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Game of Loans: The Relationship Between Education Debt, Social Responsibility Concerns, and Making a Career Choice in the Public, Private, and Nonprofit Sectors

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Game of Loans: The Relationship Between Education Debt and Making a Career Choice in the Public, Private, and Nonprofit Sectors

ABSTRACT

The public and nonprofit sectors generally pay less than the private sector and individuals are willing to forgo higher salaries in exchange for greater intrinsic satisfaction derived from making a contribution to society. However, personal financial considerations, such as education debt, may discourage individuals from pursuing careers in lower paying sectors even if they are predisposed to public service motivation (PSM). We surveyed a sample of graduating students to investigate if: (1) education debt discourages students from pursuing lower paying public or nonprofit careers, and (2) whether PSM overrides the considerations students might make about entering lower paying sectors as their education debt rises. First, we find that education debt has a marginal effect on initially selecting private over public and nonprofit careers. Rising education debt may discourage students from public sector careers after controlling for PSM. We also find that rising education debt may discourage students from nonprofit careers even with high levels of PSM. The present study enhances our understanding of how financial considerations, in the form of education debt, may influence a student's *initial* choice in pursuing public, private, and nonprofit careers.

Keywords: Public service motivation, career choice, education debt, public, private, nonprofit employment

INTRODUCTION

Research in public administration and nonprofit studies emphasize the role of public service motivation (PSM) when making a career choice in government and nonprofit work (Bozeman & Su, 2015; Perry, Hondeghem, & Wise, 2010; Ritz, Brewer, & Neumann, 2016). Individuals with high levels of PSM are said to value intrinsic work satisfactions (e.g., job fulfillment) over extrinsic ones (e.g., financial rewards) when choosing public and nonprofit over private sector careers (Buelens & van den Broeck, 2007; Georgellis, Iossa, & Tabvuma, 2011; Word & Park, 2015). In the US, the public and nonprofit sectors generally pay less than the private sector for comparable jobs, and individuals are willing to forgo higher salaries in exchange for greater intrinsic satisfaction derived from making a contribution to society (Moynihan & Pandey, 2007; Park & Word, 2012; King & Lewis, 2017). The motivation to serve the public has, thus far, aided public and nonprofit employers to attract qualified candidates to their workforce (Choi, 2016; Dur & Zoutenbier, 2014; Kjeldsen & Jacobsen, 2013; Word & Park, 2015).

However, a recent poll by Accenture (2016) reports that only 19 percent of college graduates are willing to work in the public and nonprofit sectors. Since -- to the best of our knowledge -- there is no longitudinal survey of PSM among students, it is unclear if the lack of interest in public service careers reflects declining PSM or a result of other factors. Challenging labor market conditions and economic realities -- unpaid summer internships, high education debts -- may force students to place economic priorities over satisfying intrinsic job needs when it comes to initial career choice. A combination of rising house prices and high education debt are forcing many young graduates to “boomerang” back to living with their parents and delaying

their launch into adulthood (Bleemer, Brown, Lee, & Van der Klaauw, 2014; Taylor & Pew Research Center, 2014). Research also shows students who identify financial obligations as a significant constraint are more likely to opt for higher paying private sector careers (e.g., Chetkovich, 2003). If financial burden or fulfilling financial needs is a strong consideration, public and nonprofit employers may face a significant challenge in recruiting new employees even if college graduates exhibit a desire to serve the public.

In this study, we draw from PSM theory to lend support for our theorizing that individuals motivated to help others will be drawn to the public and nonprofit sectors. However, personal financial considerations, such as education debt, may discourage individuals from pursuing careers in lower paying sectors even if they are predisposed to PSM. To enhance our understanding of public and nonprofit service attraction, we explore how financial considerations in the form of education debt, may influence a student's *initial* job choice in pursuing public, private, and nonprofit careers. We draw from a sample of college students in Canada who are first time job seekers to test if: (1) education debt discourages students from pursuing (lower paying) public and nonprofit sector careers in favor of higher paying private sector ones, and (2) whether PSM may override financial considerations students make when choosing public and nonprofit work.

It should be noted that a recent report suggests the Canadian public sector *on average* (and outside of senior management) pays more than the private sector (see Lammam, Palacios, Ren, & Clemens, 2015). A high degree of unionization partially explains the premium public sector workers enjoy. However, Canadian students buy into the widely held perception that public and nonprofit sectors pay less than the private sector. In our sample, students sorting into

private, public, nonprofit careers expect to make $53,700, $46,900, and $38,700 (all figures CAD) respectively, pointing to lower salary expectations in public and nonprofit employment. They also project a lower salary growth in both sectors -- expecting $69,200 (48%) in the public sector and $58,200 (50%) in nonprofit after 5 years -- compared to $92,500 (72%) in the private sector[1].

Thus, consistent with PSM theorizing, students espousing strong PSM continue to sort themselves into public and nonprofit careers, with students opting for nonprofit careers scoring higher on PSM than those headed for public sector employment. We find that education debt has a marginal effect on initially selecting private over public and nonprofit careers. Rising education debt may discourage students from public sector careers after controlling for PSM. We also find that rising education debt may discourage students from nonprofit careers even with high levels of PSM.

