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Emergency Loan Need among Graduate Students Signals Debt Trends in Higher Education May Influence the Expansion of the U.S. Economy Long-term

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Abstract. This article proposes that the rising cost of graduate education and debt may suppress interest of domestic and international students in advanced education and impact the market economy. There are three challenges indicated through emergency loan need increases that deter students from graduate education. First, intellectual and skills growth has been a path to wealth building with the cost of education modest and not a potential lifetime debt. Second, Responsibility Centered Management (RCM), galvanized due to reduction of state and federal funds to support education, may have the detrimental effect of exponentially increasing tuition and fees to maintain programs, staff, and faculty. Third, the phenomena of Nonomics evolve where the student invests the sweat equity to achieve the credentials, but lifestyle enrichment is deferred ten to twenty years due to education cost.

Keywords: Emergency loan, graduate students, US Business, RCM Model, Nonomics

1. INTRODUCTION

Top earners in the middle class with graduate degrees pay a considerable sum in taxes through purchase of goods and services. Rising emergency loan need signals that graduate education is becoming less feasible for students. McWhinnie

(2013) reports that the skyrocketing price of a college education is causing an epidemic with student loans, as more people rack up unsustainable amounts of debt to further their education. As state support to public universities diminishes commoditizing the commodity of education accelerates the importance of higher education as a key factor in wealth building. This inextricably ties the price of education to the volatility of consumer trends in the market. Kantrowitz (2009) reports that debt accumulation among graduates is increasing faster than the consumer index in today's market economy.

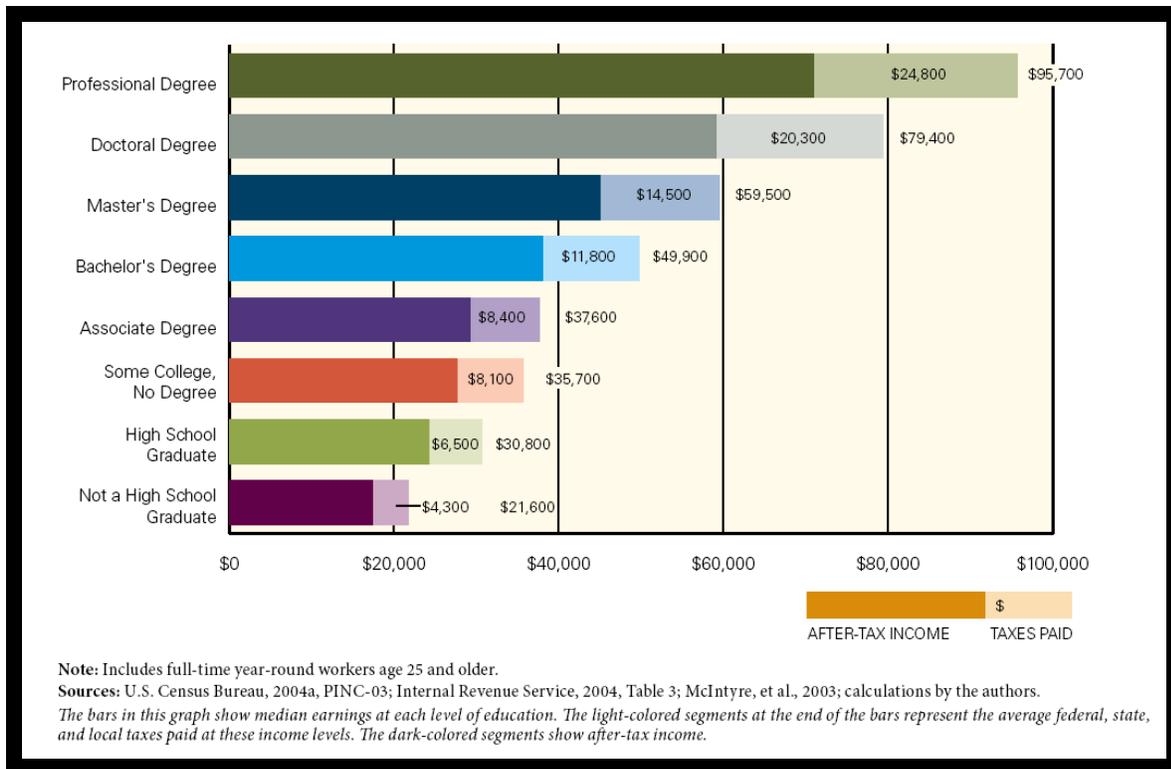
Kantrowitz (2009) points out only 47.7% of undergraduate students that have loan debt attend graduate school, whereas, 81.1% of undergraduate students without loan debt do attend graduate school. Many debt-averse students, forced to borrow to complete their undergraduate studies, may not seek the market benefit of graduate education due to loans owed. Moreover, international students from emerging economies will be unable to afford the U.S. price for graduate education. With nearly 50% of undergraduates at the affordability ledge, emergency loan need signals policy makers have little time to adjust since rising cost is subject to reducing the interest of debt-averse majority, minority and international students in graduate education.

