In the following chart we illustrate several measures for the DIR. The first (highest DIR) represents the mean of the individual debt-to-income ratios. The middle line represents the mean of the individual debt-to-income ratios adjusted to maintain a constant cohort of veterinarians over time. The last (bottom line) provides the simple ratio of the mean of all reported incomes and all reported debt. In all cases, only the incomes of those graduates with full-time employment are included and all reported debt values are included. In other words, the sample of observations of debt is larger than the sample of income from graduates with full-time employment and thus this measure is inaccurate. The first two measures are based on graduates who have both incomes from full-time employment and reported debt. The AVMA DIR that is used as a KPI is the fully weighted, individual DIR or the Real Weighted mean Index.

DEBT-TO-INCOME MEASURES

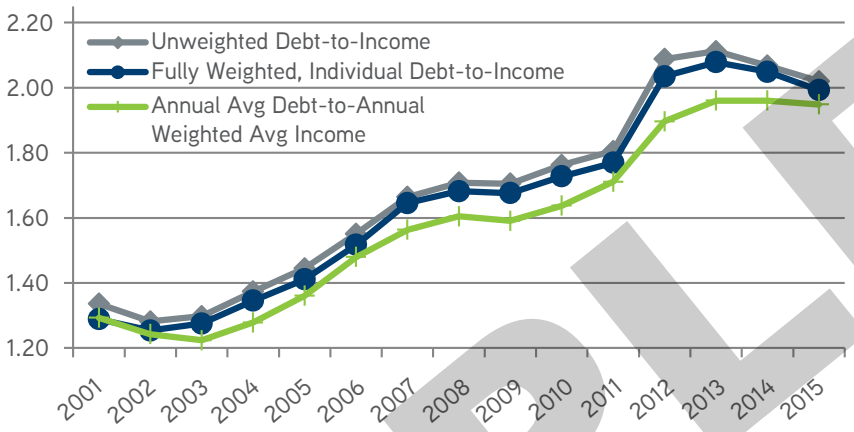

Figure 34

The debt-to-income ratio varies significantly by graduates' post-graduate plans. This is somewhat intuitive since we know that practice type is significant in explaining the variation in incomes. The variation in income can also be explained by the shifting demand for veterinarians in the respective sectors. Consequently, in order to portray an accurate picture of the debt-to-income ratio of the profession it is necessary to observe a constant cohort of veterinarians. In this way, we avoid observing the effects of a changing demographic and attributing these to economic factors.

New veterinarians pursuing public practice have had, on average, the lowest debt-to-income ratio for most of the period 2001 through 2015. In 2015 they reported a debt-to-income ratio of 1.85:1. On the other hand, new veterinarians pursuing internships had the highest debt-to-income ratio for most of the same period, with a mean debt-to-income ratio of 4.89:1 in 2015, more than double that of those pursuing employment in public practice. The debt-to-income ratio of those pursuing full-time employment in private practice was relatively low compared to other sectors, with a ratio of 2.02:1 in 2015.

DEBT-TO-INCOME BY POST-GRADUATE PLANS

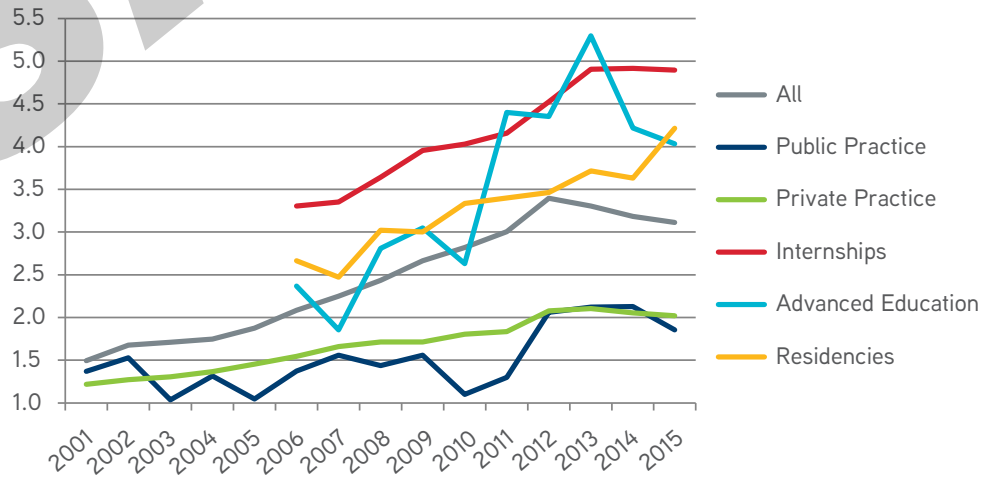

Figure 35

FACTORS SIGNIFICANT IN EXPLAINING THE DEBT-TO-INCOME RATIO

The analyses of the factors that contribute to the difference between the individual level of income and the mean income , and for individual debt and mean debt, for graduates from 2001 to 2015 have been illustrated previously. This analysis illustrates the factors that explain the differences between the DIR for each individual and the mean DIR for the sample of all graduates between 2001 and 2015 that reported income and debt. A regression of debt-to-income as a function of year, age, gender, whether the respondent had children, sought employment, received any offers, number of hours and weeks expecting to work, additional degrees held, location of anticipated place of employment, practice type, Gross Domestic Product (GDP) lagged one year, and veterinary college was performed. Results are provided in the table below.

As a baseline for comparison with the other variables in the respective groups, Texas A & M University (the university with the lowest mean debt, by school) and companion animal exclusive (the most populated sector for full-time employment) were omitted from the model.

The following factors were statistically significant in explaining the variation in the debt-to-income ratio of survey respondents, at a 5 percent level of significance: year of graduation, age, gender, whether or not respondent has children, hours they expect to work, practice type (food animal, equine, government services and university employee) and the college of graduation. The group with the most significant variables was the college of graduation. Out of 28 universities, 24 were significantly different from Texas A & M in explaining the variation in the debt-to-income ratio as a result of the school. Veterinary colleges at the University of Georgia, Purdue University and North Carolina State University had debt-to-income ratios that were not statistically different from Texas A & M.

The unstandardized coefficient indicates the change to the constant debt-to-income ratio (-1.098) attributable to each characteristic (variable). For instance, women have a .199 higher mean debt-to-income ratio than men over the 2001 to 2015 period, and each year of age adds .018 to the mean DIR.

Attending Western University adds 2.214 to the mean DIR, while attending Texas A & M, Purdue, Georgia or North Carolina State adds nothing to the mean DIR, reflecting the difference in costs of attending the colleges. However, equine practice adds .627 to the mean DIR, while taking a job in academia adds 1.262 to the mean DIR, reflecting the difference in starting salary in these different occupational paths.

The coefficients would differ considerably if only computed from the 2015 graduates, as there have been considerable changes in relative costs of education across the colleges and the starting salaries by practice types over time. The cost of tuition, living expenses and interest accumulated on debt will be compared across colleges in the following section.