CONCEPTUAL BACKGROUND

According to organizational behavior literature, individuals will seek out work that maximizes their job satisfaction with respect to pay, promotion, supervisor, coworkers, and the work itself (Jepsen & Sheu, 2003; Smith, Kendall, & Hulin, 1969). In this respect, PSM represents a strong value proposition that can help satisfy the intrinsic needs of individuals seeking to help others and to serve the public. Public and nonprofit sector employers have traditionally relied on PSM to attract workers by appealing to their need for interesting and meaningful work (i.e., the work itself), thus satisfying one aspect of their job satisfaction needs. However, we know from past research that individuals who value extrinsic work rewards -- such as job security, generous benefits, and work/life balance -- also select public sector jobs (Buelens

& Van den Broeck, 2007; Houston, 2000; Taylor, 2012). In this respect, PSM does not fully explain the motives behind why individuals choose to work for the government or nonprofit organizations.

Expanding on individual needs for satisfaction at work, value-percept theory (Locke, 1976) explicates that individual priorities determine what satisfies them on the job. Thus, unfulfilled aspects of a job that is important to an individual can cause them to be dissatisfied. In other words, individuals may self-select themselves out of public service if they place a greater emphasis on meeting their financial needs which cannot be fulfilled in the public and nonprofit sectors. Conversely, a strong desire to serve the public (high levels of PSM) may override an individual's financial considerations (i.e., displaying more concern for others than for themselves) and sort themselves into public service careers. On this basis, the decision to pursue a career in one sector or another really depends on how well an individual perceives the sector will satisfy his or her most valued or important needs (also see Winter & Thaler, 2016). This view has been strongly supported by PSM research invoking the person-environment fit and attraction-selection-attrition paradigms (e.g., Bright, 2007; Clerkin & Coggburn, 2012; Steijn, 2008).

Public Service Motivation

According to PSM theory, individuals are attracted to public service because of a desire to influence public policy, a commitment to civic duty, standing up for social justice, and self-sacrifice for the benefit of others (Perry & Wise, 1990; Perry & Hondeghem, 2008; Ritz, 2011; Vandenabeele, 2007). PSM is a multi-dimension value theory, and different factors attract different individuals to public and nonprofit work. Most research involving PSM has been

focused on the differences between public and private sector workers, finding that individuals espousing PSM to prefer public sector over private sector careers (Buelens & van den Broeck, 2007; Crewson, 1997; Houston, 2000). This is logical because public service, by nature, attracts individuals who value commitments to social responsibility, fairness and equality, social justice, and generally displaying a concern for others (Frederickson & Hart, 1985; Gabris & Simo, 1995; Kim & Vandenabeele, 2010; Wright, Moynihan & Pandey, 2012).

Studies have shown that individuals preferring public and nonprofit careers over private sector employment exhibit greater altruistic behaviors, such as volunteering, donating time, blood, and money (Clerkin, Paynter, & Taylor, 2009; Houston, 2006; Knutsen & Chan, 2015; Lee ,2012; Pandey, Wright, & Moynihan, 2008). Researchers further note that the prosocial nature of public service satiates individual needs for meaningful and important work fueling their *intrinsic* work satisfactions. The association between PSM and public service has been empirically established, and researchers have examined PSM in various ways including its association with job satisfaction (Bright, 2007; Wright & Pandey, 2008), work performance (Alonso & Lewis, 2001; Bellé, 2013; Leisink & Steijn, 2009), organizational commitment (Camilleri, 2006; Castaing, 2006), and volunteer behaviors (Clerkin et al., 2009; Lee, 2012; Houston, 2006).

The decision to pursue public service, however, is not limited to PSM, its values and/or motives. Indeed, studies have shown individuals are also attracted to public sector employment because of more tangible rewards such as greater job security (Bellante & Link, 1981; Lewis & Frank, 2002), more generous benefits (Van de Walle, Steijn, & Jilke, 2015), and better working conditions such as shorter working hours and work/life balance (Buelens & Van den Broeck,

2007; Saltzstein, Ting, & Saltzstein, 2001). Minority group members (e.g., women, racial and sexual minorities) also prefer government jobs because the public sector offers better protection against harassment, discrimination, and equal opportunities for advancement (Lewis & Ng, 2013; Ng & Sears, 2015). In some countries, individuals may even pursue public sector careers because of the prestige associated with government work (e.g., Ng, Gossett, Chinyoka, & Obasi, 2016). In this regard, public sector careers, in addition to satiating individuals' intrinsic work satisfaction, also fulfill the *extrinsic* needs associated with employment. In short, extrinsic aspects of work may also motivate individuals to make a career choice in the public sector, and research is beginning to identify a more multidimensional public and nonprofit employee that is both intrinsically and extrinsically motivated.

Donative Labor Hypothesis and Nonprofit Employment

As the public and nonprofit sectors often pay less than the private sector for comparable jobs (King & Lewis, 2017), workers in these sectors often rationalize their career choice by asserting that the satisfaction they derive from helping others compensate for the lower pay they receive (Geogellis, Iossa, & Tabvuma, 2011; Houston, 2000; Buellens & Van den Broeck, 2007). Researchers frequently advance the "donative labor" hypothesis to explain the notion that public and nonprofit workers are willing to accept a lower salary in exchange for the intrinsic work satisfactions they receive from performing meaningful work (Bassous, 2015; Park & Word, 2012; King & Lewis, 2017).

