs</b>	<b>0.39</b>	<b>0.35</b>	<b>0.31</b>	<b>0.94</b>	<b>0.31</b>	<b>0.84</b>

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years following the reference offence, the means of the reappearance (R) and no reappearance (NR) subgroups for each offence are significantly different in 92% of comparisons (p-value<0.01). The standout discriminator is priors, followed by age. The R groups all have higher levels of priors and lower mean age. Equality of means can be very strongly rejected for the R and NR groups in regard to priors. Indeed, there may be a danger that priors act as a proxy for all omitted information when modelling recidivism.

There are some other points to note about the R and NR groups. The proportions of each offender group reappearing within five years for driving offences are in general under 0.50, and around 0.25 for the PCA groups. The R groups were given, on average, significantly higher fines and higher licence disqualification periods. They contained significantly higher proportions of males and Indigenous offenders and their postcodes of residence showed more disadvantage and higher average charge rates. The R groups were more likely to be in the high penalty group at the reference offence. They also showed marginally lower delay, were less likely to plead guilty and had a higher mean number of concurrent offences.

### STATISTICAL MODELS AND RESULTS

As discussed above, Smith and Paternoster (1990) suggest that the most appropriate method to control for selection bias in recidivism analyses is to simultaneously estimate two regression equations: a selection equation and an outcome (or recidivism) equation.

Three specific methods are proposed by Smith and Paternoster to estimate these equations: the Heckman 2-Step Model, Enhanced Ordinary Least Squares method and the Instrumental Variable approach (or 2-Stage Least Squares).

The Heckman 2-Step Model involves the use of a selection equation and a Heckman-type adjustment, lambda, (where lambda = rho\*sigma) in the

outcome equation. The Heckman selection model utilises simultaneous estimation of the two equations, where the outcome regression model can be denoted by:

$$r = z'\beta + u_1 \dots\dots\dots (1)$$

and the probit model for selection can be given by:

$$\Pr(Y=1|X) = \Phi(x_1'b) \text{ where } Y \text{ is an indicator of } y^* = x'\beta + u_2 > 0 \dots\dots\dots (2)$$

where  $\Phi$  is the standard cumulative normal probability distribution and the following holds:

$$u_1 \sim N(0, \sigma^2)$$

$$u_2 \sim N(0, 1)$$

and the correlation between the error terms:

$$\text{corr}(u_1, u_2) = \rho.$$

When  $\rho = 0$ , OLS regression provides unbiased estimates, when  $\rho$  is non-zero the OLS estimates are biased.

The Enhanced Ordinary Least Squares approach uses the specified selection equation to produce conditional residuals as a proxy for the missing information (or an index derived from these residuals). These conditional residuals are then used as an additional independent variable in the recidivism equation. In the Instrumental Variable approach, predicted values from the selection or first stage regression equations are used as instrumental variables in the outcome or recidivism equation. For simplicity, only the methodology and results from the Heckman 2-Step model are presented in detail here. However, the findings from the Enhanced Ordinary Least Squares and Instrumental Variable approaches are presented in the Appendix and any major differences in the results from these models are highlighted in the discussion.

### HECKMAN 2-STEP MODEL

As described earlier, the measure of reoffending utilised in this analysis was a count of subsequent court appearances for any driving-related offence within five years of the reference offence. The results from the analyses are discussed below. All analyses described in this section and presented in the Appendix were conducted using STATA 8.1 software.

### The selection equation

The first step in the Heckman 2-Step analysis is to specify a model for the process by which offenders are 'selected' to receive a relatively severe penalty for their reference offence (drink-driving, drive whilst disqualified, speeding or 'other driving' offence). The distributions of fines and licence disqualifications, as expected, were highly right-skewed. Thus the means were well above the medians. By classifying offenders who received both a fine and licence disqualification above the mean of their offender group as a 'high penalty' subgroup, we are able to construct a simple penalty severity partition into 'high' and 'low', which takes both penalty types into account. The 'high penalty' subgroup generally comprised 15 to 20 % of the offenders in each group<sup>7</sup>. If the court imposed penalty is to reflect aspects of offence severity and provide a level of deterrence, then covariates related specifically to the reference offence and the individual need to be included as regressors, as well as any societal/institutional controls that may be relevant. Since each driving offence is modelled separately, severity of the reference offence will be reflected through concurrent offences (which include counts of the principal driving offences plus other lesser offences), whilst priors, age, gender and Indigenous status are used to cover attributes of the individual. The remainder of the covariates relate aspects of location and court process to the penalty.

A probit equation was then estimated in which penalty type (high v. low) was specified as the dependent variable and factors thought to be influential in the sentencing process were the independent variables.

