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Context

Theoretical relationships between economic cycle and drug use

	Economic slowdown	Economic growth
Psycho-social theories	<ul style="list-style-type: none"> ↑ drug use “stress” (self-medication hypothesis) “boredom” 	<ul style="list-style-type: none"> ↑ drug use “pleasure” “social networks expanded” “stress of intensity of work” ↓ drug use “less stress”
Economic theories	<ul style="list-style-type: none"> ↑ drug use “illicit markets expand” “opportunity cost lower” ↓ drug use “income effect” 	<ul style="list-style-type: none"> ↑ drug use “income effect” ↓ drug use “opportunity cost higher”

Previous research

- Alcohol: Numbers of people who drink unrelated to business cycle. But heavy drinkers drink less during down-turns (and lower alcohol mortality during recessions)
- Illicit drugs: More drug use during times of higher unemployment.

Methods

Drug use

- Measured through the National Household Survey: seven waves of the NDSHS, covering the period 1991 to 2007
- Alcohol and cannabis: any use in the last 12 months; frequency of use for those who had used.

Economic indicators

- Unemployment rate (average of the monthly male and female unemployment rate in the year before the survey collection period in their current state of residence)
- Real income per capita (derived from gross household income less tax).

Over-time changes in a state's unemployment rate and income per capita with drug use of individuals living in that state

- Controlled for year and state fixed effects
- Age and gender differences tested
- Alcohol/cannabis participation (past year) was modelled using probit
- Frequency of use amongst users modelled as a ordered probit
- Control variables: marital status, Indigenous status, education, and current main activity.

Results

Depends on age, type of substance, participation versus frequency and the economic measure

- For alcohol:
 - No effect for participation
 - Lower consumption associated with rising unemployment rates (pro-cyclical).
- For cannabis:
 - Participation increases for young people (14-24) with unemployment rate rises BUT decreases with unemployment rate rises for older people (25-49)
 - For users, cannabis use decreases with unemployment rate rises for 35-49 yr olds BUT increases with unemployment rate rises for younger groups.

Limitations

16 year observation period and 2-3 year gap between surveys: the period includes only one classical Australia-wide recession followed by a decade or more of reasonably steady economic growth.

Figure 1 Cannabis and alcohol use with business cycle indicators: Australia, 1991 -2007

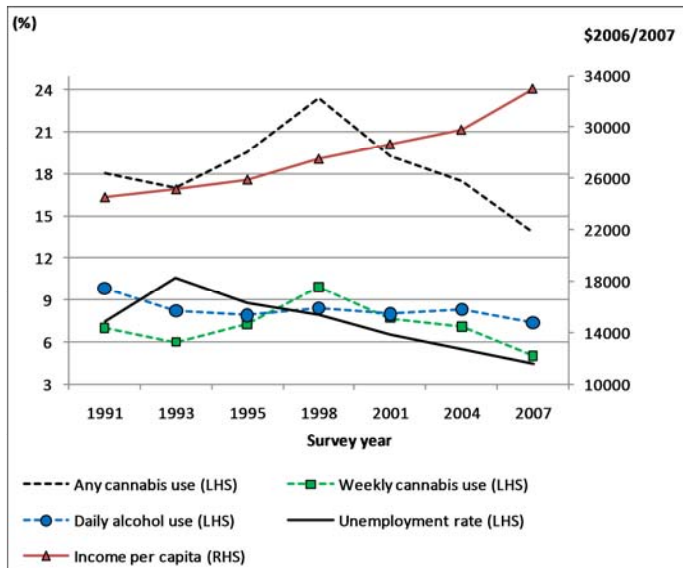


Table 1 Participation in alcohol/cannabis use (past year): Predicted effect of a one percentage point increase in the unemployment rate and a \$1000 increase in income per capita – Probit

	Alcohol		Cannabis	
	Marginal effect	Z-score	Marginal effect	Z-score
	(Pseudo R ² = .0466)		(Pseudo R ² = .0803)	
Unemployment rate	-0.005	-1.56	-0.026***	-5.16
14-24 years	0.006	1.73	0.030***	13.78
25-34 years	0.001	0.24	0.013***	4.02
Inc. per capita/1000	0.001	1.32	-0.008**	-3.19
14-24 years	0.002	1.12	0.004*	2.04
25-34 years	-0.000	0.04	0.001	1.14
Sample size	53,340		56,347	

*significant at 10%, ** significant at 5%, *** significant at 1% (2 sided test)

Table 2 Existing alcohol and cannabis users: Predicted effect of a one percentage point increase in the unemployment rate and a \$1000 increase in income per capita – Ordered probit

	Weekly or more alcohol use	Weekly or more cannabis use
Unemployment rate	-0.0056*	-0.0205*
14-24 years	0.0044*	0.0343**
25-34 years	-0.0018	0.0256**
Inc. per capita/1000	0.0002	-0.0008
14-24 years	0.0027***	0.0003
25-34 years	-0.0005	0.0053
Sample size	43,385	10,187

*significant at 10%, ** significant at 5%, *** significant at 1% (2 sided test)

Conclusion

Australia's recent economic slowdown has been characterised by rising unemployment rates without accompanying falls in income per capita

- No population effect on numbers drinking
- Less alcohol consumption amongst drinkers
- Young people and cannabis: increase in numbers and use rates with unemployment rises
- Age matters but gender doesn't.

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