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Hillary Clinton's Billion Dollar Idea: New College Compact

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Abstract: Undergraduate student loan debt has reached a level of $1.48 trillion dollars (student loan hero), or roughly 6% of the national debt. Of the $1.48 trillion dollars of debt, $1 trillion of the debt is in the form of federal loans, or loans as provided from the United States government (US Department of Education). The average graduate walks away with $37,172 in debt. The average interest rate on these loans is 3.8%, causing the graduate to pay $351 a month or $42,120 for the life of the loan. The burden of debt has resulted in graduates delaying life milestones such as homeownership, marriage and children, which has resulted in a drain on the gross domestic product (GDP).

The new College Compact plan as proposed by Hillary Clinton is designed to alleviate the challenges for debt repayment by allowing graduates to refinance their student loans. With private car loans at 0% (Toyota) and public student loans at 3.8%, students should be able to refinance their loans to a lower interest rate. However, interest payments are now included in the government budget. To balance the reduction in income, the government will be required to raise taxes to compensate for the loss according to the plan. The offsetting cost of raised taxes to the reduced student loan repayment will further drain the gross domestic product.

To evaluate the College Compact plan, we developed a time series of cohorts in Illinois evaluating their disposable income. Higher disposable income allows for the individuals in the cohort to participate in the life milestones of homeownership, marriage and children. Using data from IPEDS, we found 8 distinguishable major classifications. Using these classifications, we were able to create an average starting salary given the cohort's graduation year. Taking the wage growth from the Atlanta Federal Reserve, were able to establish average salaries for each cohort for the entire time period from their graduation through 2014. Using the expenditures by age, we were able to calculate the average living expense for each of the cohorts for the time period. Finally, applying the average debt repayment coupled with the tax impact, we were able to find the average disposable income on a yearly basis for each of the cohorts.

Applying the College Compact plan, we can simulate the effect of the existing cohorts' disposable income for the next 10 years. Keeping the current economic trends, the same, meaning no surprise market crashes or intense booms, we find the cohorts' disposable income declines which will result in further erosion of the GDP. Individuals without public student debt will have an increase in payments, resulting in a lower disposable income. These individuals will pay a higher tax rate without the benefit of the reduced student loan payment.

Key words: new college compact; student debt; federal loan debt refinance; Monte Carlo

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1. Introduction

Undergraduate student loan debt has left graduates financially challenged to pursue the next traditional stages of life including marriage, home buying and having children. The delay of these life milestones has become a limitation on the growth of the overall United States economy. These three life activities stimulate excess spending through spending on courtship, weddings, homes, home furnishings, and child care needs, all of which contribute to the growth of the United States economy. However, now a generation of Americans need government assistance to solve their current financial crisis. Alleviating the burden of debt will allow this group to move out of their parent's homes and start pursing traditional American life goals of marriage, home ownership and children (Bolton, 2013). Once Generation Y and the Millennial Generation begin to purse these goals, they will shift their spending from paying down student loan debt to spending which will directly stimulate the overall economy. Without assistance, this generation is trapped by the burden of overcoming their debt, thus prolonging their willingness to engage in the traditional next steps of life.

Currently the average graduate student walks away with $37,172 in student loans, most of which are backed by the United States government. Of the total student loan debt of $1.48 trillion dollars, the majority comes from federal loans or public funding at roughly $1 trillion dollars (Forbes), implying the United States government is the main source of financial backing for these students to earn their degree. The other source of funding for student debt comes in the form of private loans. The United States government has no authority to change terms or relieve debt with regards to private loans. However, something can be done with public student loan debt.

The United States government currently earns an average of 3.8% on student loan debt which they have issued, which will earn the government $38 billion dollars in revenue before accounting for student loan defaults. The income earned is put in overall United States budget (CNN). Operations have become dependent on this revenue generated from student loans. Simply forgiving student loans would create a loss in the overall budget of $38 billion, which would have to be made up through other revenue streams including raising taxes to compensate for the loss.

Hillary Clinton's New College Compact argues those with existing public student debt should either have their debt forgiven, for some specific special cases or have their debt refinanced (Clinton, 2016). Graduates given the forgiven status would be those who have served in a not-for-profit role, made consistent payments on their existing debt for over 10 years and continue to have student loan debt. Other graduates would be given opportunities to refinance their existing loan payments to reduce their overall monthly payments on student loans. The reduction of monthly payments would allow for the graduate to have higher disposable income, allowing for the graduate to pursue those traditional life goals, thus spending more money in the overall economy.

