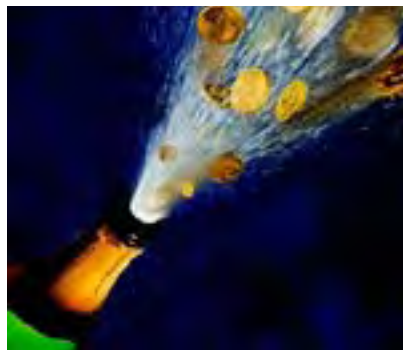# No Booze? You May Lose:
Why Drinkers Earn More Money Than Nondrinkers

By Bethany L. Peters, Ph.D. and Edward P. Stringham, Ph.D.

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By Bethany L. Peters, Ph.D. and Edward P. Stringham, Ph.D.*

Executive Summary

A number of theorists assume that drinking has harmful economic effects, but data show that drinking and earnings are positively correlated. We hypothesize that drinking leads to higher earnings by increasing social capital. If drinkers have larger social networks, their earnings should increase. Examining the General Social Survey, we find that self-reported drinkers earn 10-14 percent more than abstainers, which replicates results from other data sets. We then attempt to differentiate between social and nonsocial drinking by comparing the earnings of those who frequent bars at least once per month and those who do not. We find that males who frequent bars at least once per month earn an additional 7 percent on top of the 10 percent drinkers' premium. These results suggest that social drinking leads to increased social capital.

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Introduction

A growing movement attempts to restrict the consumption of alcoholic beverages, especially among young adults. Backed by a large public health literature, government agencies are enacting policies to reduce drinking. At the forefront is the American Medical Association's program "A Matter of Degree," which advocates improving enforcement of drinking age laws, limiting the number of alcohol outlets near college campuses, restricting drink specials and alcohol advertisements, and increasing alcohol taxes. Supporting the restrictions are professors associated with the Harvard School of Public Health who deem drinking to be deviant and harmful to individuals and to society (Wechsler and Wuethrich, 2002; Weitzman and Kawachi, 2000; Kawachi, 2000).[1]

Although there is a united campaign to restrict alcohol, labor market data may surprise non-economists: recent studies indicate that drinking and individual earnings are positively correlated. Instead of earning less money than nondrinkers, drinkers earn more. One explanation is that drinking improves physical health, which in turn affects earnings (Hamilton and Hamilton, 1997). We contend that there is an economic explanation.

We hypothesize that drinking enhances social capital, which leads to superior market outcomes. Glaeser et al. (2000: 4) describe social capital as "a person's social characteristics, including social skills, charisma, and the size of his Rolodex, which enable him to reap market and nonmarket returns from interactions with others." Some aspects of social capital might be innate, but people can enhance others, such as Rolodex size. If social drinking increases social capital, social drinking could also increase earnings. We attempt to test whether drinking enhances social capital by differentiating between social and nonsocial drinking; we predict that those who drink in public will have higher earnings than those who drink at home. New data confirm that drinkers earn more, and we find that social drinkers earn even more.

What Do We Know About Drinking and Earning?

Beginning with Berger and Leigh (1988), economists have observed a positive correlation between drinking and earnings. Cook (1991) looked the Quality of Employment Survey and the number of drinks consumed per month and confirmed that abstainers earn less than drinkers.[2] French and Zarkin (1995) also found that individuals who have never been drinkers earn 8 to 11 percent less. Hamilton and Hamilton (1997) estimated separate equations for abstainers, light-to-moderate drinkers, and heavy drinkers and found that abstainers earn 7.4 percent less than moderate drinkers. Zarkin et al. (1998) found that nondrinkers earn 7 percent less than drinkers at all levels. MacDonald and Shields (2001) used ordinary least squares and instrumental variables models and reported that moderate drinkers earn the highest wages (relative to abstention and heavy drinking).

However, reverse causation is a potential problem in cross-sectional analysis. Auld (forthcoming) dealt with this by presenting a structural model that incorporates smoking and drinking decisions, and he also found a wage penalty for abstinence. In single-equation models, Auld estimated that abstinence resulted in a 10 percent decrease in earnings. In his structural model, the earnings penalty for abstention increased to 25 percent. When controlling for smoking status, Auld found no drinking penalty, even for heavy drinkers.[3] Thus, several studies have shown that drinking positively affects earnings, a finding robust to different data sets and methodologies.[4]

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How Would Drinking Affect Earnings?

