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IS608 Final

The source of educational data is as follows and is located at <a href="https://www.census.gov/compendia/statab/cats/education.html">https://www.census.gov/compendia/statab/cats/education.html</a>:

- Data about Degrees earned by level and sex:
  <u>https://www.census.gov/compendia/statab/2012/tables/12s0299.xls</u>
- Data about Federal Direct Student Loans: <u>https://www.census.gov/compendia/statab/2012/tables/12s0291.xls</u>
- Data about Financial support received for private schools: <u>https://www.census.gov/compendia/statab/2012/tables/12s0294.xls</u>
- Data about Professors' salaries at private schools: <u>https://www.census.gov/compendia/statab/2012/tables/12s0295.xls</u>
- Data about private tuition: <u>https://www.census.gov/compendia/statab/2012/tables/12s0293.xls</u>

The data is available in .xls format that includes headers, footers, comments etc. This kind of data had to be cleaned manually in Microsoft Excel in order to be a useful csv file. The parameters of the dataset about Degrees earned are year, gender, and degree type (Associates, Bachelor, Masters, First Professional, and Doctorate). The parameters of the dataset about Loans are Type of assistance (Loans, grants, etc), year, and amount in millions. The parameters of the dataset about financial support are type of institution (in this case, private 4-year institutions), year and amount in millions. The parameters of the data about professors' salaries are academic rank (Professor, associate professor etc) and year. The parameters of the data about private tuition are year and amount.

The Degree data shows, for the first chart, that while both genders are each getting more degrees, the growth rate for females is staggering when looking at males. Surprisingly, the amount of degrees that males earned in 2009, for almost all the degree types, is not that much more than the amount earned in the 1970s. This is in comparison to the amount of degrees that females earned in 2009, which for all degree types is much more than the amount earned in the 1970s. If these trends continue with female degree holders outnumbering males, it could radically change the male-dominated business and professional world of today. With women only making up ~14 percent of Fortune 500 Executive Officer positions in 2013<sup>1</sup>, this number would increase as the talent pool is made up of more females.

Very interesting is the dip in amount of degrees earned for males in almost all degree types around 1980-1990.

<sup>&</sup>lt;sup>1</sup> http://www.catalyst.org/knowledge/statistical-overview-women-workplace

With respect to the second chart, the first thing you would notice is the massive spike in Federal direct student loans from the early 2000s to 2011. This is followed by a normal increasing Private financial support as well as professor salaries and tuition. Remarkably, regardless of economic conditions or the switch of male to female dominated student bodies, salaries and tuition has increased steadily over the decades. There is not even one dip at all. Each year is more than the previous. The trend suggests not only that tuition and salaries will forever increase but that there has been nothing over the years that has stop them from their rise.