Variables included in vector X from equation (2) considered to have direct and indirect influence on penalty severity are:

- $x_1$  The defendant's age;
- $x_2$  Gender;
- $x_3$  The level of disadvantage at defendant's postcode;
- $x_4$  Indigenous status;

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- $x_5$  Binary variable indicating whether the defendant resided in a regional area (i.e. outside of Sydney, Newcastle and Wollongong);
  - $x_6$  Delay from offence to determination;
  - $x_7$  Plea submitted for the reference offence;
  - $x_8$  The charge rate index in the postcode where the defendant resided as at the reference offence;
  - $x_9$  Number of concurrent offences; and
  - $x_{10}$  Number of prior driving offences recorded.
- The composition of X is unlikely to be comprehensive because the level of penalty imposed by the magistrate may be influenced by other factors not available in the secondary data available from court records<sup>a</sup>. Some variables are proximal ( $x_1$ ,  $x_2$  and  $x_3$ ) allowing us to test for an individual's likelihood of receiving a high penalty, whilst others are distal ( $x_5$ ,  $x_1$ ,  $x_5$ ,  $x_7$  and  $x_9$ ) allowing us to control for a judicial process that may be prejudicial or spatially biased.
- The results from the probit equation estimated for each of the offender groups are presented in Tables 2a and 2b.
- The selection equations in Tables 2a and 2b show that, as expected, the severity of the penalty imposed for a driving offence is related to both attributes of the individual and aspects of the reference offence.

**Table 2a: Probit models for 'high penalty' imposed by the court for PCA offences**

Variable	Low-range PCA			Mid-range PCA			High-range PCA		
	Coeff.	Std. error	p-value	Coeff.	Std. error	p-value	Coeff.	Std. error	p-value
Age	0.004	0.002	0.056	0.002	0.001	0.096	-0.002	0.001	0.262
Gender	0.305	0.073	0.000*	0.269	0.035	0.000*	0.187	0.048	0.000*
Disadvantage	-0.001	0.0004	0.000*	-0.0009	0.0002	0.000*	-0.0004	0.0003	0.136
Indigenous	0.060	0.090	0.508	0.013	0.046	0.773	-0.047	0.059	0.425
Regional	-0.130	0.044	0.003*	-0.088	0.023	0.000*	-0.056	0.033	0.095
Delay	-0.001	0.0003	0.002*	-0.0006	0.0001	0.000*	-0.0005	0.0001	0.001*
Plead guilty	-0.493	0.062	0.000*	-0.619	0.036	0.000*	-0.573	0.051	0.000*
Charge rate index	-0.003	0.002	0.032*	-0.002	0.001	0.037*	-0.002	0.001	0.047*
Concurrent offences	0.696	0.029	0.000*	0.584	0.015	0.000*	0.422	0.018	0.000*
Prior driving offences	0.561	0.032	0.000*	0.693	0.022	0.000*	0.553	0.033	0.000*
Constant	-0.556	0.415	0.180	-0.626	0.215	0.004*	-0.700	0.306	0.022*
<b>Non-selection hazard</b>	<b>-0.327</b>	<b>0.071</b>	<b>0.000*</b>	<b>-0.312</b>	<b>0.039</b>	<b>0.000*</b>	<b>-0.190</b>	<b>0.052</b>	<b>0.000*</b>

\* Statistically significant at the 0.05 level

**Table 2b: Probit models for 'high penalty' imposed by the court for non-PCA offences**

Variable	Drive whilst disqualified			Exceed speed limit			'Other driving' offences		
	Coeff.	Std. error	p-value	Coeff.	Std. error	p-value	Coeff.	Std. error	p-value
Age	0.005	0.002	0.001*	-0.025	0.002	0.000*	0.005	0.001	0.000*
Gender	0.281	0.050	0.000*	0.231	0.067	0.001*	0.222	0.037	0.000*
Disadvantage	-0.0005	0.0002	0.033*	-0.0002	0.0003	0.506	-0.0006	0.0002	0.002*
Indigenous	0.012	0.050	0.811	-0.089	0.178	0.616	0.137	0.039	0.001*
Regional	0.162	0.032	0.000*	0.034	0.042	0.418	-0.111	0.027	0.000*
Delay	-0.0006	0.0001	0.000*	-0.001	0.0002	0.000*	-0.001	0.0001	0.000*
Plead guilty	-0.117	0.034	0.000*	0.141	0.039	0.000*	0.117	0.027	0.000*
Charge rate index	-0.003	0.001	0.001*	0.0005	0.002	0.772	-0.001	0.001	0.392
Concurrent offences	0.319	0.013	0.000*	0.209	0.034	0.000*	0.237	0.010	0.000*
Prior driving offences	0.239	0.015	0.000*	-0.133	0.035	0.000*	-0.009	0.015	0.562
Constant	-1.551	0.263	0.000*	-0.375	0.391	0.338	-1.243	0.218	0.000*
<b>Non-selection hazard</b>	<b>-0.464</b>	<b>0.104</b>	<b>0.000*</b>	<b>-0.289</b>	<b>0.173</b>	<b>0.095</b>	<b>-0.515</b>	<b>0.108</b>	<b>0.000*</b>