The interest rate of 3.8% has been widely debated by politicians. Many claim an interest rate of 3.8% is too high considering the current interest rate environment. One comparison which is often cited is that of new car loans being 0%. Given the depreciating asset of a car coupled with higher default rates of 19% (Fox Business); a 0% interest rate is remarkably low given the level of risk associated with the loan. Car loans which do experience default have the ability to repose the car and sell the car thus being able to recuperate some of the losses as opposed to writing off the entire car loan.

Some politicians argue an interest rate of 3.8% is incredibly low and allows for students to have access to

funding for education they wouldn't otherwise have without the United States government. The current average student loan debt default rate is 16.5% (US Department of Education). Student loan debt is different from any other debt given the lack of being able to repose a physical asset and the graduate's inability to declare bankruptcy allowing for the debt to be either repackaged or forgiven. Given the level of riskiness of being able to recuperate the loan value, an interest rate of 3.8% might not be outrageous.

Allowing graduates to refinance their public student loans at a lower interest rate would dramatically reduce income to the United States government resulting in lower capital for the operating budget. For example, a reduced interest rate to 1.5%, would generate $15 billion in revenue over the life of the $1 trillion loans, creating a deficit in the operating budget by $23 billion. To compensate for this loss either the operating budget will need to be reduced or revenue will need to be increased. The New College Compact recommends increasing taxes to compensate for this loss. Student debt holders will still have the burden of paying off the same principal of debt, again an average of $37,132 but at a less aggressive rate. These debt holders will also face an increase in Federal Taxes to compensate for the change in interest rates. Non-student debt holders will also face the challenges of an increased tax rate, thus reducing their disposable income.

The Plan calls for all Americans to assist those Americans with public student loan debt through the increased payment of taxes. The goal of the New College Compact is to alleviate those with public student debt to allow them to be able to move forward with traditional life goals of marriage, home ownership and family thus increasing their overall spending helping stimulate the United States economy. To maintain the level of operations for the United States government, the reduction of interest income needs to be offset by the increase in taxes. The net effect will result in a shifting of payments. Those with public student loan debt will experience some relief through the plan, but the relief will be limited by the increase in taxation. Those without public student loan debt will experience economic loss by the reduction of overall disposable income. The larger group of individuals without public student loan debt will reduce the growth of the United States economy more than the stimulus of those with public student loan debt.

2. Hypothesis

Evaluating the New College Compact plan to alleviate existing financial distress of those burdened with public student debt generates three distinct questions: (1) Does the plan increase disposable income for those with outstanding public student debt, after accounting for the increase in taxes? (2) Does the plan decreases disposable income for those without public student debt due to the impact of increases taxes? (3) Does the combined effect of those with and those without public student debt increase the overall level of disposable income? Having excess disposable income allows for increased spending which stimulates the overall United States economy. A large increase in disposable income for those with public student debt will allow for those individuals to move forward with life goals of moving out of their parent's basement into homes they have purchased themselves.

Hypothesis #1: Individuals with public student debt will have more disposable income after they are able to refinance their public student debt even with the increase in tax payments.

Hypothesis #2: Individuals without public student debt will have reduced disposable income after those individuals with public student debt have refinanced their student debt due to the increased level of taxes.

Hypothesis #3: The combination of those with public student loan debt and those without public student loan debt does not generate an overall increase in disposal income. Rather the combination decreases overall

disposable income.

3. Data

To evaluate the College Compact plan, we developed a single example of a student graduating in Illinois by evaluating their disposable income. We were able to create an average salary of a student graduating with a degree in liberal arts from DePaul University of $38,163 giving a monthly gross of $3,180.25. The monthly federal tax rate used was 8.33% or $359.64. Monthly social security payments were $197.18, medicare $46.11 and Illinois state tax $119.26 (Internal Revenue Service). Accounting for living in Chicago, we found the average cost of a studio apartment to be $1,078.00 with utilities at $121.16 per month. For a recent graduate we took into consideration basic necessities of life to include monthly internet, CTA pass, gym membership, cell phone and entertainment which includes dining out and recreational spending. Monthly internet is $40.14. A monthly CTA pass is $105.00 (smartasset). Gym memberships cost $57.36 a month. A cell phone bill is conservatively estimated to be $100 per month. The last line item of entertainment covers food for the graduate. We estimated $125 per week or $562.50 per month. Assuming a debt of $35,000, an interest rate of 3.8% and a 20-year term we found student loan payments to be $208.43. Finally, applying the average debt repayment coupled with the tax impact, we were able to find the average disposable income on a monthly basis for the individual to be $168.33. A recent graduate with the same living expenses will have a monthly disposable income of $376.76.