However, research exploring the role of PSM on sorting into public versus nonprofit sector has been fewer in relation to those sorting into public versus private sectors. Existing research suggests individuals scoring higher on PSM -- especially on the self-sacrifice (altruistic)

dimension -- are more likely to choose nonprofit over public sector employment (Clerkin & Coggburn, 2012). Nonprofit workers are more likely to indicate "a chance to make a difference" and "helping people" than public sector workers (Mann, 2006). Complementing this, Rose (2013) observes that only the policy making (instrumental) dimension predicts public sector employment, while public interest, compassion, and self-sacrifice predict nonprofit careers. In addition, Borzaga and Tortia (2006) found pay does not have a statistical significant relationship with job satisfaction for nonprofit workers, suggesting that financial considerations matter less to those interested in nonprofit work.

Thus, while public sector jobs may attract both intrinsically and extrinsically motivated workers, individuals who self-select into nonprofit work may value intrinsic aspects of work more than public sector workers, given their deep-rooted desire to help others (Bassous, 2015). Taken together, we surmise that nonprofit workers may espouse stronger PSM, and are less sensitive to financial considerations than public sector workers. This view is further supported by McGinnis Johnson and Ng (2015), who reported that nonprofit workers were no more likely to switch away from nonprofit work to other sectors even when they were offered higher salaries. Thus, we extend knowledge on making a career choice in public and nonprofit careers, by exploring the role of financial considerations -- in the form of education debt -- and high levels of PSM when individuals sort into public and nonprofit careers.

Education Debt

In the 2010 graduating class, approximately 50% of all college students graduate with education debt, and the average debt per student in Canada is $14,900 (Ferguson & Wang, 2014). $28.3 billion in education debt is owed nationally, and the average education debt has

now surpassed $25,000 per student (Sagan, 2016). This rising trend may reflect students becoming more tolerant of education debt over time, likely because they have become reliant on it, and also because they may not be cognizant of the magnitude in how much they owe (Andruska, Hogarth, Fletcher, Forbes, & Wohlgemuth, 2014). There have also been assertions that many of today's youth are financially astute and take on part-time jobs to avoid education debt (Howe, 2014; Perry, 2011).

Students today may also be more cognizant of the negative impact of education debt on their future earnings, asset accumulation, and financial wellbeing (Cho, Xu, & Kiss, 2015; Elliott & Lewis, 2015). One study found that students' perceptions on the benefits of taking on education debt declined from 71 percent to 59 percent between 1991 and 2002 (Choi, 2014). Furthermore, some students take on part-time jobs or paid internships to help pay for their college education. As a result, they may rely less on education debt, and a lower debt load may in turn affect their initial career choice.

Indeed, students were more likely to pick a financially rewarding career over one of personal interest if financial consideration is a factor; however that decision would be reversed if they were not faced with an economic choice (Behymer & Cockriel, 1988). For example, students will take jobs with no growth potential but are high paying in order to pay off education debt quicker (Minicozzi, 2005). Several studies have been conducted on education debt and career choices, but most were in high paying professions such as law or medicine (Grayson, Newton, & Thompson, 2012; Rohlfing, Navarro, Maniya, Hughes, & Rogalsky, 2014). In general, students select high paying careers (usually found in the private sector) over public and nonprofit careers, as education debt rises due to economic self-rationalization (Rothstein &

Rouse, 2011). In this respect, pay may also function as a hygiene factor, which is essential for livelihood and survival (Taylor, 2012; Van de Walle et al., 2015). One study reports that law students are willing to enter public service only if their education debt is forgiven (in the form of tuition assistance) (Field, 2009).

Expanding on Locke's value-percept theory, we add that an individual may switch sectors as he or she fulfills one need and triggers another need. In this instance, individuals exhibiting strong PSM and high levels of education debt may initially launch their careers in the higher paying private sector but switch to public and nonprofit employment to satiate their PSM needs once their education debt is paid off. This view is supported by Wright and Christensen (2010) who report that PSM is a stronger predictor of subsequent careers in the public sector, in a multiple period study of employment sector. Given our focus on college students who are first time job seekers, we limit our research question and discussion on how education debt and PSM affect *initial* career choice. Specifically, we investigate whether: (1) education debt discourages college students from pursuing lower paying public sector and nonprofit careers, and (2) if (stronger) PSM overrides the considerations students might make about entering lower paying sectors as their education debt rises.

METHODS

Data for the study was obtained from 2010 Brainstorm, DECODE, and Universum in their annual "Top Campus Employers Report" survey of Canadian college students. The study aims to understand students' work and career expectations upon graduation. The survey instrument was distributed to students through their campus career centers across the country. A total of 28,000 students from 126 universities and colleges participated in the survey for a chance

to win an iPod. We reduced the sample to 8,383 to include: (1) students who are pursuing their undergraduate (Bachelor's) degree to ensure the education debt is limited to the first degree, and (2) those who are in their final year of study, and thus will be active job seekers. The sample (see Table 1) is predominantly female (63%), white (77%), and averaged 22 years of age. A majority of the students majored in business (28%) and liberal arts (26%), and the average student carried approximately $15,000 in education debt, comparable to the average national education debt reported by Statistics Canada for the class of 2010 (Ferguson & Wang, 2014).

