

Money isn't everything: job satisfaction, nonmonetary job rewards, and sub-baccalaureate credentials

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ABSTRACT

Some researchers and reformers have raised doubts about whether sub-BA credentials lead to good jobs. This study finds that young working adults (ages 25-32) report that nonmonetary rewards such as autonomy and career relevance are more strongly related to job satisfaction than earnings is. Controlling for background differences, young adults with BA and graduate degrees have the greatest nonmonetary job rewards, followed by those with associate's degrees and certificate credentials, all of whom have significantly greater nonmonetary job rewards than high school graduates. Students who attend college without earning credentials report few job rewards, and no better autonomy and career-relevance than high school graduates. Parents, advisors, and policymakers should inform students of nonmonetary job rewards they likely will value as young adult workers in addition to earnings, and which credentials lead to these job rewards.

Keywords: college payoffs, sub-baccalaureate credentials, associate's degrees, certificates, nonmonetary rewards

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INTRODUCTION

The United States has embarked on a new educational policy of College-for-All that vastly expands college opportunities. Policymakers declare that all youth should attend college to improve their economic opportunities and meet labor market demands. American society offers a variety of educational credentials that may meet this challenge. Youth may not be fully informed of their credential choices and the completion rates. Researchers find that despite youths' increased opportunity to go to college, they often have poor information and misconceptions that lead to serious disappointments (Rosenbaum, et al. 2015; Deil-Amen and DeLuca. 2010).

Responding to students' difficulty obtaining information for their college choices, President Obama promoted a "college scorecard" in his 2013 State of the Union address that parents and students can use to compare schools based on "where you can get the most bang for your educational buck." The scorecard provides key information to students, such as college graduation rate, employment rate, and average earnings in the year after graduation.

This information may be useful, but the focus on earnings excludes job dimensions that signal jobs with long-term earnings potential. Jobs differ in many respects besides earnings. Nonmonetary job rewards, such as career-relatedness, benefits, and working conditions, may indicate jobs with greater long-term potential than earnings. This study examines whether various nonmonetary rewards are more strongly related to job satisfaction than earnings, based on analysis of the National Longitudinal Study of Adolescent and Adult Health. (Add Health).

Educators' usual focus on bachelor's degrees (hereafter, BA) may also be too narrow. Many reformers believe that all students should pursue BA degrees (Kahlenberg, 2011). Some contend that the BA degree is "the only sure route out of poverty" (Kati Haycock quoted in Carr, 2013), raising doubts about the value of sub-BA credentials. Educators encourage nearly all students to have BA plans, reformers have focused on this goal, and public service ads proclaim that BA degrees offer \$1 million payoffs over a lifetime. Students have listened, and BA plans have increased over recent decades (Schneider and Stevenson 1999). In 2004, 80% of high school graduates have BA plans (authors' calculations from ELS).

In contrast with the BA, sub-BA credentials such as associate's degrees [hereafter, AAs] and certificates, are rarely mentioned and poorly understood. Sub-BA credentials had small earnings payoffs in the 1990s, but earnings payoffs have grown larger since then (Dougherty, 1994; Grubb 1996, 2002, Carnevale, et al. 2012). Doubts remain about whether sub-BA credentials lead to good jobs and offer career preparation (Brown, 2007; Zasloff and Steckel, 2014). Some popular stereotypes assert that sub-BA jobs offer repetitive, low-autonomy jobs and poor future careers; but, as Kerckhoff and Bell (1998) point out, research often ignores them. This study compares the nonmonetary rewards that are associated with various college credentials, college attendance without credentials, and high school diplomas.

This paper examines whether young adult workers view nonmonetary job rewards as satisfying and, if so, which college credentials lead to jobs with these nonmonetary job rewards. National policy supposedly considers job outcomes, but focuses narrowly on earnings. We examine what can be gained from considering non-monetary job rewards as well.

LITERATURE REVIEW

Growing Importance of Sub-BA Credentials

Formerly a small part of post-secondary education, community colleges now enroll 45% of undergraduates (AACC 2015). The growth in community college enrollment is primarily due to disadvantaged youth, who now enroll in college despite poor grades or resources that would likely have prevented their college access in earlier generations (Settersten and Ray 2010). Community colleges are the primary institutions conferring sub-BA credentials, which have become more frequent than BAs. In 2011, 987,715 certificates, 1,017,538 associate degrees, and 1,791,046 BAs were awarded (Kena et al. 2014, p. 218). That amounts to just over 2 million graduates who received sub-BA credentials in a year. The rate of certificates and associate degrees awarded has increased almost twice as much as for BAs since 2000. From 2000 to 2012, the number of BA graduates increased by 44.0%, certificate graduates increased by 78.8%, and associate degree graduates increased by 75.8% (Ibid.).

