The effect of education debt on dentists’ career decisions

Sean Nicholson, PhD; Marko Vujicic, PhD; Tanya Wanchek, PhD, JD; Anthony Ziebert, DDS, MS; Adriana Menezes, BS

Rising education debt and the accompanying pressure to repay it raises concerns that debt may affect important career decisions such as whether to seek advanced training within a profession, whether to select a high-paying position within a profession, what types of patients to serve, how much to work, and when to retire. Students in the United States collectively held $966 billion in student loan debt in 2012, almost 3 times as much in real terms as in 2004.1 Debt levels were particularly high among graduates of professional schools. For example, the education debt balances among students graduating in 2011 from dental, medical, and law schools were $203,000, $162,000, and $125,000, respectively.2-4

If incomes grow at the same rate as debt, then younger professionals will be able to pay off their debt and still maintain the same standard of living as their predecessors. There is evidence, however, that debt-to-income levels are rising in high-income professions. In dentistry, for example, the average education debt held

ABSTRACT

Background. The purpose of the study was to determine whether there is an association between the amount of education debt on completing dental school (initial debt) and certain career decisions.

Methods. The authors surveyed 1,842 practicing dentists who completed dental school between 1996 and 2011 to ascertain their initial education debt, the balance on their debt in 2013, and a variety of specialization and practice decisions made during their careers. Data also included demographic characteristics and parental income and education levels.

Results. Dentists with higher initial debt were less likely to specialize and more likely to enter private practice, accept high-paying jobs on graduation, and work longer hours. Choice of employment setting, practice ownership, and whether to provide Medicaid and charity care were associated with dentists’ sexes and races but not debt.

Conclusions. High debt levels influenced some career decisions, but the magnitude of these effects was small compared with the effects of demographic characteristics, including race and sex, on career choices.

Practical Implications. Policy makers concerned about the influence of student debt on the professional decisions of dental school graduates should recognize that students’ demographic characteristics may be more powerful in driving career choices.

Key Words. Dental education; career choice; dentistry.

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by students graduating in 1996 was 70% of the contemporaneous median income in the profession, versus 103% for 2011 graduates. For veterinarians, the debt-to-income ratio increased from 118% in 1998 to 163% in 2010.1 Given the rising level of student indebtedness, understanding the association between the amount of education debt on completing dental school (initial debt) and such career decisions as whether to specialize and where to practice could yield useful information to guide policy makers and others invested in helping to shape the future dental workforce.

REVIEW OF THE LITERATURE

According to standard economic models, education debt should have a small effect on career choices unless debt becomes large relative to expected lifetime earnings. Studies in which the investigators examined the association of education debt and career choices provide mixed support for the standard life-cycle model, which asserts that people make sequential decisions about allocating time, effort, and money to maintain economic stability over their lifetimes.6 Minicozzi7 reports a positive, statistically significant relationship between a male student’s education debt and the probability he will pursue a high-paying job with low prospects for short-term wage growth. Investigators in several other studies concluded that lower education debt or the absence of tuition loans was associated positively with a college or law school student’s likelihood of pursuing a lower-paying occupation on completing education.8-10 In contrast, Zhang11 found no association between education debt and career choices and only a small negative association between education debt and the decision to pursue graduate training.

Likewise, there are no clear conclusions from studies that focus on the association between education debt and career decisions in health occupations. Results from earlier studies showed no relationship between indebtedness and the choice of a medical specialty.12 Investigators in more recent studies, however, found that education debt was associated with medical career choices and that the magnitude of the effect depended on individual characteristics.13,14 Rosenblatt and Andrilla15 found that women and minority groups with substantial debt were more interested in pursuing primary care or obtaining an inner-city practice, respectively. On the other hand, students from middle-income families were less likely to pursue primary care careers, suggesting that such students are sensitive to debt when making career choices.16 Investigators in some studies found that high levels of debt were associated with medical students’ choice to pursue primary care specialties that offer lower incomes but allow one to start repaying loans sooner.19 Finally, investigators in some studies found that education debt was associated with medical students’ short-term decisions but not their long-term decisions.20,21

METHODS

In February 2013, we attempted to contact the 17,734 students who graduated from US dental schools in 1996, 2001, 2006, and 2011. We targeted members of these cohorts to examine the effect of debt on dental career choices during a period of rising student indebtedness and to observe changes in the ability of students to reduce their debt burden over time. Gathering data from several cohorts provided us with a wider range of indebtedness to consider as we looked for correlations between the amount of education debt held at the time of graduation from dental school and dentists’ career choices after graduation. The American Dental Association’s institutional review board reviewed and deemed the survey exempt from the Health and Human Services Policy for the Protection of Human Subjects (see Section 45 CFR 46.101 (b) (2)).22 Participants implied consent by completing the survey and submitting their responses.