[Insert Table 1 here]

Measures

Dependent Variable:

Initial Sectoral choice. The dependent variable of interest is the sector in which students prefer to work following graduation. Students were asked to indicate (one option only) which type of organization they prefer to work for after graduation: 1) Start my own business, 2) Small business, 3) Medium-sized company, 4) Large company, 5) Non-profit/Charity/Social Enterprise 6) Government/Public Services 7) I do not know 8) Other. The responses were aggregated into private (options 1, 2, 3, 4), nonprofit (option 5), and public (option 6) sector employment. Students who responded "do not know" (option 7) or "other" (option 8) were dropped from the analysis.

Independent Variables:

Education debt. Students were asked to write in the amount of student debt they had. We logged the amount to reduce heteroskedasticity.

Public Service Motivation (PSM). Students were asked to rate 16 work values they consider important when accepting employment, using a 4-point scale (1=not at all influential; 4=very influential). We were guided by past research (Henstra & McGowan, 2016; Kim &

Vandenabeele, 2010; Lewis & Ng, 2013; Lyons, Duxbury, & Higgins, 2006; Wright, Moynihan, & Pandey, 2012) on the values associated with PSM (i.e., social responsibility, personal impact, diversity) in selecting items as our proxy for PSM. Following Lewis and Ng (2013), we selected three items most representative of PSM conceptualizations, "commitment to social responsibility," "opportunities to have a personal impact," and "strong commitment to employee diversity" as a proxy measure for PSM. The Cronbach alpha is 0.66. The other items (e.g., "organization is a leader in its field," "opportunity to travel," "good training opportunities," "healthy workplace" which have no theoretical relation with PSM.

An additive index is constructed to combine the three Likert scale items that make up the PSM variable. The additive index ranges from 3 to 12. We then divide up that index into three variables to represent the diversity in PSM scores, PSM1 (score 3-5), PSM2 (score 6-9), and PSM3 (score 10-12).

Control variables. On the basis of past research, we controlled for variables known to affect sectoral choice (Lewis & Frank, 2002; Ng & Sears, 2015; Vandenabeele, 2011). Respondents were asked to indicate their gender (0=male, 1=female), race (0=racial minority[2], 1=white), age, fields of study (see Table 1 for categories), major and grade point average (GPA) (see Table 1). These are all nominal variables except major which is a nominal variable and GPA which is an ordinal variable. We included the 5-year salary expectations as a control, consistent with Wright and Christensen (2010), to ensure that future salary growth does not influence initial career choice (note: the initial and 5-year salary expectations we highly correlated (r = .60)). Initial salary was not included as a control since it is a factor affecting initial career choice. We also included robust standard errors in models clustered at the college level to

reduce endogeneity, as both how much education debt students have acquired, and their future career could be influenced by the college they attend.

RESULTS

Fifty-eight percent of the respondents are interested in private sector careers, while 35% and 8% respectively are interested in public and nonprofit careers. The variance inflation factor (VIF) test for multicollinearity revealed an average VIF value of 2.56, which is below the standard cutoff of 3.5, indicating that multicollinearity is not a concern. Table 2 summarizes the chi-square and ANOVA tests between the independent and control variables among respondents interested in private, public and nonprofit sector jobs. Students with private sector career interests have the lowest amounts of education debt ($14,300), followed by students with nonprofit ($15,600), and public sector career interests ($18,300). Female students were more likely to have education debt. The average self-reported PSM score for students interested in private sector careers is 2.93 (on a 4-point scale[3]), while the average PSM score for students interested in public and nonprofit careers are 3.12 and 3.35 respectively. Business majors were more likely to indicate a private sector career (r = .32) but were less likely to indicate a career preference in the public sector (r = -.32). Engineering students were more likely to choose private sector careers over the public sector, while IT and law students were more like to choose private careers over nonprofit employment. Students reporting the highest GPA (3.85-4.00) were also more likely to choose private sector careers.

[Insert Table 2 here]

Data Analysis

We performed multinominal logistic regression (see Table 3) to examine students' preferences for private, public, and nonprofit careers. In Model A, only control variables are included. Older students and women are more likely to sort into public and nonprofit sector careers. Students reporting greater salary expectations after 5 years are also more likely to opt for private sector careers. In Model B, where PSM scores are introduced, students reporting the highest levels PSM are more likely to select public and nonprofit careers, consistent with PSM theorizing.

[Insert Table 3 here]

In Model C[4], both PSM and education debt are included in the full model[5]. First, education debt has no effect on selecting private over public or nonprofit sector careers. In other words, education debt does not deter students from nonprofit or public sector work. Five-year salary expectations did not have an effect on sectoral choice. To enhance our understanding of the effects of education debt and PSM on students' propensity to work in the public and nonprofit sectors, we examined the interactional effects between education debt and PSM levels on sector choice.