Community colleges confer two kinds of sub-BA credentials, certificates (intended to be completed in 1 year) and AA degrees (2 years). Mid-skill jobs often explicitly require these credentials. Employees who can fill mid-skill jobs are in high demand (e.g., radiography, sonography, computer networking, web master, CAD/CAM, paralegal, and many others, cf. Holzer, Lane, Rosenblum, Andersson. 2011). Even during a severe recession when many BAs were unemployed, employers reported that mid-skill jobs went unfilled because BA-trained workers lacked the right skills to fill new and growing demand in mid-skill jobs. This was especially true in allied health fields, information technology, and business (Acemoglu and Autor, 2010; Holzer, et al. 2011; IBHE, 2009; Levy and Murnane, 2004; Manufacturing Institute, 2011; Manpower-Group. 2011). BA graduates have more years of education than sub-BA graduates, but they often lack the qualifications for these jobs. Certificate and AA degree programs provide the skills required for these jobs, and these credentials can be earned more quickly than BAs.

Sub-BA graduates earn less than bachelor's degree graduates on average, but they have significant earnings payoffs compared to high school graduates (Belfield and Bailey 2011; Grubb, 2002: 307; Jacobson and Mokher 2009). However, it is not known if these shorter credentials lead to jobs that are less desirable in other ways, such as working conditions and career futures (Grubb, 2002). This paper examines the nonmonetary job rewards associated with sub-BA degrees. We find that sub-BA degrees lead to a robust array of non-monetary job rewards, often similar to those of BA degrees.

Limitations of Earnings

Research often looks at earnings outcomes, and policymakers now propose rating colleges on earnings outcomes.¹ The rationale behind this proposed policy is that students often take out student loans to attend college without knowledge about whether their post-college jobs will enable them to repay their loans. If graduates' earnings are not better than the earnings of high school graduates, students should be warned, and colleges should be sanctioned. Earnings

¹ Current federal educational finance policy addresses earnings indirectly by penalizing colleges with high rates of default on federal student loans.

are important, especially with the importance of student loans in college finance, but an earnings-centered perspective can be criticized on several grounds.

First, economic theory suggests that some individuals will sacrifice pay to get better training, especially in early jobs (Doeringer and Piore, 1971; Piore, 2002; Holzer et al. 2011; Stern 1978, 1982). Some qualitative research indicates that young employees are aware of this trade-off (cite withheld). Young adults' low-paid jobs may offer better training and long-term career outcomes than higher-paid jobs.

Second, some colleges help graduates obtain career-relevant jobs, and even discourage highly-paid jobs (Rosenbaum, et al., 2006). College occupational faculty report that they advise graduates to look for career-relevant jobs that use their skills and provide job advancement. They also advise graduates to seek autonomy and responsibility that will develop their skills. Some occupational faculty discourage some highly-paid jobs, such as dangerous security jobs, strenuous warehouse jobs, and dead-end jobs. Graduates who take such jobs may see early earnings advantages disappear 10-20 years later, particularly if they are injured or if they are less willing to tolerate those job conditions as they get older.

Earnings may not correspond to whether or not a job is "good" or satisfying to the individual who holds it. This paper extends prior research to examine whether young adults' ratings of various non-monetary job rewards are more related to job satisfaction than earnings and identify which credentials lead to better nonmonetary rewards.

Job Satisfaction and Nonmonetary Job Rewards

Job satisfaction is the usual indicator of job quality, and research has found a wide array of nonmonetary job rewards related to job satisfaction. In the earliest research, organizational psychology considers job satisfaction the usual indicator of job quality. It is related to five core job characteristics: skill variety, task identity, task significance, autonomy, and task feedback (Hackman and Oldham, 1975). Surveys of national samples indicate that job satisfaction is strongly associated with similar job conditions—autonomy and occupational self-direction, job pressures, organizational structure and position, job uncertainties, and rewards and protections (Clark, 2005; Davis et al. 2009; Miller, 1980). A recent review concludes that a good job provides relatively high earnings, potential for earnings and career growth, adequate fringe benefits, autonomy (self-direction over work), flexibility to address non-work needs, and relatively secure jobs (Kalleberg, 2011, pp. 7–9).

Using national survey data, Jencks, Perman, and Rainwater (1988) have found that adults' job satisfaction is less related to earnings than to non-monetary job rewards, such as autonomy and career-relevance. They found that the effect of these non-monetary job conditions on job desirability is twice that of earnings, in a study of adults of all ages (Ibid.). More recent research has found comparable findings (Oreopoulos and Salvanes 2011). However, diverse-aged samples like these include individuals who started their careers in different labor market conditions that no longer exist, so they may not be informative to current students.