Debt constricts expansion of the economy. Supiano (2012) reports that a growing proportion of students are borrowing too much compared with new graduates' starting salaries. Graduate students become indentured for their education cost and unable to appreciate the privilege of advanced higher education due to the stress of debt. Emotional instability with debt as the devil's advocate may propagate greater mismanagement that fully derails any opportunity of wealth building.

The loss of millions of graduate students to the uncertain turmoil of debt and the loss of undergraduates from fear of increasing education cost hurts the expansion of the market economy. Education effectively creates and maintains a strong middle class that serves as the economic engine to stimulate growth and assure systemic stability. Syverson (2001) points out that higher education not only

helps with increased income, it may also assist in decreasing or lowering unemployment. As shown by Figure 1, the ability to increase ones income and status with an associate, undergraduate, and graduate degree provides access, as well as an opportunity for the disenfranchised to contribute to expansion of the marketplace. Emergency loan need indicates that there is crumbling at the foundation of the competitive market economy as educational institutions and students grapple with rising costs without state and federal support.

Figure 1: Median Earning and Tax Payment by Level of Education 2004¹



More public institutions are state assisted versus state supported. The reduction of support from state governments requires public universities to balance their budgets by: 1) licensing their brand; 2) expanding research effort; 3) commercializing discoveries; and 4) increasing tuition and fees.

¹ http://www.collegeboard.com/prod_downloads/press/cost05/education_pays_05.pdf

2. THE RCM MODEL

To maximize use of funds allocated by the state through per capita or formula-generated semester credit hour reimbursements to public universities, executive leadership in public institutions is transitioning budget operations to Responsibility Centered Management (RCM). In the RCM model, departments are subject to a significant windfall of cash to redistribute to their academic programs. Murray (2000) points out that many worry that RCM hurts a university's spirit of collaboration in sharing of students and research grants across school and departmental lines. The weakness of the RCM program is that agencies within public institutions that do not have teaching faculty, such as undergraduate Honors colleges, graduate schools, offices of the registrar, student business services, financial aid, student affairs, provost, and president may suffer substantial budget constraints that will curtail their efficiencies.

Graduate students emergency loan need escalates in the RCM resource allocation environments as costs rise to support service staff operations. Public universities will have to use more frequently their statutory authority to increase fees to pass the operations expense on to the education consumer. Murray (2000) states that liberal arts disciplines can't earn nearly as much as the grant rich disciplines of medicine, engineering and business. Graduate students may have to borrow more from the federal government or a non-federal vendor to alleviate stress associated with rising costs of housing, food, utilities, tuition and fees. The emergency loan is used by graduate students to fill the financial gaps created by unanticipated cost increases.