In Table 4[5], we performed logistic regression on choosing public over private sectors careers. Neither the main independent variables or the interaction terms (PSM x education debt) are statistically significant, suggesting that both high levels of PSM and education debt do not influence selecting public sector careers over private sector careers.

[Insert Table 4 here]

In Table 5[5], we similarly performed logistic regression on selecting nonprofit over private sector careers. In this instance, students with the high levels of PSM (PSM=3) and average

student loan debt are marginally ($p<.10$) less likely to select nonprofit work. We did not find any statistically significant differences between PSM levels, education debt and interaction terms. Our findings suggest that even among students with high levels of PSM, rising education debt are marginally more likely to select private over nonprofit careers. We summarize our findings under Table 6 below.

[Insert Table 5 here]

[Insert Table 6 here]

DISCUSSION

The public and nonprofit sectors compete with private sector employers in attracting the best and the brightest to deliver public service. We know from past research that motivation to serve the public (PSM) has aided public and nonprofit employers in attracting well-qualified candidates. First, our findings corroborate with PSM theorizing where students exhibiting higher PSM scores prefer public and nonprofit employment over private sector careers. Our findings also show that students sorting into nonprofit careers also score higher on our proxy measure for PSM (social responsibility, personal impact, diversity) than students preferring the public sector. Students preferring nonprofit careers report the highest PSM scores (3.35), followed by students opting for public sector jobs (3.12), while those headed for private sector careers report the lowest scores (2.93).

We also know from our sample that college students expect the public and nonprofit sectors to pay less than the private sector. We anticipate that rising education debt and challenging economic times may discourage students from selecting lower paying public and nonprofit careers, in favor of higher paying private sector employment.

Our data suggests that education debt may be related to a marginal tendency for students to select higher paying private sector careers with rising levels of education debt. We speculate that these students may have preferred public but prioritize financial considerations (i.e., paying off debt quickly) ahead of satisfying intrinsic needs and choose higher paying private sector employment for an initial career. When education debt is relatively low, students may be persuaded to launch their initial career in the private sector first to pay off debt quickly. It is possible that after repaying their debt, they may switch careers and return to public and nonprofit sector employment.

It is logical to assume that students with high debt loads are more likely to come from lower income families (Elliott & Lewis, 2015). We speculate that students from lower socio-economic backgrounds (who are more likely to have higher education debt) may also be more sensitive to social and economic inequities and have stronger concerns for social justice (Eisold, 2010; Hansen, 1997). Empathy and compassion (values associated with PSM) are part of what drives people to public service, and individuals with high debt loads may have a greater empathy for others and consequently espouse a stronger drive for public service. Indeed, some studies have made a link between undergraduate indebtedness and a decision to pursue doctoral education, accumulating more debt, and work to reduce social inequalities over time (cf. Choi, 2014).

When we controlled for PSM levels (Model C), students with rising levels of education debt are marginally more likely to select high paying private sector careers. Students may feel the higher salaries (14% gap in private-public sector initial salary expectations) in the private sector may assist with paying off high levels of education debt. Furthermore, our interaction

effects did not demonstrate that high PSM levels may be a pull for individuals with a rising debt load to choose public sector, as paying off education debt quickly may be a more immediate consideration in initial career choice.

Nonprofit Careers

When we controlled for PSM (Model C), the students in our sample did not opt for private sector careers with rising levels of education debt. However, from our interaction terms (PSM x education debt) analysis, we did find that students with the highest levels of PSM and increasing levels of education debt are marginally more likely to select high paying private sector careers over nonprofit work. Students selecting nonprofit careers already report the highest PSM scores ("topped out") and an increasing debt load may "crowd out" even high levels of PSM. Thus, despite high levels of PSM, students facing rising debt levels may prioritize economic considerations over public service in initial career choice.

CONCLUSION

Our findings extend the PSM literature by demonstrating that high levels of PSM remain strongly associated with making a career choice in the public and nonprofit sectors. Christensen & Wright (2011) found that law students' interest in public vis-à-vis private sector work is related to PSM and the desire to be in the service to others. Likewise, Vandenabeele (2007) found that preference for public sector work among students is linked with PSM; furthermore, the more public the employer's profile, the greater the appeal it has to students as prospective employers. In this respect, public and nonprofit employers may wish to develop and/or strengthen their reputation for impact, social responsibility, and equality, values Canadian college students rate as important (see Ng & Gossett, 2013) to attract students to public service.

However, out study shows that rising debt levels may entice students to select private over public and nonprofit careers. Therefore, it is important to have debt levels in check as rising education debt should not be a reason for shunning public and nonprofit careers. Indeed, the Canadian government has written off $178 million in education debt (in addition to $176 million written off the year before) as students are struggling to repay their education debt (The Canadian Press, 2017).

