The economic benefit of being blonde: A study of waitress tip earnings based on their hair color in a prominent restaurant chain

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ABSTRACT

The effect of hair color alternation on tip earnings by restaurant waitresses working in a prominent restaurant chain was examined. Waitresses record various control variables and tip incomes for 60 days in which period they switch their hair colors between blonde and other ones. Various model analyses show an interaction between hair color and tip earnings. It is documented, both statistically and economically, that non-blonde Caucasian females earn significantly more tips after dying their hair blonde in a real world work setting. These results have clear and present implications for labor and behavior economics.

Keywords: Behavioral economics, Beauty, Wages

INTRODUCTION

Recent economics literature documents the impact of physical characteristics onto wages, in addition to other forms of economic earnings such as fundraising. For example, Persico et al. (2004) and Case and Paxson (2008) examine the labor markets effect of height; Cawley (2004) studies the negative correlation between income and obesity. Other studies look into the effects of beauty (Hamermesh and Biddle [1994] and Mobius and Rosenblatt [2006]), or being blonde (Price [2008] and Johnston [2010]). While certain physical characteristics in real life are difficult to alter or mask — for instance height or obesity, other traits can be improved at a cost such as through plastic surgery. At the extreme end of the cost spectrum, hair color can be dyed with negligible expense. The study contributes to this growing literature by investigating the economic impact of blonde hair on women's wages.

Modern media often portraits women with blonde hair as being more attractive. Such general public perceptions are also frequently documented in academic studies, e.g. Price (2008). Furthermore, the perceived physical beauty on this iconic image is often economically rewarded. Johnston (2010) finds that blonde women receive a large wage premium. On the other hand, blonde women are generally rated as less intelligent than average women, e.g. Kyle and Mahler (1996). Thus blondeness could positively or negatively affect incomes of women in the labor market, depending on whether the beauty perception dominates, or the low intelligence perception prevails.

Thus, Caucasian women in the labor market are facing an equipoise choice on their hair color in order to maximize their wages: should I keep my natural hair color or alter it to improve income?

With the actual field data at a prominent U.S. restaurant chain, the study finds that after female servers change hair color into blonde, the tip earning is increased from 17.26% to 18.63% of their gross sales – a 1.37 percentage point increase (7.94% relative effect). The difference is statistically significant at 1% level. Previous works simply compare the earnings among blond and non-blond – such methodology is difficult to disentangle the effect of hair color from those of other factors such as physical attractiveness. By having the same person and comparing income before and after dyeing hair, the empirical results are nearly fully controlled for factors such as age, beauty, body mass index, eye color (a coordinating factor with hair color), height, education level, personality, marital status, as well as controlling for exogenous factors such as day/night shifts and weekdays.

The study attracted both regional and global media attentions. [1] Additional data from those media website polls are gathered for robustness check. The economic benefit of being blonde is clear and present in the study.

[1] The study has been widely publicized in spring 2011 by NBC Philadelphia , Fox29 , Philadelphia Inquirer, FM 95.7, B101, Northeast Times, WLW Cincinnati, and overseas media in Germany and Netherland. For example, http://www.philly.com/philly/news/nation_world/20110517_Golden_locks__Waitresses__tips_rose_when_hair_changed_from_brunet_to_blond.html

Background

The data is gathered from a spring 2011 field study of servers working at Chickie's and Pete's, a prominent sports-themed restaurant chain headquartered in metropolitan Philadelphia. ESPN voted Chickie's and Pete's as the #1 Sports Bar on the East Coast U.S. in 2008. This restaurant and bar attracts mostly sports fans, blue collar workers, and families, with 65 percent of its clients being men. The business setting is ideal due to not only its large and diversified customer base, but also "meticulous records" kept by Chickie's and Pete's as documented in its recent record-setting legal settlement with the U.S. Department of Labor.[2] For example in 2010, a branch location under study has average annual number of employees of 113. The total number of hours worked by all employees amounted to 126,435. Females make up at least 85 percent of the wait staff. On average servers are given a 4 to 6 table section to work throughout their 6 to 10 hour shift. A typical table seats 2 to 4 persons.