Emergency loan need among graduate students may increase as more institutions move to the RCM model that will influence a rise in fees to support staffing and service initiatives in non-instructional departments. Kantrowitz (2009) analyzes that Master students have an average debt of \$25,000 and doctorate students have an average debt of \$52,000 that requires payoff to start within the year following graduation. History affirms that there is a significant loss to the

nation's economic engine when human capital is left behind and underutilized. The formulas in Figure 3 provide strong evidence that supports that in 2008, education loan debt cost the U.S. economy an estimated 18% of the nation's gross domestic earnings.

Emergency loan need signals an impending crisis related to affordability of education in the United States for international and domestic students. As consumers in the market economy, the most important purchase for the disenfranchised and majority is the expenditure of their income for higher education. The expenditure of their income for undergraduate and graduate education is more meaningful to the community and nation.

To the disenfranchised consumers around the world, education is a commodity that stabilizes a lifestyle and enhances employability. From Associate to Doctoral degrees, the contribution of education to the market economy relates to the importance of earnings that advanced training brings to the community and nation. Disenfranchised populations see education not only for intellectual value but also as a tool to promote local change and provide access to the global market.

In the reshaping (Figure 2), intellectual growth is the heart of education. This self-initiative gains the benefit of higher income potential as a by-product of participation in the learning community. Cost influences the population that may see education as a means to change the course of their family history. Emergency loan need signals with domestic and international graduate students that there is a deficiency of funds to encourage post-graduate study. This deficiency may lead to less diversity on campuses and fewer international students able to study in the United States.

Also, Figure 2 is divided into halves both vertically or horizontally. The weight of the population linked to production and employment signals that the economic contraction may create an additional tier among the disenfranchised. Individuals tossed into the malaise of economic despair due to circumstances beyond their control find recovery difficult. Debt-ridden prior to the recession and with limited savings, their efforts to retrain at an under-financed public university

or community college will make them candidates for emergency loan need prior to completion.

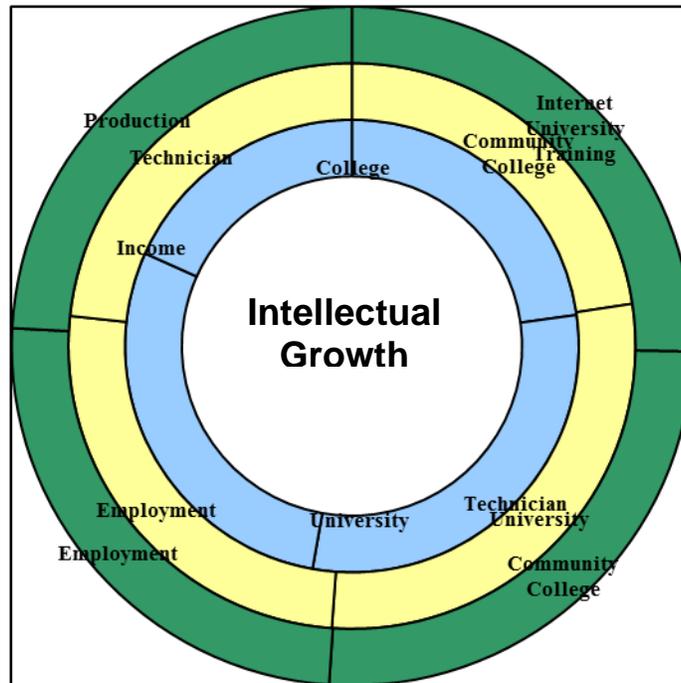


Figure 2. Reshaping the Consumption Model of Higher Education

3. NONOMICS

Graduate students entering public universities will have significant emergency loan need compounded by career debt and credit issues. Nonomics is self-inflicted predicated on the reasoning that education is good despite cost. The peril of being debt-ridden during the prime productive years has evolved with the commoditization of education as state and federal support receded. As Walters (2005) reported the gap between what students can afford to pay and the actual cost of college causes many low-income students to attend only part-time or skip advanced education altogether. When there is higher individual debt nonomics

occur because discretionary purchasing power has been absorbed to manage persistent demands on meager resources.