The estimated revenue from interest payments of federally subsidized student loan debt is $135 billion over the next 10 years. Assuming the revenue from interest payments are evenly distributed, we assume an annual income of $13.5 billion. This revenue represents 3.55% of the overall federal budget of $3.8 trillion. Allowing graduates to refinance their student loans would generate a loss of income to the federal government which needs to be made whole through the raising of taxes. Our model allows for 9 different scenarios of interest rates ranging from an annual interest rate of 3.8% through 0.00%. Each of these interest rates is then linked to an increase in the level of taxes. The highest raise in federal taxes of 3.55% when interest rates are refinanced at the 0% level. Table 1 demonstrates the list of interest rates and their corresponding tax increase.

Table 1 The List of Interest Rates and Their Corresponding Tax Increase

Interest rate	Tax rate
0.003167	11.309000
0.002771	11.746500
0.002375	12.184000
0.001979	12.621500
0.001583	13.059000
0.001188	13.496500
0.000792	13.934000
0.000396	14.371500
0.000000	14.809000

4. Model

Three models have been created to answer the three hypothesis questions. Using historical data in Illinois to

simulate living costs, we can generate an average level of monthly disposable income. This excess income is then assumed to be utilized in both consumption and investment, with the emphasis being on consumption.

Model #1:

$$Disposable\ Income\ Individuals\ with\ Public\ Student\ Loan\ Debt = Average\ Yearly\ Salary - Taxes - Average\ Illinois\ Living\ Expenses - Public\ Student\ Loan\ Debt\ Payment$$

Model #2:

$$Disposable\ Income\ Individuals\ without\ Public\ Student\ Loan\ Debt = Average\ Yearly\ Salary - Taxes - Average\ Living\ Expenses$$

Model #3:

$$Disposable\ Income = Disposable\ Income\ Individuals\ with\ Public\ Student\ Loan\ Debt + Disposable\ Income\ Individuals\ without\ Public\ Student\ Loan\ Debt$$

5. Results

Using a Monte Carlo simulation for the change in interest rates for refinancing we were able to generate an average disposable income for both the graduate with and without federal student loan debt. Table 2 depicts the monthly disposable income without a student loan for the DePaul graduate.

Table 2 Monthly Disposable Income with No Student Loan

DePaul Liberal Arts	
	2016
Annual Salary	$38,163.00
Monthly gross	$3,180.25
Fed tax	$359.64
SS	$197.18
Medicare	$46.11
IL tax	$119.26
student loan	
Disposable Income	$2,458.06
Rent: Studio	$1,078.00
Utilities	$121.16
Internet	$40.14
CTA Pass	$105.00
Gym Membership	$57.36
Cell Phone	$100.00
Food/Entertainment	$562.50
Disposable Income	$393.90

The average disposable income for those without a student loan is $393.30. The simulation was run 1000 times. The average disposable income for those with student loans is $232.12. Table 3 demonstrates the disposable income with the student loan payment of $351.00 giving a disposable income of $42.90.

Table 3 Monthly Disposable Income with No Student Loan

DePaul Liberal Arts	
	2016
Annual Salary	$38,163.00
Monthly gross	$3,180.25
Fed tax	$359.64
SS	$197.18
Medicare	$46.11
IL tax	$119.26
student loan	$351.00
Disposable Income	$2,107.06
Rent: Studio	$1,078.00
Utilities	$121.16
Internet	$40.14
CTA Pass	$105.00
Gym Membership	$57.36
Cell Phone	$100.00
Food/Entertainment	$562.50
Disposable Income	$42.90

Hypothesis 1:

Individuals with public student debt will have more disposable income after they are able to refinance their public student debt even with the increase in tax payments.

The average level of disposable income before the graduate is able to refinance their student debt level is $42.90. After the graduate is able to refinance their student debt the average disposable income is $17.67 or $25.23 loss in monthly disposable income. Table 4 demonstrates the change in disposable income.