A total of 1,842 dentists completed the survey for an overall response rate of 10.4%. The low response rate was partly because a current valid phone number was not available for 7,088 of the dentists and not all dentists with a valid phone number were contacted successfully. Of those contacted by phone (n = 649), 84% agreed to complete the survey. The highest response rate came from the class of 2011. This cohort was easiest to reach because the American Dental Association database contained more e-mail addresses for this class than for the other 3.

One objective in designing the survey was to examine the trajectory of education debt over dentists’ careers and the effect of debt on career decisions. The survey asked respondents about their total education debt on completion of dental school (including from college), current balance on education debt, current practice situation, annual income, practice ownership, average number of hours worked weekly, number of weeks worked per year, patient characteristics, and attitudes toward debt, among other information.

We examined 5 career choices in our analysis:

- pursuing advanced or specialized training (that is, endodontics, oral and maxillofacial surgery, orthodontics, or periodontics; General Practice Residency and Advanced Education in General Dentistry residencies did not qualify as specialization);
- entering private practice, or accepting a position with a government organization (for example, the armed
characteristics of the population of dental students in
compared the characteristics of the respondents with the
variables. These included demographic characteristics,
least squares regression (when the dependent variable
was continuous) analyses to control for a number of
decisions after dental school, we used either probit (when
the dependent variable was dichotomous) or ordinary
To address potential selection bias, where possible, we
compared the characteristics of the respondents with the
characteristics of the population of dental students in
services), or a public health organization (for example,
a community clinic), or a dental school (that is, as a
faculty member);
For dentists in private practice at the time of the
survey, we also examined:
whether they owned their practice;
the percentage of their total patients who were
covered by Medicaid or received charity care;
the number of hours worked per year.

To determine whether there was an association be-
tween the amount of dentists’ education debt and career
decisions after dental school, we used either probit (when
the dependent variable was dichotomous) or ordinary
least squares regression (when the dependent variable
was continuous) analyses to control for a number of
variables. These included demographic characteristics,
such as sex, race, and year of graduation.

To address potential selection bias, where possible, we
compared the characteristics of the respondents with the
characteristics of the population of dental students in
be Asian or black than the dental school population as a
whole in 3 of the 4 graduation cohorts we studied.

Survey respondents reported an average of $214,000 in
education debt at the time of completing dental school
(initial debt). Table 2 shows the distribution of dental
students’ debt at the time of graduation in constant (that
is, real) 2013 dollars. Approximately 90% of respondents
who graduated in 1996 or 2001 and 95% of the 2006 and
2011 cohorts had some education debt. The median
amount of initial debt, for those with positive debt,
increased substantially over time in real terms, from
$148,000 among the 1996 graduates to $255,000 among the
2011 graduates. The values at the 25th and 75th percentiles
also increased by approximately $90,000 over time,
whereas the increases were approximately $50,000 for the
5th and 95th percentiles. There was substantial cross-
sectional variation in education debt for all 4 cohorts.

Table 3 shows the distribution of dentists’ education
debt at the time of the February 2013 survey. A total of
54.1% of the 1996 graduates (65.4% from Panel B minus

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TABLE 1
Characteristics of survey respondents.*