\* Statistically significant at the 0.05 level

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Concurrent offences were the strongest predictors of more severe fines/disqualifications. The next most noteworthy predictor was prior driving offences, which was positively related to higher penalties for drink-driving and drive whilst disqualified offences, but had a negative significant coefficient for speeding offences and was not significant for 'other driving' offences. The Indigenous variable was not significant in drink-driving, drive whilst disqualified and speeding offences. Age was a significant predictor of penalty severity in non-PCA offences, whilst gender was significant in all models (males attract higher penalties). Offenders from more disadvantaged postcodes received higher penalties (apart from speeding and high-range drink-driving offences which showed insignificant coefficients). The coefficients for the charge rate index suggest that offenders from areas with high charge rates tend to attract less severe penalties for drink-driving and drive whilst disqualified offences. The guilty plea was also associated with lower penalties for drink-driving and drive whilst disqualified offences, but was associated with higher penalties for speeding and 'other driving' offences. Lengthier delay<sup>9</sup> was associated with less severe penalties across the six offences. The performance of the regional variable was largely dependent on the offence (for example, regional drive whilst disqualified offenders incurred more severe penalties than metro offenders, whilst the reverse occurred for drink-driving and 'other driving' offenders).

If the variables included in the selection equation are comprehensive, we should be able to efficiently predict the likelihood of a high penalty being imposed. This will mean that our predicted likelihood is close to the observed likelihood and that the amount of missing information contained within the error term will be relatively small. The significance of the Heckman 2-Step Lambda statistic (i.e. coefficient of non-selection hazard or Inverse Mills Ratio) is the simplest way to test whether omitted information presents as a problem for the specified model. In the probit selection model, this statistic

is calculated from the predicted values by dividing their standard normal probability density function by the cumulative normal density function  $[\lambda(\tilde{y}^*) = \varphi(\tilde{y}^*)/\Phi(\tilde{y}^*)]$ . It represents a positive non-linear index of the amount of missing information (omitted variables). If the Heckman Lambda statistic is not statistically significant, then selection bias is not a concern and an Ordinary Least Squares (OLS) or probit model should provide unbiased estimates for the recidivism analysis.

As seen from Tables 2a and 2b, the lambda statistic (non-selection hazard) is highly significant in all but one of our selection models (lambda was only significant at the 0.10 level for speeding offences). This is consistent with the view that unmeasured variables that increase the likelihood of receiving a high penalty are significantly associated with a greater likelihood of reappearing before the court. Thus a Heckman-type adjustment should be included in the outcome equation to correct for the bias arising from these omitted or mismeasured variables.

### The outcome equation

The second step in the Heckman 2-Step analysis is to specify an outcome equation (to be estimated concurrently with the selection equation) predicting the likelihood of reappearing before the court. Many of the same independent variables that were included in the selection model are also included in this outcome model. It is also important that the selection equation contains at least one variable not related to the dependent variable in the outcome equation so as to avoid problems of multicollinearity in the Heckman procedure. Delay, postcode charge rate, plea and concurrent offences<sup>10</sup> were used as predictors of penalty severity but not included in the reoffending outcome equation. They are thought to have an obvious strong relationship as to whether or not a defendant receives a relatively high penalty at the finalisation of the reference offence but, arguably, no obvious relationship to reoffending risk.

The outcome equation also includes information regarding the level of penalty imposed by the court, as indicated by the

total fine amount (in dollars) and the total licence disqualification period (in months) imposed for the reference offence, as well as additional information derived from the selection model to account for selection bias. The dependent variable in the outcome equation is a count variable indicating the number of reappearances ( $r = 0, 1, 2 \dots$  etc.) before the court for a new driving offence during the five-year follow-up period.

Variables included in vector  $Z$  from equation (1), considered to have direct influence on court reappearance are:

- $z_1$  Total fine (\$);
- $z_2$  Total disqualification (months);
- $z_3$  Prior driving offence indicator (conviction in five years to reference offence);
- $z_4$  Age;
- $z_5$  Gender;
- $z_6$  The level of disadvantage of defendant's postcode;
- $z_7$  Indigenous status; and
- $z_8$  Binary variable indicating whether the defendant resided in a regional area (i.e. outside of Sydney, Newcastle and Wollongong).

Results from this model are shown in Tables 3a and 3b. As can be seen from these tables, persons who are young or Indigenous have a significantly higher probability of subsequent offending, controlling for other factors<sup>11</sup>. The exception is speeding offences. Neither age nor Indigenous status is a significant predictor of returning to court for persons convicted of these offences. Also, generally speaking, the probability of recidivism is higher among those who live in disadvantaged and non-regional areas.