We note a number of limitations of the present study to put our findings in context. First, as we used secondary data to explore the interplay between education debt, PSM, and sectoral choice, we caution the limitations of our findings pertaining to response categories and causality. Our study is thus limited to predicting sectoral choice on the basis of education debt and PSM. First, we acknowledge that there are other factors (e.g., job characteristics) that would play a role in an individual's decision in selecting a sector. Students may also consider job attributes in their choice of public and nonprofit work. For example, government and nonprofit worker often have greater scope of responsibilities (e.g., management responsibilities) than in the private sector at the front end of their careers (see Lee & Wilkins, 2011). We also note that some private sector jobs and organizations also fulfil public service mandates as in the case of Moulton and Feeney (2010); however, this is more likely to be the case in the US where private sector organizations step in to fill public service gaps (e.g., private hospitals, private colleges) than in Canada.

Second, given the use of secondary data, we were only able to assess certain aspects of PSM, in explaining the propensity to select public and nonprofit careers. Other dimensions of PSM (e.g., attraction to policy making, civic duty, self-sacrifice) were not captured in our

measure, although we anticipate they have little explanatory power for elucidating education debt and career choice. The items in our proxy measure of PSM (social responsibility, personal impact, diversity) may assist with identifying the differentiating factors that workers associate with government and nonprofit work. This has the potential of refining the PSM construct into sub dimensions consisting of employer mission, the work itself, and the work environment. We acknowledge that these items are under researched within the context PSM and suggest for future work to include a more comprehensive measure of PSM to more fully explain our exploratory findings.

Third, students were also asked to self-report their education debt but given the substantial variance in debt levels and the average self-reported amounts to be comparable to national census data, we do not believe social desirability bias to be a significant concern. We do suggest additional research using primary data collected by university and colleges to replicate our exploratory findings here.

Fourth, our study is focused on *initial* career choice and students may indeed switch careers as priorities shift. For example, students may initially opt for private sector careers to pay off their education debt (as reported in our study) but may switch sectors to fulfill their PSM needs later in their careers. A longitudinal career study will enhance our understanding of the sustainability and strength of PSM over time, and also reduce the possibility of social desirability bias in a cross-sectional study.

Lastly, since this study is based on a Canadian sample, we call for future work to explore the relationship between education debt and public service in other countries with different forms of financing for higher education such as the US. As debt levels continue to grow, the

implications of education debt on students' career choice and financial and economic wellbeing is worthy of investigation.

NOTES

[1] The 5-year salary expectations were in line with those reported by Millennial students in Canada (see Ng, Lyons and Schweitzer, 2017).

[2] Visible-minorities are defined in Canada, as persons other than Aboriginals peoples who are non-Caucasian in race, and non-white in color.

[3] We averaged the 3 items to arrive at a 4-point scale to make it easier to interpret the scores.

[4] Debt levels: no debt (n=1,182), < $20,000 (n=875), $20,000-$39,999 (n=504), $40,000-$59,999 (n=166), $60,000-$79,999 (n=40), $80,000+ (n=46). At the suggestion of the reviewers, we reran our analyses using students with and with no education debt (1,0). The findings are similar to the model we presented. There is no statistical difference between students with and without debt in selecting public and nonprofit over private sector careers.

[5] The number of observations in Tables 4 and 5 drops because there are fewer individuals who provided their education debt information.

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Table 1: Descriptive Statistics

	N	Mean or %
Dependent Variables		
Sectoral Choice		
Private Sector	4,822	57.5%
Public Sector	2,893	34.5%
Nonprofit Sector	668	8.0%
Independent Variables		
Education Debt (amount owed)	2,813	$15,808
Public Service Motivation		
PSM = 1	4,822	2.93
PSM = 2	2,893	3.12
PSM= 3	668	3.35
Salary Expectations		
At graduation	2,230	$50,544
In 5 years	2,181	$82,626
Control Variables		
Age	8,383	22
Gender		
Male	3,134	37.4%
Female	5,249	62.6%
Race/Ethnicity		
Non-White	1,960	23.3%
White	6,423	76.6%
Major		
Business	2,323	27.7
Engineering	957	11.4
IT	124	1.5
Natural Sciences	667	8.0
Liberal Arts/Fine Arts/Education/Social Sciences	2,162	25.8%
Law	99	1.2%
Health/Medicine	998	11.9%

Communications	231	2.8%
Other	822	9.8%
Grade Point Average		
3.85-4.00 (A; 90-100%)	5	0.1%
3.70-3.84 (A-; 80-90%)	36	0.4%
3.40-3.69 (B+; 78-79%)	788	9.4%
3.00-3.39 (B; 74-77%)	1,290	15.4%
2.80-2.99 (B-; 70-73%)	1,939	23.1%
1.80-2.79 (C; 60-69%)	1,693	20.2%
1.10-1.79 (D; 50-59%)	1,770	21.1%
Less than 1.10 (F; <50%)	575	6.9%
Do not know/Do not wish to say	287	3.4%

***p<.01, **p<.01, *p<.05

Table 2: Chi Squared and ANOVA Results with Descriptive Statistics (Mean) in each Sub-Sample