Nonomics as seen in Figure 3 is debt accumulation residue with zero opportunity to achieve pre-recession positive economic position. Though emergency loan programs may help them persist, Burd (2006) found that government policies designed to help federal student loan borrowers with their debt are “well intentioned but flawed.” It is a fatal notions for policy-makers to trust that student loans as a silo provide an opportunity for everyone to get a graduate education. Emergency loan need signals that the more massive the debt the less likely the graduate student may contribute to the expansion of the market economy through the purchase of goods and services.

Figure 3: The four-step approach to compute nonomics

The formulas to compute nonomics involves four-step approach:

- 1) Firstly, one computes the total loan monthly payment (Tlmp) for each individual

$$Tlmp = Smlp + Cmlp + Hinmp + Rmp + Omp$$

Legend used to compute the total loan monthly payment (Tlmp) is:

Smlp = Student Monthly Loan Payment

Cmp = Car Monthly Loan Payment

Hinmp = Health Insurance Monthly Payment

Rmp = Rent/Loan Monthly Payment

Omp = Others Monthly Payment such as phone, water, electricity bills. It should be noted that others do not include expenses allocated for shopping

- 2) Secondly, one computes the future value (FV) of the total loan monthly payment (Tlmp) for each individual.

The future value for total loan monthly payment (Tlmp) is:

$$FV = Tlmp (1 + r)^T$$

Legend used to compute the future value (FV) for each individual total loan monthly payment (Tlmp) is:

r is the interest

T is the number of years

- 3) Thirdly, one computes the sum of the future value of each individual in the market/population.

$$\sum_{j=1}^n FV_j = FV_1 + FV_2 + FV_3 + FV_4 + \dots + FV_n$$

Where FV_j is the future values for each individual total loan monthly payment; and n is the number of people that borrowed loans in the population.

- 4) Fourthly, one computes the nonomic (the percentage of the economic growth that is loss if an estimate of debt is multiplied by the population that carries debt forward).

$$\text{Nonomic} = \left(\frac{\sum_{j=1}^n FV_j}{\text{GDP}} * 100 \right)$$

Where $\sum_{j=1}^n FV_j$ is the sum of all the future values for each individual that borrow loans in the population; GDP is the country gross domestic products; and n is the number of people that borrowed loans in the population.

Syverson (2001) suggests that African Americans and Hispanics in particular are not participating in higher education in nearly the percentage they exist in the population. The researcher postulates the current demographic trend indicates that the United States will see greater enrollment and graduation disparities in the future between majority and minority populations. Syverson (2001) notes that higher education is an important gateway to careers with higher earnings, therefore, it is important that all U.S. residents have access to higher education. The emergency loan need data indicates that cost-creep influence is reshaping the learning community into a have and have not population as result of escalating debt to achieve a graduate education.

4. METHODOLOGY

The data for this study were collected using 228 graduate students who are enrolled in a large public university located in the United States of America. It should be noted that only a few students did not provide all the information that was required. The methodology used is survey methodology for the following

reasons: (1) students self-identified by completing the emergency loan need request described their financial dilemma; (2) each request was reviewed by financial aid to assess borrower status under the university loan cap; (3) students under the cap approved were subject to counseling on the loan guidelines; (4) students at their loan cap were subject to advisement where feasible and their cap was raised to provide some assistance; (5) students sign a promissory note in Student Business Services to start repayment in sixty to ninety days at an affordable monthly rate as well as receive more financial advisement; (6) the emergency loan has no interest as long as the graduate students abide by the terms of the promissory note and if the graduate students fail to abide by the terms 1% to 10% interest may be levied, and (7) each recipient had a dialog about financial planning pre- or post-approval.

For this analysis, data collection methodology came from self-identified graduate students verified to be in good academic standing able to demonstrate an emergency loan need. The data reviewed and collected from self-identified graduate students included the following:

- a. name, address, phone number, major, GPA, and social security number
- b. financial overview that was returned to the graduate student after review
- c. a signed emergency loan request with details about the resource dilemma.