The critical coefficients for our deterrence hypotheses are the coefficients for 'total fine' and 'total disqualification'. Tables 3a and 3b show that neither of these statistics is negatively significant in any of our estimated models. Thus, neither the fine amount nor the length of licence disqualification are significant predictors of the probability of returning to court

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**Table 3a: Heckman 2-step consistent estimator models predicting any new appearance for a PCA offence utilising information on the selection process**

Variable	Low-range PCA			Mid-range PCA			High-range PCA		
	Coeff.	Std. error	p-value	Coeff.	Std. error	p-value	Coeff.	Std. error	p-value
Total fine	0.0001	0.0001	0.154	-0.00006	0.00004	0.097	0.00001	0.00003	0.702
Total disqualification	0.004	0.003	0.243	-0.0001	0.0009	0.893	-0.0008	0.0009	0.363
Prior driving offence	0.086	0.066	0.190	-0.004	0.035	0.919	0.055	0.042	0.191
Age	-0.006	0.003	0.035*	-0.007	0.001	0.000*	-0.003	0.002	0.089
Gender	-0.089	0.119	0.452	0.100	0.050	0.047*	0.122	0.054	0.023*
Disadvantage	-0.0007	0.0004	0.094	-0.001	0.0002	0.000*	-0.0009	0.0002	0.000*
Indigenous	0.359	0.113	0.001*	0.368	0.052	0.000*	0.308	0.056	0.000*
Regional	-0.022	0.063	0.725	-0.186	0.031	0.000*	-0.074	0.035	0.034*
Constant	1.743	0.432	0.000*	2.086	0.214	0.000*	1.489	0.261	0.000*

\* Statistically significant at the 0.05 level

**Table 3b: Heckman 2-step consistent estimator models predicting any new appearance for a non-PCA driving offence, utilising information on the selection process**

Variable	Drive whilst disqualified			Exceed speed limit			'Other driving' offences		
	Coeff.	Std. error	p-value	Coeff.	Std. error	p-value	Coeff.	Std. error	p-value
Total fine	-0.00005	0.00005	0.347	0.00007	0.00007	0.312	0.00004	0.00005	0.409
Total disqualification	0.00008	0.002	0.966	0.014	0.004	0.000*	-0.0001	0.002	0.932
Prior driving offence	0.002	0.067	0.973	0.337	0.075	0.000*	0.331	0.062	0.000*
Age	-0.014	0.003	0.000*	-0.0002	0.005	0.970	-0.020	0.003	0.000*
Gender	0.094	0.110	0.392	0.060	0.101	0.552	0.022	0.087	0.799
Disadvantage	-0.001	0.0004	0.009*	-0.001	0.0003	0.003*	-0.001	0.0003	0.000*
Indigenous	0.287	0.098	0.003*	0.370	0.228	0.105	0.466	0.083	0.000*
Regional	-0.284	0.066	0.000*	-0.080	0.057	0.158	-0.302	0.061	0.000*
Constant	3.070	0.460	0.000*	1.621	0.392	0.000*	3.524	0.382	0.000*

\* Statistically significant at the 0.05 level

for a new driving offence, controlling for other relevant factors. In fact, the coefficient for 'total fine' is negative (i.e. in the expected direction for a deterrent effect) only for the mid-range PCA and drive whilst disqualified offences. However, the effect even for these groups is weak and not statistically significant at the 0.05 level. Again, the exception to this is persons convicted of speeding offences. For this offender group there is a significant, positive association between licence disqualification and recidivism, indicating that a longer period of licence disqualification actually increases the probability of subsequent driving offending.

### SUMMARY AND DISCUSSION

The primary purpose of these analyses was to investigate the marginal deterrent efficacy of financial penalties for criminal driving offences. This study not only provides much needed empirical research in an area where few studies have previously been conducted but also addresses the problem of selection bias that has constrained deterrence research in the past.

The analyses reported here indicate that for almost all models designed to predict driving offence recidivism (with

the exception of speeding offences) selection bias does exist. This means that an ordinary least squares or logistic/probit regression could potentially lead to biased or spurious estimates when assessing the deterrent efficacy of the penalty amount. The present analysis, which corrected for this bias, failed to find any evidence for a significant relationship between fine amount and the likelihood that an offender will return to court for a new driving offence<sup>12</sup>. Nor was there any evidence from our analyses to suggest that longer licence disqualification periods reduced the likelihood of an offender reappearing before the courts. The only

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significant effect of penalty type occurred in relation to speeding offences. In this instance, longer licence disqualification periods appear to increase the risk of subsequent offending; a finding that runs contrary to deterrence hypotheses.