We believe that economics can explain why drinkers earn more money than teetotalers. Our hypothesis is the opposite of the anti-alcohol view associated with the Harvard School of Public Health College Alcohol Studies Program. Whereas Weitzman and Kawachi (2000) argued that people with more social capital drink less, we present the alternative hypothesis that drinking enhances social capital and as such is a productive activity. *Ceteris paribus,* people with more social capital will have more opportunities and should have superior labor market outcomes.

We created our hypothesis through casual observation and examination of scholarly accounts. Drinkers typically tend to be more social than abstainers. As Cook (1991) explained, drinking is a social activity, and one reason people drink is to be sociable. In the medical literature, Skog (1980) showed that moderate drinkers have the strongest social networks. Furthermore, Leifman et al. (1995) documented a negative relationship between social integration and abstinence. Whether abstainers choose not to be as social or whether organizers of social occasions involving drinking exclude abstainers is unclear. Abstainers may prefer to interact with other abstainers or less social people. Alternately, abstainers might not be invited to social gatherings, work-related or otherwise, because drinkers consider abstainers dull.

Corcoran et al. (1980), Montgomery (1991), and Putnam (2000) each made convincing cases that social networks are important for finding jobs and earning promotions. Montgomery (1991) explained that companies prefer acquaintances of employees because employees screen potential candidates and thereby reduce the cost of search. Approximately half the workers surveyed in the Panel Study of Income Dynamics found their job through friends or relatives, and one-third reported help from acquaintances in obtaining their job (Corcoran et al., 1980). Therefore, a person with more contacts will have more labor market options (Burt, 1997). Granovetter (1995) suggested that a large quantity of weak ties or friends-of-friends may be most important to garnering the best job offers.

Thus, if social drinking enables greater social networks, it will also increase earnings. In terms of search theory: the more one drinks, the more people one knows, and the more people one knows, the lower the marginal costs of search. The person with the larger Rolodex can contact more people in any given time period, so the probability that he or she finds the best employment offer increases. But social drinking may provide benefits in addition to those predicted by simple search

theory. Drinkers may be able to socialize more with clients and co-workers, giving drinkers an advantage in important relationships. Drinking may also provide individuals with opportunities to learn people, business, and social skills.

According to our hypothesis, drinking and socializing is a potentially productive investment that positively influences future earnings.[5] One way to test whether social capital is the causal mechanism is to measure whether individuals who drink in public earn more than individuals who do not.

What the Data Show About Drinking and Earning

Our data are from the General Social Survey (GSS), a nationally representative, repeated cross section that contains questions on employment status and salary, demographic characteristics, and alcohol consumption patterns. The survey question on alcohol asks respondents, "Do you ever have occasion to use any alcoholic beverages such as liquor, wine, or beer, or are you a total abstainer?" From this question we create a dummy variable where drinkers have a one and abstainers have a zero.

The survey also asks respondents the frequency with which they go to a bar or tavern. Choices include the following: almost every day, once or twice a week, several times per month, about once per month, several times a year, about once a year, never, and don't know. From this question we create a variable indicating whether an individual frequents a bar or tavern at least once per month. This somewhat crude measure attempts to capture whether one drinks in social or nonsocial settings. We therefore estimate the following equation:

$$Y_i = \gamma X_i + \beta A_i + \delta B_i + \varepsilon_I, \qquad\qquad (1)$$

where Y is the log of real earned income by individual i; X is a vector of personal and demographic characteristics; A is the drinking dummy variable; and B is the social vs. nonsocial drinking dummy variable.[6] Control variables in X include race, age, age squared, religion, schooling, marital status, parental education, number of siblings, and region of residence.

Our empirical results support the hypothesis that drinking improves earnings by increasing social capital. Table 1 presents the descriptive statistics: The average male drinker earns 21 percent more than the average male abstainer, and the average female drinker earns 8 percent more than the average female abstainer. Among full-time workers[7] the average male drinker earns 19 percent more than the average male abstainer, and the average female drinker earns 23 percent more than the average female abstainer. The econometrics control for differences in demographics and personal characteristics in each group.[8]