The literature on job quality has placed considerable confidence on subjective ratings. Despite researchers' concerns about respondents' subjective judgments of career relevance, objective indicators require researchers to make coding judgments that raise other doubts (Davis, Smith, and Marsden, 2009). Many job attributes that individuals value are hard to measure objectively, and individuals' subjective ratings (including job satisfaction) provide indicators that are "closely related to other, more complicated objective measures" (Clark et al. 2008). We

concur with researchers who have concluded that subjective ratings are valuable indicators about aspects of jobs that are otherwise difficult to measure, and subjective ratings are the best indication of individuals' own reactions to their jobs.

Autonomy and Career Relevance

As noted, prior research has emphasized two job rewards: autonomy and career relevance. Prior research leads us to expect that these job rewards will have strong associations with job satisfaction, if current young adults respond like older adult samples in prior decades. We discuss this literature on the importance of these two job rewards.

Autonomy refers to how much control one has over daily work life. Theorists consider autonomy the central feature of middle-class jobs because these jobs have decision-making authority over how the job is done and allow independence (Goldthorpe, 1980; Kohn and Schooler, 1982). Similarly, Clark (2005) identifies being allowed to work independently as one of the most important job qualities. Perhaps the largest impact is noted by Marmot, who finds that autonomy strongly predicts health outcomes: "Autonomy—how much control you have over your own life...plays a big part in producing the social gradient in health" (Marmot, 2004: p. 2).

Autonomy may be important at all ages, but it may have special importance for young adults. Autonomy provides opportunities to show judgement and responsibility, attributes that have been linked to career advancement (Clark, 2005). Using the 1988–2000 NELS data, Bradley, Taylor, and Nguyen (2001) found that perceived autonomy predicted 5 dimensions of job satisfaction: satisfaction with pay, satisfaction with fringe benefits, satisfaction with promotion prospects, satisfaction with job security, and satisfaction with importance of work for young adults.

Career-relevance – how closely one's job is related to one's desired future career-- is also important to young adults. Parents, counselors, and mass media tell students that attending college will yield a career, not just a job. Young adults seek jobs that are part of a career, but they are often confined to jobs that offer no opportunities for career development or advancement (Borman, 1991; Moss and Tilly, 2001; Holzer, et al., 2011; Silva, 2013).

Autonomy and career-relevance may be particularly important for mid-level jobs and the sub-BA degrees that prepare students for these jobs. Some researchers assert that increased skill requirements in the labor market may have led to a greater emphasis on career-relevant skills (Piore, 2002). According to this view, many mid-skill jobs offer increased training, challenge, expertise, autonomy and career advancement over time (Barley, 1996). Sub-BA credentials are required for diverse mid-skill jobs: medical assistants, paralegals, airplane mechanics, and technician jobs in manufacturing, computer networking, and medical fields. Research has not examined whether sub-BA credentials lead to autonomy and career-relevance for recent graduates. Some have criticized sub-BA credentials for offering narrow training and limited careers (Brint and Karabel, 1989), and others have ignored them while advocating BA degrees (Carr, 2013). We will examine whether sub-BA credentials lead to jobs that offer autonomy and career relevance.

Our study contributes to existing research in two ways. First, we examine how young adults' job satisfaction is related to some of the monetary and nonmonetary job rewards emphasized in organizational behavior research. We examine autonomy, career relevance, and many others. Most studies analyze adults of all ages, many of whom established their careers in very different labor market conditions that don't exist today. Results from older adults may not

inform current students of what they can expect. These issues are rarely studied for young adults, for the post-2007 labor market, or with a focus on career-relevant jobs. This chapter examines how young adults (ages 25-32) rate their jobs on various dimensions, and which dimensions are most closely related to their overall job satisfaction.

Second, we examine the nonmonetary rewards of jobs held by young adults with the following educational credentials: graduate degrees, BA, AA, and certificates. Prior studies have focused mostly on credentials' earnings outcomes. The few prior studies on nonmonetary rewards sometimes control for education, but they rarely report how each educational credential is related to nonmonetary job rewards. Education may not merely be a single linear scale, where each added year of education gives the same increment to all job rewards. Rather, different degrees may be associated with different nonmonetary job rewards. Individuals make choices about which college credential to pursue based on anticipated payoffs, yet little is known about nonmonetary job rewards associated with different credentials.

We examine the non-monetary job rewards associated with various degrees and whether sub-BA credentials lead to some of the same nonmonetary job rewards as BAs. If young adults value nonmonetary rewards, but certificates or associate's degrees don't lead to jobs with those rewards, then high earnings payoffs may not be sufficient to make such degrees desirable. Regardless of earnings, sub-BA credentials may be valued if they lead to jobs with good nonmonetary rewards. Sub-BA credentials may offer good job conditions that today's college students and policymakers should consider, beyond earnings.