DATA

Caucasian female servers were recruited through word-of-mouth and flyers posted in the restaurant chain. To enter the study, each participant received a dossier of materials, containing web instructions and a consent form, from one of the coauthors. The online questionnaire asked about current and natural hair color, eye color, age, height, weight, relationship status, ethnicity, work experience, education, intelligence (proxied by academic Grade Point Average in the highest degree), and personality.

A randomly-generated unique anonymous subject ID number was provided to each participant after the questionnaire. Participants were instructed to use their ID number to report their tip earnings and work shift information online for 60 days: 30 days in their natural hair color and 30 days in dyed blonde color.[3]

The results are based on ten servers, with a single object being naturally blondes. While the number of subjects seems to be small at first, it translates into 282 work shifts and over 8,000 tables served.[4]

EMPIRICAL DISCUSSION

Table 1 reports descriptive statistics of servers under study. 68% of them have coordinating eye colors (blue, green, or Hazel) to blonde hairs as defined by Snee (1974). The average age is 26. The average height is about 5'4" and average Body Mass Index is 22.3, indicating while human subjects under study are about as tall as an average American woman, they are significantly leaner figuratively according to a report from Center for Disease Control.[5] The servers also on average have about two and half years' college education (some are actually college students working to support their schooling) with a Grade Point Average of B. A quarter of them have over three or more years of serving experience; a third are either single and

[2] http://articles.philly.com/2014-02-22/news/47563033_1_peter-ciarrocchi-jr-tipped-employee-minimum-wage
[3] For a single natural blonde, she was instructed to dye her hair into brunette.
[4] Similarly, the seminal study on tip earnings by lap dancers at different menstrual periods by Miller, Tybur, and Jordan (2007) recruited eighteen dancers resulting in 296 work shifts.
[5] http://www.cdc.gov/nchs/data/nhanes/databriefs/adultweight.pdf

available, or being self-identified extrovert. There is no exceedingly high correlation (above .9) among factors.

Regressions are used to analyze the impact of being blonde on gross sales and earned tipping percentage based on sales. Both are meticulously recoded by Chickie's and Pete's, and provided to servers at the end of their shifts. Table 2 presents regression results.

It appears that gross sales is a variable unaffected by any of the server characteristics, but strongly associated with time and day of the shift.

As the attention is shifted to tip earnings, being blonde shows a 1.37 percentage point increase in received tip percentage. Although not reported separately, this estimates that the tip earning is on average increased from 17.26% to 18.63%, or roughly $14 to $15 per shift. [6]

In contrast, when the single naturally blonde waitress dyed her hair brunette in a separate analysis, her tip earning percentage was lowered by .4 percentage point at 10% significant level.

Thus waitresses under the study significantly benefited financially by simply dying their hair color at comparatively negligible cost. While being blondes does not seem to promote additional sales for the restaurants, it improves the economic benefit of servers, which may aid restaurant businesses indirectly. The finding has important economic, managerial, and labor market implications.

Other findings include that servers' age matters. For each year older, the tip percentage point is increased by 0.1%, and the result is significant at 1% level. Day/Night shifts do not make statistical differences in tip percentage. However because the sales volume for night shifts is on average 47% higher than that of day shifts, the tip earnings in dollar amount for night shift is consequently 45% higher on average. Weekdays also matter, although in a way somewhat unexpected: the average tipping is 0.7 percentage point lower during Fridays and Saturdays. The highest percentage is recorded as 30.9% on a Tues; and the lowest being 11.6% on a Friday. However, because the sale volume on Fridays and Saturdays is 48% higher, the average tip earnings in dollar amount on those days are still more than 40% higher.

None of the other factors, such as education level, work experience, and personality, seems to have any bearings on the tip earnings in the study.

CONCLUSIONS

The findings are solidified by the fact that subjects simply changed their hair colors during the 60-day study period, while all other characteristics such as attractiveness, weight, height, intelligence, experience and many other factors remain virtually the same.

The outcomes were further cemented via the polling data from various media sources who publicized the study on a single question: Do you tip more if the waitress is blonde? Out of 862 total responses, 544 or 63 percent said yes. That is, the null that being blonde does not benefit from more generous tipping is resoundingly rejected at 1% level.