It is important to note, however, that the statistical procedure used in these analyses (i.e. the Heckman 2-Step model) has one very important assumption which, if violated, can affect the validity of our conclusions; namely that the disturbance terms of the first stage and the outcome models have a bivariate normal distribution. Our reliance on this untestable assumption (Ettner 2004) is reduced by virtue of the fact that we have variables that predict penalty severity but do not impact on reappearance. In our selection equations, delay, postcode charge rate, plea and concurrent offences were used as predictors of penalty severity but were not included in the reoffending outcome equation. It is also worth noting that further analyses, using two other statistical procedures proposed by Smith and Paternoster (1990) to account for selection bias (Enhanced Ordinary Least Squares/Enhanced Probit method and the Instrumental Variable approach), produce similar results to those presented here. A summary of the findings from these additional analyses appear in the Appendix to this bulletin (see Tables A3-A4).

If we ignore the selection bias, we would be making an assumption that there are no omitted variables that influence penalty severity and reoffending for these driving offences. For a comparison of the results from estimating an Ordinary Least Squares and Probit models using the same independent variables, but ignoring selection bias issues, see Tables A5-A6. Ignoring selection bias we are led to believe that higher fines are significantly associated with higher reoffending, but can easily see that the issue is not so clear-cut once selection bias is taken into account. As shown in Tables A3 and A4, the coefficient for fine amount is generally not significant in the models correcting for selection bias, indicating that the level of fine imposed by the

court has no marginal deterrent effect on driving offence recidivism. The exception to this is low-range and mid-range drink-driving offences. For these offences, the coefficient is significant and in the direction anticipated by deterrence theory (i.e. negative); but only for outcome models estimated using the Instrumental Variable approach. For licence disqualification, the findings are somewhat mixed. The Instrumental Variable models suggest a significant deterrent effect for longer licence disqualifications, at least for those persons convicted of speeding and 'other driving' offences. However, the Enhanced Ordinary Least Squares/Probit models are consistent with the earlier results obtained using the Heckman 2-step model in showing a criminogenic effect of longer licence disqualification periods for these and other offences (including low-range drink-driving). In general, there is little that would suggest a marginal deterrent effect of court-imposed fines and licence disqualification for persons convicted of driving offences.

The most consistent predictors of returning to court were individual attributes of the offender. Having no prior offending history was generally the strongest indicator that a convicted driving offender would desist from committing further offences. Age, gender and Indigenous status were also significant predictors of whether or not an offender would return to court, with persons who are young, Indigenous or male being more likely to reappear for a new driving offence. In terms of the aggregate-level variables, there was also evidence to suggest that those residing in more advantaged areas and regional areas had a lower likelihood of reappearing for a new driving offence.

The lack of evidence for a marginal deterrent effect of fines found in the current study is consistent with much of the deterrence research on punishment severity. Few deterrence studies have found significant correlations between the severity of criminal sanctions and subsequent offending. Those that have, tend to find that any change in reoffending resulting from harsher penalties is relatively small in magnitude (see von

Hirsch et al. 1999 for a review). There are three main reasons identified in the research literature why variations in fine amount might have limited efficacy in deterring offenders:

1. The vast majority of potential offenders may be deterred by the anticipated informal social sanctions associated with public exposure of the offence rather than the formal punishment prescribed by legislatures;
2. There may be no marginal deterrent effect of higher fines at existing fine levels; and
3. Many offenders may discount the penalty because they believe the risk of detection and apprehension by police to be very low.

One area where the current findings differ from previous work in this area is in regard to the effectiveness of licence disqualification. Previous drink-driving research has suggested that longer licence disqualifications can have a beneficial effect on recidivism (e.g. Mann et al. 1991; Siskind 1996); whereas the current results suggest that longer licence disqualifications have little to no deterrent effect and, in fact, for some driving offences, may actually increase the risk of reoffending. While it is possible that these discrepancies are due to the failure of previous research to adequately address selection bias issues in recidivism studies, a more likely explanation is the differences in the definition of reoffending. In our study we used any new appearance before the court for a driving offence within the defined follow-up period. Other studies have compared drink-driving offence rates while under disqualification from driving with rates during legal periods of driving or have simply used road accident rates pre- and post-disqualification as the outcome measure in their analyses. These latter measures are arguably more sensitive measures of actual levels of reoffending than are court appearance rates. Future research should examine this issue in greater detail.