	Private	Public	Nonprofit
Education Debt**	$14,312	$18,252	$15,609
PSM***			
PSM = 1	225	68	9
PSM = 2	2,885	1,406	222
PSM = 3	1,712	1,419	437
Salary Expectations***			
At graduation***	$53,736	$46,986	$39,762
In 5 years***	$92,543	$69,264	$58,277
Age***	21.9	22.2	22.5
Gender ***			
Male	2,288	721	125
Female	2,534	2,172	543
Race/Ethnicity ***			
Non-White	1,219	602	139
White	3,603	2291	529
Major***			
Business	1,922	310	91
Engineering	836	96	25
IT	100	21	3
Natural Sciences	330	288	49
Liberal Arts/Fine Arts/Education/Social Sciences	662	1,177	323
Law	42	54	3
Health/Medicine	351	575	72
Communications	157	45	29
Other	422	327	73
Grade Point Average***			
3.85-4.00 (A; 90-100%)	5	0	0
3.70-3.84 (A-; 80-90%)	22	13	1

3.40-3.69 (B+; 78-79%)	497	254	37
3.00-3.39 (B; 74-77%)	754	446	90
2.80-2.99 (B-; 70-73%)	1,175	616	148
1.80-2.79 (C; 60-69%)	952	589	152
1.10-1.79 (D; 50-59%)	955	652	163
Less than 1.10 (F; <50%)	308	210	57
Do not know/Do not wish to say	154	113	20

Table 3: Regression Results Models

	MODEL A CONTROL VARIABLES ONLY		MODEL B PSM + CONTROL VARIABLES		MODEL C FULL MODEL	
	Public vs. Private Sector	Nonprofit vs. Private Sector	Public vs. Private Sector	Nonprofit vs. Private Sector	Public vs. Private Sector	Nonprofit vs. Private Sector
PSM						
PSM =2 (Reference Group, PSM=1)			0.595	0.478	0.598	0.109
			(0.369)	(0.642)	(0.483)	(1.382)
PSM = 3			0.895**	1.334**	1.017**	0.873
			(0.380)	(0.618)	(0.429)	(1.385)
Education Debt (Logged)					-0.161*	0.0205
					(0.0831)	(0.196)
Salary Expectations in 5 years	-3.43e-06*	-2.10e-05***	-3.55e-06*	-2.15e-05***	-3.40e-06	-1.95e-05
	(2.08e-06)	(5.43e-06)	(2.08e-06)	(5.65e-06)	(5.78e-06)	(1.83e-05)
Age	0.0572**	0.115***	0.0595**	0.118***	0.0699	0.153**
	(0.0244)	(0.0408)	(0.0240)	(0.0383)	(0.0515)	(0.0737)
Gender (Male =0, Female = 1)	0.707***	0.940***	0.657***	0.807***	0.568*	0.759
	(0.142)	(0.256)	(0.145)	(0.245)	(0.316)	(0.520)
Race (Non-White=0, White=1)	0.0851	-0.158	0.140	-0.0445	-0.355	-0.329
	(0.140)	(0.202)	(0.143)	(0.213)	(0.294)	(0.368)
Major (Reference Group - Business)						
Engineering	-0.622*	-0.638	-0.616*	-0.619	-0.203	0.265
	(0.319)	(0.709)	(0.319)	(0.710)	(0.602)	(1.025)
IT	1.068***	-13.63***	1.102***	-14.00***	1.042	-14.33***
	(0.329)	(0.540)	(0.334)	(0.530)	(0.689)	(0.709)
Natural Sciences	1.381***	1.082***	1.383***	1.096***	2.014***	0.689
	(0.234)	(0.333)	(0.235)	(0.347)	(0.540)	(1.117)

Liberal Arts/Fine Arts/Education/Social Sciences	2.389***	2.145***	2.387***	2.132***	3.098***	2.647***
	(0.169)	(0.194)	(0.165)	(0.202)	(0.343)	(0.563)
Law	1.837***	-13.74***	1.824***	-14.16***	0.562	-15.01***
	(0.433)	(0.444)	(0.436)	(0.435)	(0.908)	(0.901)
Health/Medicine	2.012***	1.028***	1.996***	1.019***	2.651***	1.457**
	(0.173)	(0.319)	(0.169)	(0.322)	(0.442)	(0.643)
Communications	-0.312	0.187	-0.348	0.118	0.237	0.974
	(0.344)	(0.376)	(0.324)	(0.353)	(1.115)	(1.461)
Don't Know	1.247***	0.892**	1.246***	0.898**	1.444***	0.946
	(0.260)	(0.366)	(0.260)	(0.382)	(0.329)	(0.958)
<u>Grade Point Average (Reference Group/Do not know)</u>						
Less than 1.10 (F; <50%)	0.512	1.236*	0.468	1.196*	2.590***	1.532
	(0.347)	(0.663)	(0.359)	(0.649)	(0.496)	(1.241)
.10-1.79 (D; 50-59%)	-0.0256	0.623	-0.0495	0.651	1.640**	1.595**
	(0.270)	(0.637)	(0.268)	(0.634)	(0.645)	(0.728)
1.80-2.79 (C; 60-69%)	0.201	0.937*	0.150	0.923*	2.044***	1.790***
	(0.306)	(0.545)	(0.313)	(0.546)	(0.713)	(0.572)
2.80-2.99 (B-; 70-73%)	-0.0855	0.413	-0.121	0.434	1.376**	1.200*
	(0.288)	(0.660)	(0.293)	(0.667)	(0.616)	(0.637)
3.00-3.39 (B; 74-77%)	0.103	0.414	0.0499	0.382	1.406**	0.958
	(0.311)	(0.673)	(0.318)	(0.688)	(0.688)	(0.721)
3.40-3.69 (B+; 78-79%)	0.396	0.431	0.359	0.449	2.483***	-13.86***
	(0.295)	(0.660)	(0.299)	(0.684)	(0.756)	(0.698)
.3.70-3.84 (A-; 80-90%)	-0.799	-14.20***	-0.798	-14.46***	-15.51***	-15.79***
	(0.980)	(0.852)	(0.959)	(0.813)	(1.030)	(1.130)
3.85-4.00 (A; 90-100%)	-14.80***	-10.56***	-15.26***	-10.70***		
	(1.166)	(1.511)	(1.147)	(1.451)		
Constant	-3.874***	-6.000***	-4.534***	-6.772***	-4.377**	-7.878***
	(0.762)	(1.393)	(0.941)	(1.084)	(1.858)	(2.873)