REFERENCES

Case, A., & Paxson, C. (2008). Stature and status: height, ability, and labor market outcomes. *Journal of Political Economy*, 116, 499–532.

Cawley, J. (2004). The impact of obesity on wages. *Journal of Human Resource*, 39, 452–474.

[6] Detailed information on dollar amount is withheld, as indicated in recruitment flyers.

Hamermesh, D., & Biddle, J. (1994). Beauty and the labor market. *American Economic Review*, 84, 1174–1194.

Johnston, D. (2010). Physical appearance and wages: Do blondes have more fun*? Economic Letters*, 108, 10–12.

Kyle, D., & Mahler, H. (1996). The effects of hair color and cosmetic use on perceptions of a female's ability. *Psychology of Women Quarterly*, 20, 447–455.

Miller, G., Tyber, J. & Jordan, B. (2007). Ovulatory cycle effects on tip earnings by lap dancers: economic evidence for human estrus? *Evolution and Human Behavior*, 28, 375-381.

Mobius, M., & Rosenblatt, T. (2006). Why beauty matters. *American Economic Review*, 96, 222–235.

Persico, N., Postlewaite, A., & Silverman, D. (2004). The effect of adolescent experience on labor market outcomes: the case of height. *Journal of Political Economy*,112, 1019–1053.

Price, M. (2008). Fund-raising success and a solicitor's beauty capital: do blondes raise more funds? *Economic Letters*, 100, 351–354.

Snee, R. (1974). Graphical display of two-way contingency tables. *The American Statistician*, 28, 9–12.

Table 1 Descriptive Statistics of Servers

Sample = 282 Shifts	Mean	SD	Minimum	Maximum
Coordinating Eye Colors (Blue, Green, or Hazel)	.68	.47	0.00	1.00
Age	26.38	9.04	21.00	47.00
Height (feet and inches)	5’4.3”	1.71”	5’3”	5.8”
Body Mass Index	22.31	1.88	20.00	25.00
Higher Education (years)	2.35	1.17	0.00	4.00
Grade Point Average	3.11	.58	2.33	3.88
Seasoned Work Experience as a Server (> 3 years)	.24	.43	0.00	1.00
Night Shift Dummy	.73	.44	0.00	1.00
Weekend Shift Dummy	.31	.46	0.00	1.00
Length of shift (hours)	7.19	2.80	4.50	12.00
Number of tables per shift	28.73	16.54	9.00	77.00
Single and Available	.38	.49	0.00	1.00
Extrovert	.36	.48	0.00	1.00

Table 2. The Effects of Blondeness on Log Tip Earnings and Gross Sales

	Tip Earnings (% of Sales)	Gross Sales per Work Shift (log)
Being Blonde	1.37***	.04
	(.51)	(.13)
Coordinating Eye Colors	.15	.02
	(.42)	(.08)
Normalized Age	.10***	.00
	(.03)	(.02)
Normalized Height	.07	.12
	(.09)	(.22)
Normalized Body Mass Index	.05	.01
	(.03)	(.02)
Higher Education (years)	.00	.00
	(.04)	(.02)
Grade Point Average	.00	.00
	(.01)	(.05)
Seasoned Server	.40*	.10
	(.23)	(.17)
Night Shift Dummy	-.26	.47***
	(.39)	(.18)
Weekend Shift Dummy	-.69**	.48***
	(.33)	(.20)
Single and Available	.24	.03
	(.27)	(.12)
Extrovert	.22	.12
	(.31)	(.11)

***, **, and * indicate significance at 1%, 5%, and 10% respectively. Coefficients for Gross Sales per Work Shift regression indicate sales change in percentages. Age, height, and Body Mass Index were normalized by subtracting their respective averages from the raw numbers. Also included but not show are constants, length of the shift, and total number of tables per shift. The latter two factors do not have impact on tip earning percentage, although they naturally have strong positive impact on gross sales. Various interaction items between individual characteristics and being blonde are not reported as none are significant at 5% level.