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## NOTES

1. Note that very little work has been conducted thus far on the role of celeritous punishment in controlling crime and therefore deterrence research investigating this aspect of punishment is not reviewed here.
2. If we were to use single stage models (such as probit or OLS) where all penalty- related independent variables (such as concurrent offences, delay, plea and priors) are included, along with the omitted variable problem due to the selection bias issue, there is likely to be another problem, that of the 'endogenous regressor'. That is, concurrent offences, delay, plea and priors will be influencing the level of the penalty, so we cannot include them as independent regressors, since they are likely to be correlated with another regressor in the same equation. The Heckman 2-Step method and the Instrumental Variable (IV) approach are used to overcome this problem.
3. A low-range PCA offence is an offence where a driver is found to have a Blood Alcohol Concentration (BAC) over 0.05g/100ml. For mid-range and high-range PCA offences the lower BAC limits are 0.08g/100ml and 0.15g/100ml respectively.
4. 'Other driving' offences include: Drive without a licence (5,316); Registration offences (4,148); Regulatory driving offences (5,632); Driving licence offences (250) and Roadworthiness offences (7). Drive without a licence offenders were considered a miscellaneous offender group and was not considered for inclusion with set of drive whilst disqualified offenders. The latter group would have all previously
- offended to incur the disqualification, whereas drive without a licence offenders may never have driven previously or incurred a prior penalty.
5. A small proportion of persons convicted of speeding or other driving offences received both a fine and a licence disqualification (16% and 20% respectively).
6. The SEIFA index of disadvantage was used here. Lower values on this index indicate higher levels of disadvantage amongst the specified population (see Australian Bureau of Statistics 2006)
7. This partitioning could cause a problem where the offenders are given a very high fine instead of licence suspension because this would result in an offender being classified in the 'low' penalty subgroup. Other more complicated methods of partitioning which took this situation into account were trialled but failed to yield more efficient models.
8. For example we can control directly for Indigenous status, but only indirectly for other attributes such as ethnicity through disadvantage and we are not able to control for other factors such as the level of social support.
9. Note that length of delay (number of days from offence to determination) could be an indicator of the vigour with which an infringement is being contested or may in part be due to cases being adjourned until a defendant has completed a relevant rehabilitation program. Successful completion of these programs may then be taken into account during the sentencing process. However it must be remembered that all offenders were convicted in these groups, meaning longer delay was associated with lower penalties.
10. Whilst delay, postcode charge rate and plea relate only to the reference case outcome, it could be argued that concurrent offences may be a proxy for 'propensity to offend' and therefore should be included as a predictor of reoffending. Concurrent offences are correlated strongly with fine and disqualification amounts and since
- the concurrent offences are a strong independent predictor of selection for a high penalty this variable should be in the selection equation and not the outcome equation.
11. Here it should be noted that the significant relationship between Indigenous status and reoffending could in part be due to the prior offending measure included in our models. Previous research conducted by the Bureau has suggested that the significant relationship between Indigenous status and recidivism can be accounted for by the extensive criminal record of Indigenous offenders. Once prior offending is adequately controlled for there is no evidence to suggest that Indigenous people are at higher risk of reappearing before the courts (Snowball & Weatherburn 2006). However, in the outcome models a binary variable was used in our analyses to represent prior appearance history, whereas in the selection equations a five year count of all prior appearances was used. This binary indicator in the outcome equation may not be sensitive enough to control for the differences between Indigenous and non-Indigenous offenders.
12. As an aside to the deterrence issue some interesting results observed from the selection equations warrant a mention. As expected, the penalty severity of fine/disqualification relates strongly to concurrent offences and prior driving appearances, but not to Indigenous status. Males are significantly more likely to receive a high penalty, as are defendants who have their offence determined more speedily and defendants who plead guilty to a drink-driving or drive whilst disqualified offence. Finally, the severity of the penalty imposed by the court varies according to characteristics of the location where the offender resides. Although there are some variations across offender groups, in general, defendants from metropolitan areas, areas of greater disadvantage and areas with a lower charge rate are more likely to receive a high penalty.

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## APPENDIX

Table A1: Comparison of means for PCA offences by reappearance

Variable	Low-range PCA (n=7,072)			Mid-range PCA (n=21,610)			High-range PCA (n=10,145)		
	Mean R	Mean NR	p-value	Mean R	Mean NR	p-value	Mean R	Mean NR	p-value
<b>Proportion reappearing for a drive offence within 5 years</b>	<b>0.27</b>	<b>0.73</b>		<b>0.25</b>	<b>0.75</b>		<b>0.24</b>	<b>0.76</b>	
Total fine (\$)	491	417	0.000	741	680	0.000	1077	1017	0.000
Total disqualification	6.12	4.35	0.000	10.69	8.99	0.000	20.62	19.32	0.000
Prior driving offence	0.26	0.14	0.000	0.19	0.12	0.000	0.17	0.12	0.000
Age (years)	28	30	0.000	29	31	0.000	32	35	0.000
Gender	0.91	0.87	0.000	0.91	0.84	0.000	0.89	0.85	0.000
Disadvantage	983	998	0.000	986	998	0.000	978	991	0.000
Indigenous	0.09	0.03	0.000	0.10	0.04	0.000	0.13	0.06	0.000
Regional	0.41	0.43	0.253	0.40	0.42	0.013	0.44	0.44	0.750
High penalty	0.21	0.11	0.000	0.22	0.16	0.000	0.20	0.17	0.000
Delay	51	47	0.082	55	49	0.025	61	61	0.975
Plead guilty	0.88	0.92	0.000	0.90	0.93	0.000	0.91	0.93	0.007
Charge rate index	40.5	37.6	0.000	40.1	38.0	0.000	41.5	39.3	0.000
Concurrent offences	1.34	1.16	0.000	1.39	1.22	0.000	1.44	1.29	0.000
Prior driving offences	0.33	0.17	0.000	0.23	0.13	0.000	0.20	0.13	0.000