Table 1: Basic Facts About People in the Data						
Entire Sample						
	Number of Males	Mean Earnings	Standard Deviation	Number of Females	Mean Earnings	Standard Deviation
Drinkers	4,259	$27,646	(23,793)	N=3,760	$14,304	(12,137)
Abstainers	988	$22,826	(20,086)	N=1,243	$11,226	(10,010)
Barhopping drinkers	1,114	$26,449	(24,330)	N=692	$13,273	(10,040)
Barhopping abstainers	46	$21,257	(25,201)	N=33	$10,521	(7,207)
Full-Time Workers						
	Number of Males	Mean Earnings	Standard Deviation	Number of Females	Mean Earnings	Standard Deviation
Drinkers	N=3,480	$30,146	(24,023)	N=2,569	$17,216	(11,951)
Abstainers	N=765	$25,432	(20,300)	N=810	$13,982	(10,278)
Barhopping drinkers	N=901	$28,757	(24,619)	N=497	$15,644	(9,983)
Barhopping abstainers	N=36	$21,755	(19,546)	N=23	$13,040	(6,735)

Table 2 shows the empirical results from our first regression in which income is the dependent variable, and we include the dummy variable for drinking status but do not differentiate between social and nonsocial drinking. Drinking status is positive and statistically significant: both men and women who drink gain an earnings bonus of 10-14 percent.

Table 2: The Effect of Current Drinking on Log Earnings for Full-Time Workers Coefficients and (Standard Errors)		
Independent Variable	**Males (N=4,242)**	**Females (N=3,371)**
Drinker	0.1042***	0.1485***
	(0.0290)	(0.0318)
Age	0.0930***	0.0883***
	(0.0058)	(0.0072)
Age²	-8.97×10^{-4}***	-8.90×10^{-4}***
	(6.57×10^{-5})	(8.41×10^{-5})
Black	-0.1421***	0.0208
	(0.0382)	(0.0393)
Other Race	-0.0552	-0.0089
	(0.0693)	(0.0771)
Protestant	-0.0229	-0.0336
	(0.0276)	(0.0313)
Jewish	0.2589***	0.1018
	(0.0716)	(0.1082)
No Religion	-0.0755*	-0.1356**
	(0.0398)	(0.0568)
Other Religion	-0.0220	0.0496
	(0.0688)	(0.1079)

Table 2: The Effect of Current Drinking on Log Earnings for Full-Time Workers Coefficients and (Standard Errors)		
Independent Variable	**Males (*N*=4,242)**	**Females (*N*=3,371)**
Completed High School	0.2616***	0.2607***
	(0.0333)	(0.0420)
Completed Junior College	0.3580***	0.4214***
	(0.0564)	(0.0659)
Completed College	0.5679***	0.6252***
	(0.0424)	(0.0539)
Completed Grad School	0.7352***	0.8468***
	(0.0495)	(0.0669)
Married	0.3227***	-0.0987***
	(0.0313)	(0.0367)
Widow	0.1953*	-0.0039
	(0.1138)	(0.0669)
Divorced	0.1672***	0.0747*
	(0.0464)	(0.0443)
Separated	0.1706**	-0.0867
	(0.0688)	(0.0692)
Mother's Education	0.0125***	6.50×10^{-4}
	(0.0044)	(0.0051)
Father's Education	0.0034	0.0057
	(0.0037)	(0.0045)
Number of Siblings	-0.0066	-0.0225***
	(0.0054)	(0.0063)
Mid-Atlantic	-0.0795	-0.1247*
	(0.0547)	(0.0653)
East North Central	-0.0397	-0.1544**
	(0.0531)	(0.0634)
West North Central	-0.1800***	-0.1883***
	(0.0603)	(0.0716)
South Atlantic	-0.1872***	-0.1986***
	(0.0547)	(0.0646)
East South Central	-0.2893***	-0.2533***
	(0.0655)	(0.0751)
West South Central	-0.2333***	-0.2127***
	(0.0604)	(0.0707)
Mountain	-0.2380***	-0.1461*
	(0.0661)	(0.0768)
Pacific	-0.0733	-0.0968
	(0.0556)	(0.0662)
Constant	7.2500***	7.3012***
	(0.1427)	(0.1705)
Adjusted *R*-Squared	0.2845	0.1968

Note: *, **,*** denotes significance at the .10, .05, .01 levels, two-tailed test. Omitted categories include white for race, no high school degree for education, never married for marital status, Catholic for religion, and New England for region.