METHODS

We analyze the National Longitudinal Study of Adolescent Health (Add Health) data, a nationally representative sample of students who were grades 7–12 in 1995.² The sample was surveyed in 4 waves of in-home interviews in 1995, 1996, 2001, and 2008, with an audio computer-assisted self-interview component for sensitive or deviant behaviors. Pre-college variables were measured in the 1995 in-home interview, when the sample was ages 12–19. Educational status, workplace conditions, and health outcomes were measured in 2008, when the sample was ages 25–32. The 2008 survey was the first to ask about employment quality beyond general job satisfaction. aa

The sample consists of 10,582 respondents with high school diplomas employed full-time in one job in 2008: 43% had no additional credential beyond a high school diploma, 9% had a community college certificate, 10% had an AA, 27% had a BA, and 11% had more than a BA. High school equivalency degree holders were excluded from the sample because the credential seems to be stigmatized by employers and is associated with lower earnings (Heckman and Rubinstein 2001).

² This research uses data from Add Health, a program project directed by Kathleen Mullan Harris and designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris at the University of North Carolina at Chapel Hill, and funded by grant P01-HD31921 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, with cooperative funding from 23 other federal agencies and foundations. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Information on how to obtain the Add Health data files is available on the Add Health website (<http://www.cpc.unc.edu/addhealth>). No direct support was received from grant P01-HD31921 for this analysis.

Measures

Add Health asked participants about properties of their current job in 2008 that we have coded as 17 variables in four categories: career relevance, benefits, working conditions, and job quality. Career-relevance was coded as three binary variables: whether the job is related to a career, prepares for a career, or is part of a career. Benefits includes whether the job offers health benefits, retirement benefits, and vacation benefits. Working conditions includes whether jobs were day shifts, irregular hours, physically strenuous, desk jobs, repetitive, unstable (number of times fired), supervisory, or supervisory of managers. Job quality includes status, autonomy, variety, and job satisfaction.

Add Health asked about three fringe benefits: health, vacation, and retirement. These variables are strongly correlated, but other job dimensions are measured by a single item and aren't highly correlated. The creation of factors for fringe benefits might make benefits better measured but would reduce comparability with the other dimensions. The three items for career relevance are strongly correlated because they came from a single item with four non-ordered categorical responses. Job rewards are all measured by individual items.

Analysis

Data analysis used Stata SE 11.2. For binary nonmonetary job rewards (the first 13 variables), we conducted regressions with each nonmonetary job reward using a Poisson working model. Poisson regression yields an incidence rate ratio (IRR), which can be interpreted as a relative risk. The relative risks are placed in rows corresponding to each education credential. For continuous outcome variables, we used linear regression and report regression coefficients corresponding to each educational credential.

Logistic regression is often used for dichotomous outcomes, irrespective of how common the outcome is. For rare outcomes, the odds ratios from logistic regression approximate the relative risk. For non-rare outcomes such as these, estimators from logistic regression are biased and artificially inflated. We estimated relative risks using a Poisson working model because Poisson regression yields consistent and unbiased estimators (Cummings 2009, Lumley et al. 2006, McNutt et al. 2003). The relative risks obtained from Poisson regression are also more easily interpreted than the ratios obtained from logistic regression.

FINDINGS

The Dimensions of a Good Job

Good jobs are sometimes defined as above median on some desired attribute. By definition, about half of young adults have jobs with above the median salary (because the median earnings is \$30,000 a year, and many individuals report that amount, 46.7% have above median earnings.) If we expand the definition of "good jobs" to be either above-median earnings or above-median on the scale of being "part of a career" (which we call career-relevant jobs), then 59.9% are above median on one of these two dimensions. Adding a third dimension, autonomy, we see that 81.5% of individuals are above-median on one of these three dimensions.

The point is obvious, but the numbers are still impressive. Over 80% of young working adults have jobs that are “good” on at least one of these three dimensions.

Associations among Job Rewards

Inspecting the correlation matrix for all job rewards (not shown), there are very few substantial correlations among young adults' ratings of their jobs. The three fringe benefits are strongly correlated ($r=0.68-0.72$), and ratings on career relatedness are mildly correlated because these are binary variables from a single survey item ($r=0.37-0.48$). Otherwise, the correlation between other job rewards are almost all smaller than 0.15. Apparently young adults see these various ratings as separate, rather than seeing “good jobs” as positive on all dimensions and “bad jobs” as negative on all dimensions.

Associations between Job Satisfaction and Job Rewards

The usual analyses implicitly assume that earnings is either the only or the most important dimension of good jobs. We find that other dimensions are more or equally as important. 6 out of the 17 variables we studied were correlated with job satisfaction ($r=0.10$ or higher). Those 6 variables were earnings, perceived SES, autonomy, repetitiveness, job related to career goal, and job is part of a career (“career-relevant,” Table 1a). In addition, these correlations do not change very much within different levels of education credentials (Table 1a). These findings indicate that a “good job” is multidimensional and relies on several factors, aligning with previous literature.