<table>
<thead>
<tr>
<th>OBSERVATION</th>
<th>GRADUATION YEAR COHORT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1996 (n = 382)</td>
</tr>
<tr>
<td></td>
<td>2001 (n = 420)</td>
</tr>
<tr>
<td></td>
<td>2006 (n = 364)</td>
</tr>
<tr>
<td></td>
<td>2011 (n = 676)</td>
</tr>
<tr>
<td></td>
<td>Overall Mean (Standard Deviation) (n = 1,842)</td>
</tr>
<tr>
<td>Female</td>
<td>0.382</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.042</td>
</tr>
<tr>
<td>White</td>
<td>0.749</td>
</tr>
<tr>
<td>Black</td>
<td>0.063</td>
</tr>
<tr>
<td>Asian</td>
<td>0.110</td>
</tr>
<tr>
<td>Other</td>
<td>0.037</td>
</tr>
<tr>
<td>Family Income</td>
<td>Greater than $100,000</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
</tr>
<tr>
<td>Father Has Graduate Degree</td>
<td>0.442</td>
</tr>
<tr>
<td>Mother Has Graduate Degree</td>
<td>0.217</td>
</tr>
<tr>
<td>Career and Practice Choices</td>
<td>Specialized</td>
</tr>
<tr>
<td></td>
<td>Private practice</td>
</tr>
<tr>
<td></td>
<td>Government position</td>
</tr>
<tr>
<td></td>
<td>Faculty member</td>
</tr>
<tr>
<td></td>
<td>Public health position</td>
</tr>
<tr>
<td>Poor patients as a percentage of total</td>
<td>11.5</td>
</tr>
<tr>
<td>Owns his or her practice</td>
<td>0.812</td>
</tr>
<tr>
<td>Average weeks worked per year</td>
<td>47.6</td>
</tr>
<tr>
<td>Average hours worked per week</td>
<td>35.6</td>
</tr>
<tr>
<td>Average hours worked per year</td>
<td>1,704</td>
</tr>
</tbody>
</table>

* All values are given as means.

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11.3% from Panel A) had paid off their education loans completely in the 17 years after leaving dental school. As would be expected, fewer of the less experienced dentists had paid off their loans between graduation and 2013. Among our survey respondents, 22.4% of the 2001 cohort, 6.6% of the 2006 cohort, and 1.6% of the 2011 cohort had paid off their debt. Debt balances for indebted members of the class of 2011 averaged $248,000, and those in the 95th percentile had roughly $450,000 in debt in 2013.

In the figure, we depict the mean education debt by cohort, at graduation and in 2013, for those who had a positive balance at the time of graduation. We included all dentists, even those who had paid off their loans, when calculating the 2013 mean debt balances. Although the median annual payoff does not vary substantially across the 4 cohorts when measured in 2013 dollars, the later cohorts are paying a substantially smaller percentage of their initial balance per year than were the earlier cohorts.

Table 4 focuses on 2 types of occupational decisions: whether the dentist pursued specialty training after completing dental school (dependent variable equals 1 for dentists who specialized and 0 for those who did not) and the type of setting in which the dentist practiced in 2013. We asked respondents to indicate only 1 of 4 practice settings as their primary occupation: private practice, government organization (for example, the armed services), public health organization (for example, a community clinic), or dental school (for example, as a faculty member). These choices were mutually exclusive.

Table 4 reports the coefficients from the 5 probit regressions. We found that dentists who graduated with a relatively large amount of education debt were more likely to enter private practice than to choose other primary occupations and less likely to specialize. In the bottom row of Table 4, we report the marginal effect on each dependent variable associated with a $60,000 increase in debt, which is one-half of the observed standard deviation of education debt. The marginal effect is the predicted change in the dependent variable if a person with the mean characteristics in the sample experienced a $60,000 increase in education debt. We found a 3.1 percentage point reduction, which is large relative to the mean of the dependent variable of 18.4 percentage points, in the probability that a dentist would seek advanced education in order to specialize. Students who graduated with a relatively large amount of education debt were also more likely to enter private practice and less likely to accept a government or faculty position than were students with an average amount of debt. We found no evidence that debt affected career decisions differently across the 4 graduation cohorts in the regressions reported in Tables 4 and 5.

The magnitude of the effect that high debt had on respondents’ likelihood of entering private practice was large in absolute terms. There was a predicted 4.2 percentage point increase in the probability of entering private practice associated with a $60,000 increase in debt. The magnitude of debt had an even larger and inverse association with the decision to accept a government or faculty position. A $60,000 increase in debt at the time of graduation was predicted to reduce the probability of accepting a government position by 2.0 percentage points (relative to a baseline probability of

### Table 2

<table>
<thead>
<tr>
<th>YEAR OF GRADUATION</th>
<th>PERCENTAGE WITH NO DEBT</th>
<th>DEBT IN THOUSANDS OF DOLARS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5th Percentile</td>
<td>25th Percentile</td>
</tr>
<tr>
<td>1996</td>
<td>11.3</td>
<td>37</td>
</tr>
<tr>
<td>2001</td>
<td>11.2</td>
<td>52</td>
</tr>
<tr>
<td>2006</td>
<td>6.0</td>
<td>52</td>
</tr>
<tr>
<td>2011</td>
<td>5.7</td>
<td>86</td>
</tr>
<tr>
<td>All Cohorts</td>
<td>8.2</td>
<td>52</td>
</tr>
</tbody>
</table>

* Education debt measured in 2013 dollars by using the Consumer Price Index for All Urban Consumers.23
† Includes only those with a debt balance at graduation.