Next we examine whether *social* drinking affects earnings. Table 3 shows the empirical results from our second regression which adds the dummy variable of whether an individual frequents a bar at least once per month. This enables us to control for personal characteristics and current drinking. Men who frequent bars at least once per month obtain a 7 percent earnings premium in addition to the 10 percent premium that drinkers have over abstainers. Although a positive drinking status increases women's earnings by 11 percent, frequenting a bar at least once per month appears to have no effect.[9] Perhaps, women increase social capital apart from drinking in bars.

Table 3: The Effect of Current Drinking and Barhopping on Log Earnings for Full-Time Workers Coefficients and (Standard Errors)		
Independent Variable	**Males (N=2,341)**	**Females (N=1,777)**
Drinker	0.0962[**]	0.1099[**]
	(0.0401)	(0.0446)
Bar-Hopper	0.0679[**]	0.0063
	(0.0328)	(0.0416)
Age	0.0968[***]	0.0933[***]
	(0.0080)	(0.0099)
Age^2	-9.37×10^{-4}[***]	-9.53×10^{-4}[***]
	(9.11×10^{-5})	(1.17×10^{-5})
Black	-0.1270[**]	0.0093
	(0.0536)	(0.0583)
Other Race	0.0609	-0.0736
	(0.1002)	(0.1132)
Protestant	5.15×10^{-4}	-0.0872[**]
	(0.0373)	(0.0427)
Jewish	0.3569[***]	0.1557
	(0.0905)	(0.1428)
No Religion	-0.1271[**]	-0.1856[**]
	(0.0528)	(0.0771)
Other Religion	-0.0742	0.3015[**]
	(0.0959)	(0.1494)
Completed High School	0.2323[***]	0.2271[***]
	(0.0439)	(0.0564)
Completed Junior College	0.3494[***]	0.4595[***]
	(0.0739)	(0.0920)
Completed College	0.5222[***]	0.5993[***]
	(0.0559)	(0.0733)
Completed Grad School	0.6725[***]	0.8795[***]
	(0.0660)	(0.0926)
Married	0.3645[***]	-0.1188[**]
	(0.0432)	(0.0510)
Widow	0.2222	-0.0048
	(0.1449)	(0.0926)
Divorced	0.1731[***]	0.0327
	(0.0649)	(0.0616)
Separated	0.1484	-0.0531
	(0.0959)	(0.0917)
Mother's Education	0.0141[**]	-9.26×10^{-4}

Table 3: The Effect of Current Drinking and Barhopping on Log Earnings for Full-Time Workers Coefficients and (Standard Errors)		
Independent Variable	**Males (N=2,341)**	**Females (N=1,777)**
	(0.0060)	(0.0070)
Father's Education	0.0022	0.0074
	(0.0050)	(0.0061)
Number of Siblings	-0.0070	-0.0215**
	(0.0072)	(0.0088)
Mid-Atlantic	-0.0627	-0.1161
	(0.0738)	(0.0864)
East North Central	-0.0219	-0.1520*
	(0.0718)	(0.0840)
West North Central	-0.0835	-0.2133**
	(0.0820)	(0.0944)
South Atlantic	-0.1886**	-0.1926**
	(0.0745)	(0.0861)
East South Central	-0.1874**	-0.2811***
	(0.0904)	(0.1018)
West South Central	-0.2443***	-0.1328
	(0.0823)	(0.0940)
Mountain	-0.2634***	-0.1760*
	(0.0900)	(0.1028)
Pacific	-0.0546	-0.0974
	(0.0751)	(0.0881)
Constant	7.1060***	7.2913***
	(0.1952)	(0.2326)
Adjusted R-Squared	0.2906	0.2048

Note: *, **,*** denotes significance at the .10, .05, .01 levels, two-tailed test. Omitted categories include white for race, no high school degree for education, never married for marital status, Catholic for religion, and New England for region.

Conclusion

In *Bowling Alone*, Putnam (2000: 324) posits that much of the success of Silicon Valley executives can be explained by social drinking: "Although nominally competitors, these companies' leaders shared information, problem-solving techniques, and perhaps just as important, beers after work." Putnam's analysis touches on our proposed social capital dimension of drinking. Both male and female drinkers have a significant earnings bonus over nondrinkers. Our finding that males who drink in bars earn an additional wage premium may indicate the importance of social capital accumulated through drinking. As evidenced by the medical literature, few researchers believed that the positive correlation between moderate drinking and longevity was causal until a biological mechanism was discovered, and we contend that social capital may be the causal mechanism of why drinkers earn more.