Consistent with prior literature, we find that career-relevance and autonomy are consistently most highly correlated with job satisfaction. These correlations persist at comparable levels within education categories. The relationships between job rewards and satisfaction are not mediated by education, even though education is associated with many job rewards, as we show below.

In a regression of job rewards and background variables on job satisfaction (Table 1b), we find that, with the exception of earnings, five of the six job rewards that correlate with job satisfaction also have significant coefficients, after extensive controls.

Nonmonetary Job Reward Payoffs for each Education Credential

We now analyze whether different levels of education lead to different non-monetary rewards. We examine 5 education groups: non-graduates (students who attended college without earning a credential), certificates, associate’s degrees, bachelor’s degrees, and master’s degrees or higher. We find that all credentials lead to many non-monetary rewards, compared to high school graduates, but non-graduates have only a few nonmonetary rewards and at modest levels.

Table 2 shows how various college credentials are related to each job reward, after many controls (listed in footnote to table). For the binary (first 13) job rewards, we used regression and we report IRR in rows for each education credential. The final 4 used linear regression and report regression coefficients.

Non-graduates Payoffs: Some College but No Credential

Compared to high school graduates, non-graduates report a limited number of rewards. In terms of career-related variables, they are slightly more likely to report that their job offers career preparation, but say their job is less related to their career. Both relationships are weak and confidence intervals of coefficients mostly don't overlap (preparation slightly overlaps) between non-graduates and certificates. Non-graduates were more likely than high school graduates to report receiving health, retirement, and vacation benefits and some better working conditions (desk jobs, perceived status, supervising others, less likely to work hard physically). Non-graduates did not differ in autonomy or repetitive work from high school graduates.

Non-graduates had some nonmonetary job rewards, but they had fewer rewards and generally at more modest levels than individuals with any college degree. Moreover, non-graduates were less likely to report having career-related jobs, and did not differ in autonomy and career relevance, which are the items most highly correlated with job satisfaction. Attending college without earning a credential yields few benefits.

Certificates Payoffs

Compared to high school graduates, individuals whose highest credential is a certificate have significantly higher levels of career-related variables, autonomy, and benefits, but do not differ from high school graduates for some working conditions.

Certificate holders are more likely to have jobs that prepare them for a career, career-relevant jobs, and jobs related to careers. Certificates also predict greater job autonomy, variety, and job status.

Certificate holders are more likely to be offered benefits than high school graduates. Certificate holders are also more likely than high school graduates to have desk jobs, less physical labor, and less job instability (number times fired), but their jobs are no better on day shift and irregular hours.

Overall, certificate holders are more likely to have some job rewards than high school graduates – particularly in autonomy, variety and career-related variables – which are job rewards that non-graduates do not get. However, certificate holders lack the across-the-board reward increases that come with associate's, bachelor's, and graduate degrees, as shown below.

AA Payoffs

AA graduates report more of almost all job rewards than high school graduates, with increases in career-related, benefits, working conditions, and quality. Compared with high school graduates, AA graduates are more likely to have jobs offering career preparation and much more likely to have career-relevant jobs, but are not less likely to work in jobs unrelated to their career. They are also more likely to receive vacation, health, and retirement benefits. In addition, they show increases in working conditions relative to high school graduates (more likely to have day shifts and desk jobs and less likely to have strenuous work). They also get more job autonomy, variety (less repetitive), job satisfaction, and job status.

In sum, AA graduates have significantly higher payoffs than high school graduates on most job rewards. They also enjoy a wider variety of job rewards than certificate holders, and are

generally on par with bachelor's degree holders, as described below.

BA Payoffs

Like associate's degrees, bachelor's degree graduates report more of almost all non-monetary job rewards than high school graduates, across all categories of relation to career, benefits, working conditions, and quality. Compared with high school graduates, BA graduates are more likely to report that their job is preparation for a career, that their job is part of a career, and that their job is related to their career. They are also more likely to be offered each of the benefits. In addition, they have increased likelihood of nearly all desirable working conditions (but not supervising others or supervising managers, which no credential predicts). Finally, they also report higher job quality. Bachelor's degree holders report more job autonomy, variety, job satisfaction, and status.

Overall, bachelor's degree graduates report increased likelihood of almost all rewards compared to high school graduates. The rewards they get are more wide-ranging than "some college" and certificates. However, associate's degree graduates have nearly all the same job rewards as BAs, sometimes at about the same magnitude.