### Table 3

<table>
<thead>
<tr>
<th>YEAR OF GRADUATION</th>
<th>PERCENTAGE WITH NO DEBT</th>
<th>DEBT IN THOUSANDS OF DOLARS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5th Percentile</td>
<td>25th Percentile</td>
</tr>
<tr>
<td>1996</td>
<td>65.4</td>
<td>6</td>
</tr>
<tr>
<td>2001</td>
<td>33.6</td>
<td>20</td>
</tr>
<tr>
<td>2006</td>
<td>12.6</td>
<td>30</td>
</tr>
<tr>
<td>2011</td>
<td>7.3</td>
<td>63</td>
</tr>
<tr>
<td>All Cohorts</td>
<td>26.4</td>
<td>30</td>
</tr>
</tbody>
</table>

* Education debt measured in 2013 dollars by using the Consumer Price Index for All Urban Consumers.23
† Includes only those with a debt balance in 2013.
8.8 percentage points) and a faculty position by 0.8 percentage points (relative to a baseline probability of 2.1%). We found no association between debt and the likelihood of accepting a public health position. These results are consistent with the idea that students choose private practice at least in part to increase their ability to repay their debt.

We also examined the associations between demographic characteristics and career choice and found these to be even stronger than the associations between career choice and debt. We used the coefficients in Table 4 to compare the predicted probabilities of making a specific career choice for people with different demographic characteristics (for example, women versus men). Among our survey respondents, women were less likely than men to specialize (by 11.0 percentage points) and to enter private practice (by 3.6 percentage points), and they were more likely to accept a public health position (by 1.2 percentage points); Asian dentists were more likely than non-Asian dentists to accept faculty positions (by 2.5 percentage points); and black dentists were less likely than nonblack dentists to enter private practice (by 20.5 percentage points) and more likely to accept a position with a government organization (by 15.8 percentage points).

Table 5 shows regression results for a set of decisions made by respondents who were in private practice. These included whether a dentist chose to own his or her practice or be an employee, what percentage of poor patients he or she chose to treat (patients are considered to be poor if they have dental insurance through Medicaid or if they receive charity care), and how many hours per year he or she chose to work. We found no association between debt and any of these 3 decisions, but we found a strong association between these decisions and both sex and race. Female dentists were 22.5% less likely than male dentists to own a practice. Whites were 12.9% more likely than Hispanics, 18% more likely than Asians, and 19.4% more likely than blacks to own a practice. This same sex and race pattern held for the percentage of a dentist’s patients who were poor, although in the opposite direction. Female and nonwhite dentists were more likely to accept poor patients than were male and white dentists. Female dentists also worked approximately 20% fewer hours per year than did male dentists.

Finally, we ran regressions to see whether younger cohorts responded differently to debt than did older cohorts. We found no evidence that debt affected career decisions differently across the 4 graduation cohorts.

DISCUSSION

The mean education debt at the time of completing dental school (initial debt) reported by the respondents in our survey was substantially higher—$24,000 to $49,000 higher depending on the cohort—than in the American Dental Education Association Survey of Dental School Seniors: 2009 Graduating Class.24 Although our survey respondents may have overreported their initial debt, we believe that this discrepancy more likely is due to a disproportionate number of dentists with high debt choosing to respond to our survey. Our respondents were less likely to have no debt at graduation than were respondents to other surveys,59 and we consider this finding reliable because people should be able to recall whether they had zero debt without any error. In addition, the existence of differences between the 2 surveys in the amount of initial debt reported by
more recent as well as older cohorts suggests that telescoping bias, the ability
to recall recent events (for example, debt burden in 2011) more accurately than
older events (for example, debt burden in 1996), did not influence our survey
responses. On the basis of this analysis, we believe that the nonrespondents to our
survey had smaller debt balances than their classmates who responded.