Table 4 Monthly Disposable Income with Student Loan Hypothesis 1

DePaul Liberal Arts	
	2016
Annual Salary	$38,163.00
Monthly gross	$3,180.25
Fed tax	$414.70
SS	$197.18
Medicare	$46.11
IL tax	$119.26
student loan	$321.17
Disposable Income	$2,081.83
Rent: Studio	$1,078.00
Utilities	$121.16
Internet	$40.14
CTA Pass	$105.00
Gym Membership	$57.36
Cell Phone	$100.00
Food/Entertainment	$562.50
Disposable Income	$17.67

Hypothesis 2:

Individuals without public student debt will have reduced disposable income after those individuals with public student debt have refinanced their student debt due to the increased level of taxes.

The average level of disposable income for the graduate with no debt before any refinancing of their peers is $393.90. After refinancing is available, the average disposable income to a graduate with no student loan debt will be $337.59 or a loss of $56.31 a month. Table 5 depicts the monthly disposable income.

Table 5 Monthly Disposable Income with Student Loan Hypothesis 1

DePaul Liberal Arts	
	2016
Annual Salary	$38,163.00
Monthly gross	$3,180.25
Fed tax	$415.95
SS	$197.18
Medicare	$46.11
IL tax	$119.26
student loan	
Disposable Income	$2,401.75
Rent: Studio	$1,078.00
Utilities	$121.16
Internet	$40.14
CTA Pass	$105.00
Gym Membership	$57.36
Cell Phone	$100.00
Food/Entertainment	$562.50
Disposable Income	$337.59

Hypothesis 3:

The combination of those with public student loan debt and those without public student loan debt does not generate an overall increase in disposal income. Rather the combination decreases overall disposable income.

The combined income before refinancing is available is $436.80. The combined income after refinancing is available is $355.26, representing a loss of $81.20.

6. Conclusions

The level of debt accumulated from student loans which are federally guaranteed has created an interesting problem which impacts those with and without the loans. The graduates with these loans struggle with having disposable income to take the next steps in life such as marriage, home ownership and starting a family. The federal government profits from the interest payments from these student loans. This income represents roughly 3.5% of the total federal budget. We hypothesized the opportunity to refinance student loans would allow for graduates with student loans to be able to reduce their monthly payment which would allow for a higher level of disposable income even with the increase in taxes to offset the reduction of income to the federal government. We found using a Monte Carlo simulation for the various interest rate reductions graduates did not have an increased

disposable income but rather had a decrease of $25.23 a month in disposable income. Secondly we hypothesized graduates with no student loan debt would have a reduction in disposable income as the increase tax rate to offset the loss of revenue to the federal government would be shared by every tax paying citizen of the United States. Using the same methodology of a Monte Carlo simulation we found those graduates did indeed have a loss of $56.31 a month in disposable income. Our last hypothesis was the combined effect of the graduate with student loan debt and the graduate with no student loan debt would have a combined loss in monthly disposable income. Given both graduates had losses, which was unexpected, we did find the combination to also result in a loss of monthly disposable income by $81.20. The plan of being able to refinance student loan debt does not have the desired outcome of increasing the graduate's disposable income. Rather, the graduate now has a reduction thus further delaying major purchases surrounded with marriage, homeownership and the starting of a family.

References

Bolton Ruth N. et al. (2013). "Understanding generation Y and their use of social media: a review and research agenda", *Journal of Service Management*, Vol. 24, No. 3, pp. 245-267.

Available online at: https://studentloanhero.com/student-loan-debt-statistics/.

Available online at: https://www.carsdirect.com/2017/toyota/prius.

Available online at: http://college-tuition.startclass.com/l/1120/DePaul-University.

Available online at: https://www.ed.gov/news/press-releases/us-department-education-releases-national-student-loan-fy-2014-cohort-default-rate.

Available online at: https://www.irs.gov/pub/irs-pdf/p15.pdf.

Available online at: https://smartasset.com/mortgage/what-is-the-true-cost-of-living-in-chicago.

Available online at: http://money.cnn.com/2016/08/04/pf/college/federal-student-loan-profit/index.html.

Available online at: http://www.foxbusiness.com/markets/2016/07/14/more-auto-loan-defaults-expected.html.

Available online at: http://www.edcentral.org/edcyclopedia/federal-student-loan-default-rates/.

Available online at: http://affinitymarketing.com/PDF/TrillionDollarStudentLoanDebt.pdf.