MA and Above Payoffs

Like associate's and bachelor's degree holders, graduate degree holders are better off in almost all respects than high school graduates. In addition, most coefficients are as large or larger than those for BA's. In terms of relation to career, graduate degree holders are more likely to report that their job is part of their career (compared to high school graduates) and that their job is related to their career. Curiously, however, they do not differ from high school graduates in whether their job prepares them for their career (perhaps because their job is already part of their career).

Graduate degree holders also get all the working conditions payoffs that bachelor's degrees get. Compared with high school graduates, people with graduate degrees are more likely to be currently employed, day shifts, and desk jobs; they are less likely to have strenuous work. The one exception: graduate degrees don't get significantly lower irregular hours than high school graduates (perhaps because of health field demands). Graduate degree holders also report more job autonomy, variety, job satisfaction, and status.

Overall, graduate degree holders mostly have the same rewards that associate's and bachelor's degree graduates get. However, they often have larger coefficients, indicating higher levels or more widely received rewards.

Do Sub-BA Credentials Lead to Higher Degrees?

Some researchers worry that by encouraging sub-BA degrees, we are discouraging future credential attainment and "cooling out" students' aspirations, as Clark (1960) found in a prior generation. We find that this is not the case. In fact, sub-BA degrees may "warm up" students' aspirations. We find that many individuals with sub-BA credentials are likely to pursue higher degrees, and indeed many attain them.

We find that many students at sub-BA degree levels expect their credential attainment may increase in the future. Compared with high school graduates, certificate holders are 22%

more likely to say that an AA is their desired educational level, and 13% more likely to say that a BA is their desired educational level. Similarly, compared with high school graduates, AA graduates are 48% more likely to be currently enrolled in school, and 42% more likely to aspire to a BA. These results are consistent with prior research that finds that 25% of certificate holders eventually attain a higher credential (Carnevale, et al., 2011) and that 47% of BAs have associate degrees (Rosenbaum, 2012). Sub-BA credentials are not seen as dead-ends. Although we analyzed current credentials, many individuals with sub-BA credentials aspire to higher degrees, and are enrolled currently, so these individuals may have higher credentials in future years.

CONCLUSION AND POLICY IMPLICATIONS

This paper discusses two issues that have been largely ignored by the education policy community: non-monetary job rewards as measures of success, and sub-BA degrees as desirable credentials. Our analyses demonstrate the importance of both non-monetary rewards and sub-BA degrees. The results suggest that sub-BA credentials may be undervalued because policymakers ignore the non-monetary payoffs from these credentials. We find that job satisfaction is strongly associated with several nonmonetary job rewards that are more strongly associated with job satisfaction than earnings, especially autonomy and career relevance.

These nonmonetary job rewards could supplement earnings measures in crucial ways. Some job placement experts warn students that high-paid jobs often have serious disadvantages (cite withheld). Some economists warn that "an overreliance on quantitative- and qualification-based measures has neglected qualitative evidence" (Oreopoulos and Salvanes 2011: 180). Few students hear this message because most community colleges lack job placement staff, and counselors serve 1000-student caseloads. If we could inform students in some way – for example, if the college scorecard added nonmonetary job rewards -- students would be more aware of these outcomes that they will likely value when they are older.

. There are several ways to add quantitative or qualitative measures of these job rewards to college information sources. Bureau of Labor Statistics descriptions often indicate career opportunities and undesirable working conditions, and O*NET indicates skill level and other indicators. Graduates' ratings on follow-up surveys might be used. Research is needed to determine which indicators are more helpful to students' choices.

Besides providing richer information for students' college choices, job rewards may help students choose credentials. Instead of only considering BA degrees because of their well-advertised earnings payoffs, students should also realize that certificates and AA degrees have significant earnings payoffs and nonmonetary job rewards. Certificates are nearly as strongly associated with autonomy and career-relevance as BAs and AAs. AAs are associated with nearly all of the job rewards as BAs, although often with somewhat weaker relationships.

To its credit, the college scorecard acknowledges the value of certificates and AA degrees, and presents them as options, yet its focus on average earnings may distract students from considering sub-BA credentials. Moreover, the scorecard doesn't help students make strategies to reduce risks. For students who begin in community colleges, BAs often take six or more years, and most students with BA plans fail to get a degree (Rosenbaum, et al. 2015). In contrast, even students who seek eventual BA degrees might reduce their risks of getting no credential and no payoff by seeking sub-BAs as interim credentials. Students need to be aware of strategies to combine credentials, and they need to consider the nonmonetary job rewards associated with each credential. A one-year certificate could improve autonomy and career

relevance, even while students continue pursuing BA degrees (as many do, Carnevale, et al. 2012).