Rising student debt levels are
becoming a major policy issue in the
United States. In dentistry, the issue has
been identified as a priority by both the
American Dental Association and the
American Dental Education Association.25,26 As the figure indicates, dentists who graduated in 2011 devoted almost as
much money annually to paying off the
principal on their student loans as did
dentists who graduated in 2001, but this
amount is a much smaller portion of
their total education debt burden. If
recent graduates continue to pay off their
loans at similar rates, we can anticipate that it will take
them far longer than the current average of 17 years to
pay off their loans. This longer loan repayment trajectory
could have additional influences on dental career choices or the willingness of students to borrow in order to
finance a dental education.

In evaluating the relationship of debt to career de-
cisions, it is also important to ask whether student debt
influences dental students’ career choices or reflects
choices made before or while incurring that debt.
Because students choose whether and how much to
borrow, an association between debt and actual career
choices may not necessarily reflect causality. Future
career choice is an unmeasured student attribute that
might influence willingness to borrow and, therefore,
debt levels, rather than vice versa.

To address this issue, we collected information on 3
variables that should affect student borrowing but not

| TABLE 4 |

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>SPECIALIZE</th>
<th>PRIVATE PRACTICE</th>
<th>GOVERNMENT POSITION</th>
<th>PUBLIC HEALTH POSITION</th>
<th>FACULTY MEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education Debt ($000)*</td>
<td>−0.0023† (0.00073)</td>
<td>0.0038† (0.00078)</td>
<td>−0.0025† (0.00096)</td>
<td>−0.0013 (0.0016)</td>
<td>−0.0041† (0.0012)</td>
</tr>
<tr>
<td>Debt Squared ($ Million)*</td>
<td>0.0049† (0.0014)</td>
<td>−0.0051† (0.0016)</td>
<td>0.0026 (0.0021)</td>
<td>0.0014 (0.0035)</td>
<td>0.0061† (0.0022)</td>
</tr>
<tr>
<td>Female*</td>
<td>−0.44† (0.075)</td>
<td>−0.17† (0.080)</td>
<td>0.080 (0.091)</td>
<td>0.27† (0.14)</td>
<td>0.12 (0.15)</td>
</tr>
<tr>
<td>Race (White Is Omitted)*</td>
<td>−0.075 (0.10)</td>
<td>−0.170 (0.11)</td>
<td>0.100 (0.12)</td>
<td>−0.049 (0.20)</td>
<td>0.46 (0.18)</td>
</tr>
<tr>
<td>Asian</td>
<td>0.0180 (0.20)</td>
<td>−0.73† (0.18)</td>
<td>0.72† (0.19)</td>
<td>0.180 (0.34)</td>
<td>0.280 (0.33)</td>
</tr>
<tr>
<td>Black</td>
<td>0.075 (0.16)</td>
<td>−0.065 (0.18)</td>
<td>−0.094 (0.22)</td>
<td>0.34 (0.26)</td>
<td>0.13 (0.34)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.040 (0.16)</td>
<td>−0.22 (0.17)</td>
<td>0.16 (0.19)</td>
<td>−0.039 (0.33)</td>
<td>0.18 (0.34)</td>
</tr>
<tr>
<td>Other</td>
<td>0.00079 (0.000910)</td>
<td>−0.00076 (0.0136)</td>
<td>0.298 (0.352)</td>
<td>0.17 (0.719)</td>
<td>−0.17 (0.719)</td>
</tr>
<tr>
<td>Female†</td>
<td>−0.59† (0.0829)</td>
<td>2.2† (1.22)</td>
<td>−0.003</td>
<td>−0.008</td>
<td>−0.008</td>
</tr>
<tr>
<td>Observations, n</td>
<td>1,825</td>
<td>1,700</td>
<td>1,700</td>
<td>1,698</td>
<td>1,700</td>
</tr>
<tr>
<td>Pseudo R²</td>
<td>0.03</td>
<td>0.06</td>
<td>0.06</td>
<td>0.07</td>
<td>0.09</td>
</tr>
<tr>
<td>Mean of Dependent Variable</td>
<td>0.184</td>
<td>0.864</td>
<td>0.088</td>
<td>0.023</td>
<td>0.021</td>
</tr>
<tr>
<td>Marginal Effect of a 0.5 Standard Deviation Increase in Debt</td>
<td>−0.031</td>
<td>0.042</td>
<td>−0.020</td>
<td>−0.003</td>
<td>−0.008</td>
</tr>
</tbody>
</table>