Table A2: Comparison of means for non-PCA offences by reappearance

Variable	Drive whilst disqualified (n=11,978)			Exceed speed limit (n=7,383)			'Other driving' offences (n=15,353)		
	Mean R	Mean NR	p-value	Mean R	Mean NR	p-value	Mean R	Mean NR	p-value
<b>Proportion reappearing for a drive offence within 5 years</b>	<b>0.50</b>	<b>0.50</b>		<b>0.19</b>	<b>0.81</b>		<b>0.43</b>	<b>0.57</b>	
Total fine (\$)	801	731	0.000	347	277	0.000	775	642	0.000
Total disqualification	14.36	13.85	0.012	1.30	0.52	0.000	6.26	4.39	0.000
Prior driving offence	0.47	0.39	0.000	0.34	0.14	0.000	0.38	0.18	0.000
Age (years)	29	30	0.000	32	36	0.000	29	32	0.000
Gender	0.89	0.86	0.000	0.92	0.89	0.000	0.87	0.81	0.000
Disadvantage	966	976	0.000	996	1008	0.000	959	974	0.000
Indigenous	0.12	0.08	0.000	0.03	0.01	0.000	0.18	0.07	0.000
Regional	0.30	0.34	0.000	0.28	0.33	0.000	0.33	0.39	0.000
High penalty	0.15	0.13	0.003	0.16	0.12	0.000	0.17	0.13	0.000
Delay	82	93	0.000	199	213	0.001	101	138	0.000
Plead guilty	0.69	0.77	0.000	0.45	0.58	0.000	0.56	0.64	0.000
Charge rate index	42.0	40.5	0.000	36.5	34.7	0.000	44.8	41.6	0.000
Concurrent offences	1.72	1.62	0.000	1.20	1.09	0.000	2.26	2.02	0.000
Prior driving offences	0.72	0.51	0.000	0.53	0.18	0.000	0.62	0.24	0.000

The following tables compare the results of predictive models of reoffending using the selected independent variables described earlier in this bulletin and several different approaches to estimate the equations. The results shown in Tables A3 and A4 are the outcome equations from four different modelling

approaches proposed by Smith and Paternoster (1990) to control selection bias: the Heckman 2-Step Model (h), the Instrumental Variable model (iv), the Enhanced Probit model (pe) and the Enhanced Ordinary Least Squares model (oe). For each offence grouping, the sign of the coefficient for the variables

contained in the model is shown and if the coefficient is significant at the 0.05 level, then this is also indicated in the table. Tables A5 and A6 show the results from estimating Probit (p) and Ordinary Least Squares (o) models, using the same independent variables but ignoring selection bias issues.

**Table A3: Models of association between independent variables and subsequent offending utilising information on the selection process**

Variable	Low-range PCA (n=7,072)		Mid-range PCA (n=21,610)		High-range PCA (n=10,145)	
	+ Coeff.	- Coeff.	+ Coeff.	- Coeff.	+ Coeff.	- Coeff.
Total fine	h pe oe	iv*	oe	h iv* pe	h iv pe oe	
Total disqualification	h iv* pe* oe*		iv* pe oe	h		h iv pe oe
Prior driving offence	h pe* oe*	iv*	pe* oe	h iv*	h iv pe oe	
Age		h* iv* pe* oe*		h* iv* pe* oe*		h iv* pe* oe*
Gender	iv pe* oe	h	h* iv* pe* oe*		h* iv pe* oe*	
Disadvantage		h iv* pe*oe*		h* iv* pe* oe*		h* iv* pe* oe*
Indigenous	h* iv* pe* oe*		h* iv* pe* oe*		h* iv* pe* oe*	
Regional		h iv pe* oe*		h* iv* pe* oe*		h* iv* pe* oe*

\* Statistically significant at the 0.05 level

**Table A4: Models of association between independent variables and subsequent offending utilising information on the selection process**