Observations	2,010	2,010	2,010	2,010	2,010	432	432	432

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4: Interaction Effects Between PSM and Education Debt on Public vs. Private Sector Career

	Government vs. Private
Education debt	-7.745
	(6.279)
PSM	
PSM=2 (PSM=1 Reference Group)	-4.293
	(5.840)
PSM = 3	-0.900
	(0.604)
PSM=2 interaction with education debt (log)	0.918
	(0.679)
PSM=3 interaction with education debt (log)	0.619
	(0.632)
Salaryexp5years	-4.70e-06
	(7.41e-06)
Age	0.0653
	(0.0538)
Gender	0.628**
	(0.311)
White	-0.404
	(0.282)
Major (Reference Group - Business)	
Engineering	-0.167
	(0.629)
IT	1.015
	(0.701)
Natural Sciences	2.102***
	(0.551)
Liberal Arts/Fine Arts/Education/Social Sciences	3.161***
	(0.342)
Law	0.605
	(0.855)
Health/Medicine	2.761***
	(0.448)
Communications	-0.0814
	(1.113)

Don't Know	1.508***
	(0.312)
Grade Point Average (Reference Group – Do not know)	
Less than 1.10 (F; <50%)	2.701***
	(0.579)
.10-1.79 (D; 50-59%)	1.515**
	(0.660)
1.80-2.79 (C; 60-69%)	2.026***
	(0.689)
2.80-2.99 (B-; 70-73%)	1.363**
	(0.618)
3.00-3.39 (B; 74-77%)	1.195*
	(0.694)
3.40-3.69 (B+; 78-79%)	2.396***
	(0.767)
Constant	2.333
	(5.486)
Observations	394

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5: Interaction Effects Between PSM and Education Debt on Nonprofit vs. Private Sector Career

	Nonprofit Sector Careers vs. Private Sector Careers
Education debt	5.465
	(3.649)
PSM	
PSM=2 (PSM=1 Reference Group)	50.75
	(37.92)
PSM = 3	60.49*
	(34.95)
PSM=2 interaction with amount owed (log)	-5.023
	(3.653)
PSM=3 interaction with amount owed(log)	-5.925*
	(3.373)
Salary Expectations in 5 years	-2.88e-05
	(1.83e-05)
Age	0.131
	(0.0805)
Gender (Male=0, Female=1)	0.481
	(0.625)
Race (Non-White=0, White=1)	-0.254
	(0.531)
Major (Reference Group Business)	
Engineering	-0.0751
	(0.945)
Natural Sciences	0.456
	(1.481)
Liberal Arts/Fine Arts/Education/Social Sciences	2.824***
	(0.679)
Health/Medicine	1.537**
	(0.637)
Communicatiosn	1.392
	(1.491)
Don't Know/Other	0.871
	(1.144)

GPA (Reference Group -Do not know/Don't wish to say)	
Less than 1.10 (F; <50%)	0.705
	(2.021)
1.10-1.79 (D; 50-59%)	1.858**
	(0.916)
1.80-2.79 (C; 60-69%)	1.295*
	(0.676)
2.80-2.99 (B-; 70-73%)	1.017
	(0.745)
3.00-3.39 (B; 74-77%)	1.129
	(0.962)
Constant	-61.15*
	(37.16)
Observations	218

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6: Summary Results on the effect of Rising Education Debt and PSM on Sector Choice

	Public vs. Private	**Nonprofit vs. Private**
Model A: Demographics	Older, female students more likely to select public careers.	Older, female students more likely to select nonprofit careers.
Model B: PSM levels	Students with higher PSM more likely to select public careers.	Students with higher PSM more likely to select nonprofit careers. Students selecting nonprofit have higher PSM coefficient than students selecting public careers.
Model C: PSM and Rising Education Debt	Students are marginally ($p<.10$) more likely to select private over public sector (after controlling for PSM).	No influence on selecting private over nonprofit careers regardless of debt.
Interactional effects: PSM x Rising Education Debt	Rising levels of debt and high levels of PSM do not influence selecting private over public careers.	Students with rising levels of debt and high levels of PSM are marginally ($p<.10$) more likely to select private over nonprofit careers.

BIOGRAPHICAL NOTES

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