



TECHNICAL APPENDIX FOR

Rising Student Debt Burdens: Factors Behind the Phenomenon

The Hamilton Project

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This appendix explains the details and data sources for the figures and calculations in the post “Rising Student Debt Burdens: Factors Behind the Phenomenon.”

Figure 1. Total Student Loans Per Year, 2002–2012

Source: [College Board](#) (2012); Federal Reserve Bank of New York Consumer Credit Panel/Equifax/Haver Analytics (2012).

Figure 2. Total Student Loans Per Year and Student Loan Delinquencies, 2002–2012

Source: [NCES](#) (2012); [College Board](#) (2012); authors’ calculations.

Figure 2 shows the breakdown between out-of-pocket costs and the quantity of loans taken out relative to net tuition. Tuition data come from the 2012 NCES Digest of Education Statistics and cover tuition, fees, room, and board for the years 1990 to 2011. Loan and aid data come from 2012 College Board *Trends in Student Aid*. All data are in constant 2011 dollars.

Average federal loans per full-time equivalent (FTE) and total federal loans data come from Table 3a in *Trends in Student Aid*. Total loans (federal and non-federal) data come from Table 4a. The number of FTEs is equal to the ratio of total federal loans to average federal loans per FTE. Average non-federal loans per FTE is equal to the quantity of total loans minus total federal loans divided by the number of FTEs. Average total loans per FTE is the sum of average federal loans per FTE and average non-federal loans per FTE.

Average aid per FTE is the sum of Average Grant Aid per FTE, Average Education Tax Benefits per FTE, and Average Federal Work-Study per FTE from Table 3a of *Trends in Student Aid*.

Average net tuition per FTE is equal to published sticker-price tuition per FTE (from NCES) minus average total aid per FTE. The average out-of-pocket cost per FTE is equal to average net tuition per FTE minus average total loans per FTE.

Figure 2 graphs average total aid per FTE (purple), average total loans per FTE (blue), and average out-of-pocket cost per FTE (green), which sum to average published sticker-price tuition per FTE.