This study's findings challenge the traditional narrow focus on earnings payoffs for young adults. Many jobs before age 30 are "starter jobs," which offer training and challenging experience, but may sacrifice earnings (Murnane and Levy, 1996). In contrast, some high-paid jobs may not provide a good start or even predict high earnings in mid-career. Starter jobs are important because they provide training, job experiences, and career opportunities (Piore, 2002). Just as prior research found for all adults (Oreopoulos and Salvanes 2011; Jencks et al., 1988), these findings suggest that young working adults are aware of the importance of non-monetary job rewards. However, college students may not be aware of these job rewards and the sub-BA credentials that lead to them. This leads them to pursue earnings and not consider whether jobs offer career preparation and autonomy.

This paper also furthers research on the health implications of sub-BA credentials. As prior research has shown, adults with certificates and AA degrees have better health outcomes than high school graduates (Belfield and Bailey, 2011; Marmot, 2004; Rosenbaum, 2011b). These findings build on that research by indicating specific job conditions that are associated with these credentials--autonomy, variety, status, and career-relevance. These job conditions may mediate the job effect on health. In addition, certificates, AAs and BA degrees are associated with less physically demanding jobs, which may lead to fewer work injuries and other adverse health consequences (Ibid.).

These analyses may also understate payoffs if students get higher credentials in the future. Although we analyze their current credentials, many intend to get higher credentials, and, if so, they may get further nonmonetary job rewards.

Most important, these findings broaden our view of valuable outcomes beyond earnings and a single credential (BA). Economic theory clearly warns about the risks of placing excessive emphasis on a single outcome. When everyone pursues a single goal (BA or high earnings), one must worry about a "bubble mentality," as well as shortages of people getting other credentials and seeking other important job rewards. Policy that narrowly focuses on BA degrees and earnings outcomes may lead too many people to pursue these goals, while such policy ignores many other desirable options, underestimates successes, and may distort college advising and priorities.

These analyses expand the possibilities for individuals to get jobs that are above average on some dimension. Moreover, just as research found for working adults, we find these various nonmonetary job rewards are related to job satisfaction for these young adult workers. Researchers can help policymakers learn from individuals' perspectives, and help young students anticipate nonmonetary job rewards they will value in the future when they enter the labor market. Moreover, besides conferring short-term job rewards, certificates and AA degrees can lead to further degrees. Policy could help colleges improve degree ladders (stackable credentials) to help students advance further.

At a time when the US Department of Education is considering making colleges accountable for employment outcomes, these findings raise serious concerns. Students rarely know about nonmonetary job rewards and their career opportunities, and it would be unfortunate if federal policy pushed colleges and students to focus narrowly on earnings at the expense of career advancement.

American education is rightly proud of offering choice and expanded opportunity, but it does a poor job at informing choices. The college scorecard could provide crucial information if

it avoids a narrow emphasis on a single outcome. If used as a device for accountability sanctions, the college scorecard risks creating incentives for colleges to steer graduates into high-paid early jobs, some of which may be disagreeable, dead-end or dangerous. As a means of providing information, the college scorecard could help students realize that they can also be considering diverse credentials and diverse job rewards.

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APPENDIX

Table 1a: Correlation between Job Satisfaction and Job Rewards.

Job Rewards	Correlation with job satisfaction Highest degree attained by 2008					
	HS Certificate	AA	BA	post-BA	All	
Personal earnings	0.11	0.17	0.07	0.10	0.02	0.10
Perceived status	0.21	0.20	0.22	0.22	0.11	0.21
Job autonomy	0.29	0.37	0.32	0.33	0.33	0.32
Job not repetitive	0.16	0.14	0.14	0.19	0.11	0.17
Job related to career goal	0.31	0.32	0.36	0.35	0.28	0.33
Job part of career (career-relevant)	0.35	0.36	0.35	0.38	0.37	0.37

n= (4470) (938) (1058) (2838) (1155) (10582)

Variables that correlate with job satisfaction at 0.10 or higher.

Table 1b Regression predicting Job Satisfaction from Job Rewards and Background Variables

Job reward	Coefficient	95% confidence interval	P-value
Part of career	0.104	(0.096, 0.112)	<0.001
Unrelated to career	-0.077	(-0.086, -0.068)	<0.001
Autonomy	0.054	(0.051, 0.058)	<0.001
Perceived status	0.014	(0.012, 0.016)	<0.001
Repetitive	-0.046	(-0.057, -0.034)	<0.001
Earnings	-0.0003	(-0.0001, 0.0004)	0.39

Control variables: demographics (race/ethnicity (black, Latino, Asian), gender); educational factors (grade average, test score, grades not reported by respondent); acculturation (nativity, parent nativity, speak English versus another language at home);and parent’s socioeconomic status (parent’s self-reported educational level, household income, and whether they have enough money to pay bills.)