* Values are presented as coefficient (standard error), except when noted otherwise.
† Significantly different from 0 at the 5% level.
‡ Significantly different from 0 at the 10% level.

| TABLE 5 |

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>OWNS HIS OR HER PRACTICE</th>
<th>POOR PATIENTS AS A PERCENTAGE OF TOTAL PATIENTS</th>
<th>HOURS WORKED PER YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education Debt ($000)*</td>
<td>0.00079 (0.000910)</td>
<td>−0.00076 (0.0136)</td>
<td>0.298 (0.352)</td>
</tr>
<tr>
<td>Debt Squared ($ Million)*</td>
<td>−0.0017 (0.00183)</td>
<td>0.02 (0.0277)</td>
<td>−0.17 (0.719)</td>
</tr>
<tr>
<td>Female*</td>
<td>−0.59† (0.0829)</td>
<td>2.2† (1.22)</td>
<td>−288† (31.4)</td>
</tr>
<tr>
<td>Race (White Is Omitted)*</td>
<td>−0.46† (0.116)</td>
<td>7.8† (1.70)</td>
<td>−45.7 (44.0)</td>
</tr>
<tr>
<td>Asian</td>
<td>−0.49† (0.236)</td>
<td>17† (3.47)</td>
<td>99.9 (90.8)</td>
</tr>
<tr>
<td>Black</td>
<td>−0.33† (0.193)</td>
<td>13† (2.83)</td>
<td>83.2 (72.5)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>−0.33† (0.182)</td>
<td>4.7† (2.73)</td>
<td>−16.2 (72.5)</td>
</tr>
<tr>
<td>Other</td>
<td>−0.33† (0.182)</td>
<td>4.7† (2.73)</td>
<td>−16.2 (72.5)</td>
</tr>
<tr>
<td>Observations, n</td>
<td>1,468</td>
<td>1,417</td>
<td>1,454</td>
</tr>
<tr>
<td>R² (or Pseudo)</td>
<td>0.36</td>
<td>0.08</td>
<td>0.11</td>
</tr>
<tr>
<td>Mean of Dependent Variable</td>
<td>0.591</td>
<td>16.5</td>
<td>1,641</td>
</tr>
</tbody>
</table>

* Values are presented as coefficient (standard error), except when noted otherwise.
† Significantly different from 0 at the 5% level.
‡ Significantly different from 0 at the 10% level.
dental career choices: mother’s education, father’s education, and parents’ household income when the respondent was in dental school. Underlying the choice of these variables is the presumption that highly educated parents earn higher incomes and could be more likely to provide financial support (or financial literacy) to their children during their studies, reducing those students’ reliance on education loans. We used these as instrument variables for the amount of debt a student had at the end of dental school and repeated our analysis by using a 2-stage least squares model. This method produced similar results, although the effect of debt was smaller than in our ordinary least squares estimate. (The 2-stage least squares results are available on request.)

Our findings clearly demonstrate that some career choices are influenced by education debt. However, in our view, the magnitude of the effect of debt on career choices is small relative to the influence of demographic characteristics such as sex and race.

CONCLUSIONS

Taken together, our results reveal a correlation between the amount of debt students had at the end of dental school and 2 of the 5 career decisions that we examined. Dentists who graduated with higher debt were less likely to specialize and were more likely to enter private practice over other primary occupations, which usually have lower salaries. These results are consistent with students deciding to accept relatively high-paying jobs immediately after graduation to increase their ability to repay their debt quickly. Among dentists who entered private practice after graduating, we found no association between debt and the likelihood of practice ownership, the percentage of patients receiving Medicaid or receiving charity care, or the average number of hours worked per week. We found that debt payback times are rising, an important trend given that debt payback times are lower for students who entered dental school: mother’s education, father’s education, and parents’ household income when the respondent was in dental school.

To our knowledge, we are the first to compare the effect of debt on dentists’ career choices in the context of other factors, specifically demographic characteristics. Our findings suggest that policy makers ought to explore a broader set of strategies if they are interested in influencing the career decisions of dentists. Targeting education debt could be one of these strategies. However, given the critical role that characteristics such as sex and race play in influencing career choices, policy makers also might explore a broader set of interventions that leverage the influence of these demographic factors.

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