The emergency loan approval is based on three fundamental criteria: (1) insurance problems, medical expenses, and health problems; (2) total household and family expenses; (3) teaching and research productivities.

Cash shortfalls contribute to emergency loan need. By paying tuition and fees an insufficient amount left may not be enough to cover food, rent, and utilities for the month. Graduate students on assistantship do not get their first check until 6 to 8 weeks later. The emergency loan for survival over that period is an inherently better deal than use of their credit card over the same period. Graduate students that have benefited from an emergency loan and repaid it seek the emergency loan in their final semester to assist with relocation costs before they receive their first paycheck. Payments are scheduled monthly to start after a sixty- to ninety-day

grace period before the first payment is due. Graduate students are given up to five years to reimburse the sum borrowed \$500 to \$2500 to the fund.

5. DATA ANALYSIS

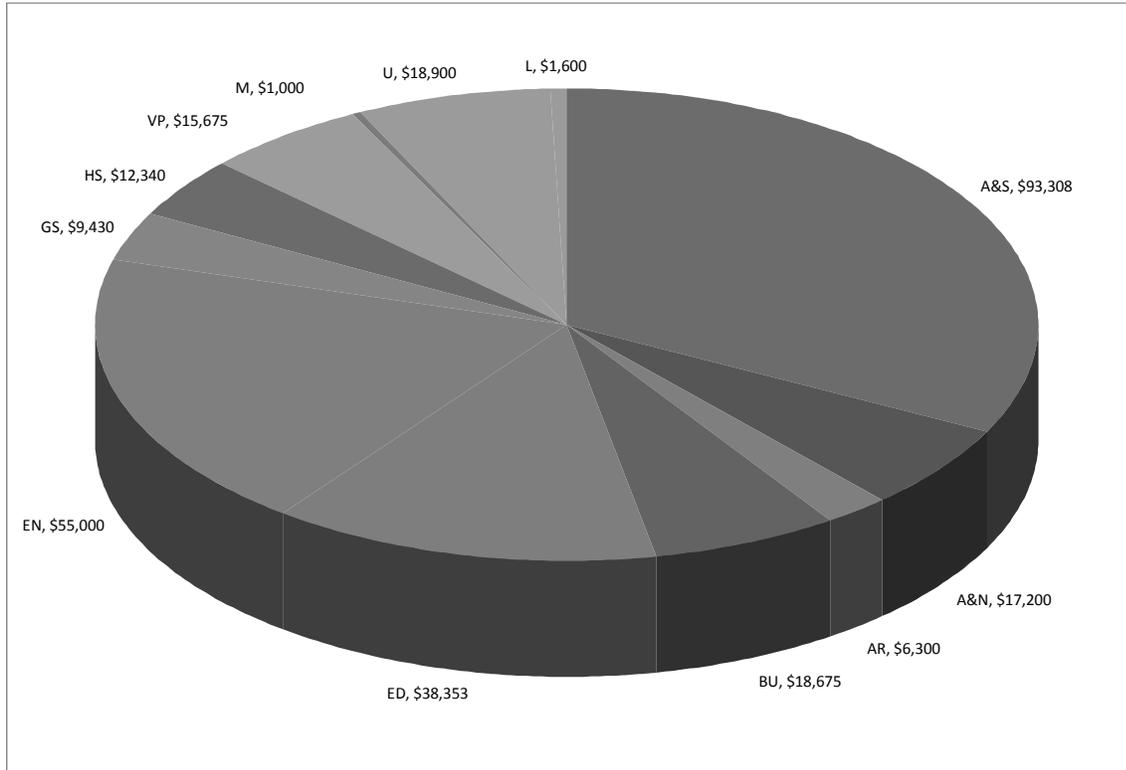
Univariate analysis was used to assess among which graduate students the emergency loan need was the most. The data strongly indicates that emergency loan need prevalence persists across a diverse spectrum of colleges, degree types, ethnicity, gender, and marital status.