Table 2: Multivariate Non-Monetary Regression Results (n=10582)

Columns correspond to educational levels, and rows correspond to employment outcomes. The entries correspond to the multivariate regression coefficient predicting the outcome from the educational level.

	Some College	Certificate	Associate's Degree	Bachelor's Degree	Graduate Degree
<i>Poisson Regression</i>					
Job Relates to Career					
Unrelated	1.11 (1.00, 1.22)*	0.64 (0.54, 0.77)*****	0.93 (0.81, 1.08)	0.59 (0.51, 0.67)*****	0.33 (0.27, 0.42)*****
Preparation	1.15 (1.02, 1.29)*	1.45 (1.27, 1.65)*****	1.17 (1.00, 1.37)*	1.27 (1.10, 1.45)***	1.23 (1.00, 1.50)*
Part of Career	1.07 (0.97, 1.18)	1.49 (1.30, 1.70)*****	1.40 (1.26, 1.57)*****	1.64 (1.46, 1.84)*****	1.96 (1.74, 2.21)*****
Benefits Offered					
Health Benefits	1.24 (1.17, 1.31)*****	1.22 (1.14, 1.30)*****	1.36 (1.27, 1.46)*****	1.42 (1.34, 1.51)*****	1.45 (1.36, 1.56)*****
Retirement Benefits	1.24 (1.16, 1.32)*****	1.24 (1.15, 1.35)*****	1.44 (1.33, 1.56)*****	1.49 (1.39, 1.59)*****	1.52 (1.41, 1.64)*****
Vacation Benefits	1.20 (1.12, 1.29)*****	1.18 (1.09, 1.26)*****	1.35(1.25, 1.45)*****	1.36 (1.26, 1.46)*****	1.39 (1.29, 1.50)*****
Job Conditions					
Day Shift	1.01 (0.96, 1.08)	0.97 (0.89, 1.05)	1.10 (1.03, 1.18)**	1.26 (1.18, 1.34)*****	1.25 (1.17, 1.34)*****
Irregular Hours	1.03 (0.90, 1.18)	1.16 (0.99, 1.36)	0.90 (0.76, 1.07)	0.82 (0.70, 0.95)**	0.90 (0.76, 1.06)
Work Hard Physically	0.86 (0.75, 0.98)*	0.71 (0.56, 0.90)**	0.44 (0.33, 0.57)*****	0.26 (0.21, 0.34)*****	0.11 (0.05, 0.22)*****
Work Desk Job	1.70 (1.50, 1.93)*****	1.50 (1.26, 1.79)*****	1.90 (1.62, 2.22)*****	2.51 (2.21, 2.85)*****	2.08 (1.78, 2.45)*****
Supervise Managers	0.92 (0.75, 1.14)	0.97 (0.75, 1.26)	1.20 (0.91, 1.59)	1.07 (0.87, 1.32)	0.96 (0.75, 1.24)
Supervise Others	1.15 (1.04, 1.26)**	0.99 (0.86, 1.14)	1.09 (0.94, 1.25)	1.03 (0.93, 1.15)	1.07 (0.92, 1.25)
Number Times Fired	0.77 (0.67, 0.88)*****	0.76 (0.62, 0.93)*****	0.61 (0.47, 0.78)*****	0.47 (0.39, 0.58)*****	0.30 (0.24, 0.38)*****
OLS Regression					
Perceived Status (0-10)	0.27 (0.16, 0.39)*****	0.43 (0.28, 0.58)*****	0.52 (0.38, 0.66)*****	1.08 (0.97, 1.20)*****	1.76 (1.58, 1.94)*****
Job Satisfaction	0.01 (-0.00, 0.03)	0.05 (0.03, 0.06)*****	0.03 (0.01, 0.04)**	0.02 (0.01, 0.04)**	0.06 (0.04, 0.08)*****
Job Autonomy	0.01 (-0.01, 0.04)	0.07 (0.04, 0.09)*****	0.04 (0.01, 0.08)**	0.06 (0.04, 0.08)*****	0.08 (0.05, 0.11)*****
Job Repetitive	-0.01 (-0.03, 0.01)	-0.03 (-0.06, -0.01)**	-0.06 (-0.08, -0.04)*****	-0.14 (-0.16, -0.12)*****	-0.20 (-0.23, -0.17)*****

Source: Adolescent Health, 1995-2008; Authors' Calculations
 Sample: Restricted to high school graduates who are employed full time in one job in 2008
 Control variables: demographics (race/ethnicity (black, latino, asian), gender); educational factors (grade average, test score, grades not reported by respondent); acculturation (nativity, parent nativity, speak English versus another language at home); and parent's socioeconomic status (parent's self-reported educational level, household income, and whether they have enough money to pay bills.)
 Confidence interval in parentheses