Our analysis leads to a number of policy implications. Most importantly, restrictions on drinking are likely to have harmful economic effects. Not only do anti-alcohol policies reduce drinkers' fun, but they may also decrease earnings. One of the unintended consequences of alcohol restrictions is that they push drinking into private settings. This occurred during the Alcohol Prohibition of 1920-1933 and is happening on college campuses today. By preventing people from drinking in public, anti-alcohol policies eliminate one of the most important aspects of drinking: increased social capital. From this perspective, anti-alcohol campaigns can be considered harmful to individuals and the economy as a whole. Authors such as Kawachi may deem drinking an anti-social activity, but advocates of alcohol restrictions may be the ones engaging in anti-social behavior. Rather than attempting to discourage drinking in society, perhaps we should encourage it.

About the Authors

B**ethany Peters** is an economist with the Analysis Group in Dallas, TX. Edward Stringham is associate professor of economics at San Jose State University. She earned her Ph.D. from Duke University and taught at Rhodes College before joining the Analysis Group.

Edward Stringham is an associate professor of economics at San Jose State University and adjunct scholar with the Reason Foundation . He is president of the Association of Private Enterprise Education, editor of the Journal of Private Enterprise, editor of two books, and author of 20 refereed articles in journals including the Journal of Institutional & Theoretical Economics, Quarterly Review of Economics & Finance, Managerial Finance, American Journal of Economics & Sociology, and *Journal of Labor Research*. His work has been discussed in the *San Francisco Chronicle, San Jose Mercury News, Oakland Tribune, Miami Tribune,* and dozens of other newspapers.

Mr. Stringham earned his Ph.D. from George Mason University in 2002, and has won Paper of the Year Award from the Association of Private Enterprise, Best Article Award from the Society for the Development of Austrian Economics, Second Place in the Independent Institute Garvey Contest, and Distinguished Young Scholar Award from the Liberalni Institut and the Prague School of Economics.

Notes

[1] Wechsler is director of the Harvard School of Public Health College Alcohol Studies Program and author of more than a dozen books and 100 articles on alcohol.

[2] Drinks are typically measured as 12 grams of pure ethanol, the amount contained in roughly 12 ounces of beer or 1.5 ounces of 80 proof liquor.

[3] Auld (forthcoming) noted in his conclusion that the behaviors for which he finds a negative effect on income (abstention and smoking) are those that do not conform to social norms.

[4] Some studies found a wage penalty for heavy drinking compared to moderate drinking, whereas others do not. According to Peters (2002), the relationship between income and alcohol consumption appears to be an inverse U; if people drink too much, their earnings decrease. Peters documented that one must drink more than 21 drinks per week to earn as little as a nondrinker.

[5] Just like all investments in capital, an optimal level exists. If one invests too much, one will earn less than the maximum. Thus, our model predicts that drinking too much could lead to lower earnings, but the main issue we examine herein is why nondrinkers earn less than drinkers.

[6] GSS respondents report income by categories so the variable is not continuous, but Ligon (1989) explained how one can produce a real income variable by using midpoints of categories.

[7] We define full-time workers as those who work at least 30 hours per week and solely present our regressions for them. We ran the regressions on the entire sample and found similar results, but we focus on full-time workers because they are most likely to benefit from social capital.
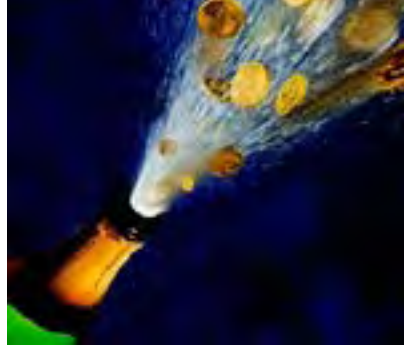
In addition, barhopping by women may act as a proxy for full-time work, so the coefficient of barhopping would be higher than we would expect if we just looked at full-time workers.

[8]   At first glance, the average bar-hopper has 5 percent lower earnings than the superset of average drinkers. However, bar-hoppers may be younger rather than less productive than their counterparts. To test the effect of barhopping on earnings, we need to hold age and some other variables constant.

[9]   This gender disparity resonates with the findings of Peters (2002) from another data source, the National Longitudinal Survey of Youth. That study tested whether men and women in states with high drinking prevalence get a larger drinkers' bonus than those in states with lower drinking prevalence. They found that men do, but women do not. Why women who drink earn more than women who abstain is left for future research.

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