Variable	Drive whilst disqualified (n=11,978)		Exceed speed limit (n=7,383)		'Other driving' offences (n=15,353)	
	+ Coeff.	- Coeff.	+ Coeff.	- Coeff.	+ Coeff.	- Coeff.
Total fine	iv pe	h oe	h iv* pe* oe*		h iv* pe* oe*	
Total disqualification	h iv	pe oe	h* pe* oe*	iv*	pe* oe	h iv*
Prior driving offence	h iv* pe* oe*		h* iv* pe* oe*		h* iv* pe* oe*	
Age		h* iv* pe* oe*	iv	h pe* oe*		h* iv* pe* oe*
Gender	h iv* pe oe		h pe* oe*	iv	h iv* pe* oe*	
Disadvantage		h* iv* pe* oe*		h* iv pe* oe*		h* iv* pe* oe*
Indigenous	h* iv* pe* oe*		h iv* pe* oe*		h* iv* pe* oe*	
Regional		h* iv* pe* oe*		h iv* pe* oe*		h* iv* pe* oe*

\* Statistically significant at the 0.05 level

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**Table A5: Models of association between independent variables and subsequent offending, ignoring selection**

Variable	Low-range PCA (n=7,072)		Mid-range PCA (n=21,610)		High-range PCA (n=10,145)	
	+ Coeff.	- Coeff.	+ Coeff.	- Coeff.	+ Coeff.	- Coeff.
Total fine	p* o*		p* o*		p* o*	
Total disqualification	p* o*		p* o*		o	p
Prior driving offence	p* o*		p* o*		p* o*	
Age		p* o*		p* o*		p* o*
Gender	p* o*		p* o*		p* o*	
Disadvantage		p* o*		p* o*		p* o*
Indigenous	p* o*		p* o*		p* o*	
Regional		p* o*		p* o*		p* o*

\* Statistically significant at the 0.05 level

**Table A6: Models of association between independent variables and subsequent offending, ignoring selection**

Variable	Drive whilst disqualified (n=11,978)		Exceed speed limit (n=7,383)		'Other driving' offences (n=15,353)	
	+ Coeff.	- Coeff.	+ Coeff.	- Coeff.	+ Coeff.	- Coeff.
Total fine	p* o*		p* o*		p* o*	
Total disqualification		p o	p* o*		p* o	
Prior driving offence	p* o*		p* o*		p* o*	
Age		p* o*		p* o*		p* o*
Gender	p* o*		p* o*		p* o*	
Disadvantage		p* o*		p* o*		p* o*
Indigenous	p* o*		p* o*		p* o*	
Regional		p* o*		p* o*		p* o*

\* Statistically significant at the 0.05 level

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## Caught driving 45 In a 25 MPH Residential Area

### NDCC 39-06.1-06

Except as provided in subsections 7 and 11, for a violation of section 39-09-02, or an equivalent ordinance, a fee established as follows:

Miles per hour over lawful speed limit

1 - 5 \$5 + 0 points

6 - 10 \$5 plus \$1/each mph over 5 mph over limit + 0 points

11 - 15 \$10 plus \$1/each mph over 10 mph over limit + 1 point

16 - 20 \$15 plus \$2/each mph over 15 mph over limit + 3 points

– fine = \$45 - pay bond or go to court + eliminate points by defensive driving course

**Judge can waive, reduce, or suspend**

21 - 25 \$25 plus \$3/each mph over 20 mph over limit + 5 points

26 - 35 \$40 plus \$3/each mph over 25 mph over limit + 9 points

36 - 45 \$70 plus \$3/each mph over 35 mph over limit + 12 points

46 + \$100 plus \$5/each mph over 45 mph over limit+ 15 points

### DMR-OGD Penalty Approach

Propose maximum penalty, equal to 46mph over = \$100 plus \$5/each mph > 45 mph over limit  
= proposed penalty of \$225 + 15 points

Can adjudicate with OAH, District Court, and Supreme Court or negotiate a settlement

Typical settlement equal to 6–10mph over (\$5 plus \$1/each mph > 5 mph over limit

= \$30 + 0 points) with \$195 + 15 points suspended for one year

imposed for any speeding violation within one year and not appealable

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## Zenith Produced Water LLC

- 1) Did NOT illegally dump the filter socks in Noonan
- 2) Operated 2 disposal wells for over 3-1/2 years with no other violations
- 3) Asked 2 North Dakota contractors who had performed construction and well work for them to recommend a waste hauler
- 4) Hired and paid the recommended Divide County resident who owned a registered North Dakota company to properly dispose of filter socks out of state
- 5) Provided information to the Commission proving that the amount of time contaminated filter socks could have been hauled from their wells to Noonan was approximately 1/5 of the maximum estimated time used to calculate the proposed penalty.
- 6) Immediately paid the portion of the proposed penalty equal to the Commission's cost of the Noonan clean up and filter sock disposal
- 7) Agreed to a \$150,000 suspended penalty due immediately and not appealable if another filter sock violation occurs within one year
- 8) Agreed to fully cooperate with the BCI investigation of persons of interest in the Noonan illegal dumping

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