5.1 COLLEGES

Figure 4 shows the total number of graduate students who are US citizens that demonstrated emergency loan need from different colleges. *Figure 4* also shows three colleges that borrowed the largest sums from the emergency loan fund: (1) College of Arts & Sciences, (2) College of Engineering, and (3) College of Education.

These results provide significant insight to graduate school deans on how to allocate financial resources based on graduate students' needs. Also, the results open the doors for future researchers to investigate specific reasons why some colleges have students who borrowed emergency loans the most. Helm (2003) reported that looming debt has forced some recent graduates to re-evaluate whether they can afford to enter rewarding but low paying professions such as teaching and social work.

Figure 4: emergency loan need by college



College legend: A & S: College of Arts & Sciences; A & N: College of Agriculture; AR: College of Architecture; BU: College of Business; ED: College of Education; EN: College of Engineering; GS: Graduate School; HS: College of Human Sciences; VP: College of Visual and Performing Arts; M: College of Mass Communication; L: College of Law; U: Unreported.

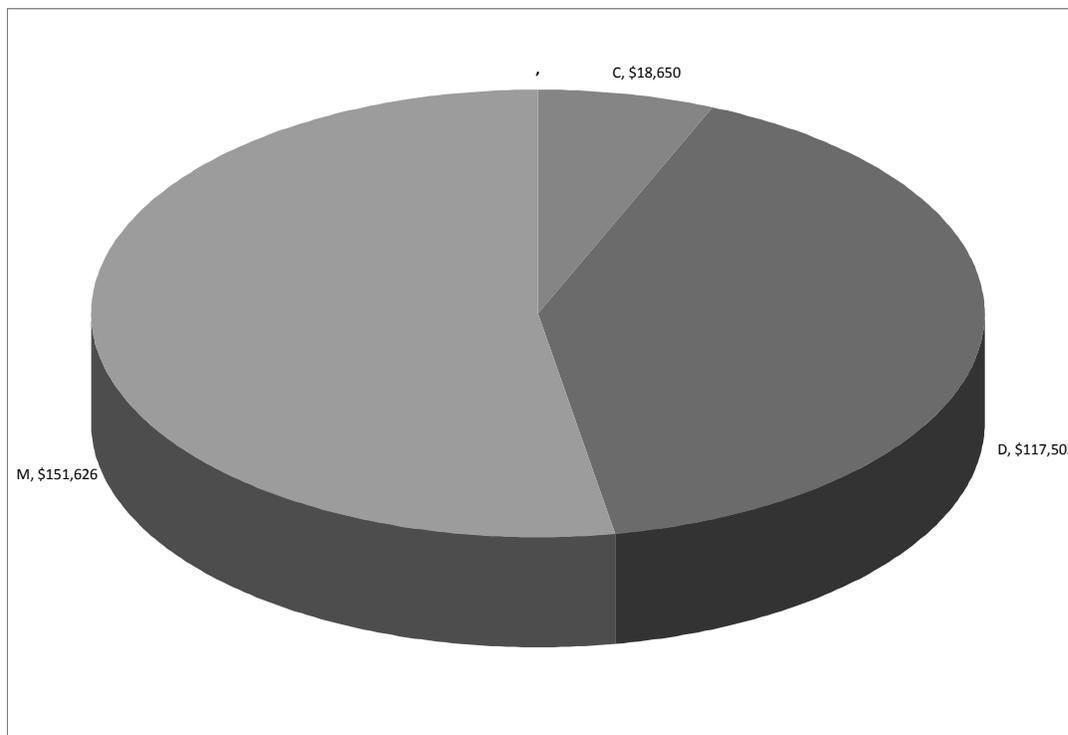
Schuman (2005) noted that the median sum borrowed by doctoral students increased faster than any other group and professional-degree recipients accrued more federal loan debt than other groups. As tuition and fees rise, graduate schools can anticipate greater emergency loan need to address unplanned cost related to energy, rent, and food.

5.2 DEGREE TYPE

In this study, for simplicity, PhD, JD, and doctor of music have been merged as the variable, doctorate. *Figure 5* shows the degree types that used access to

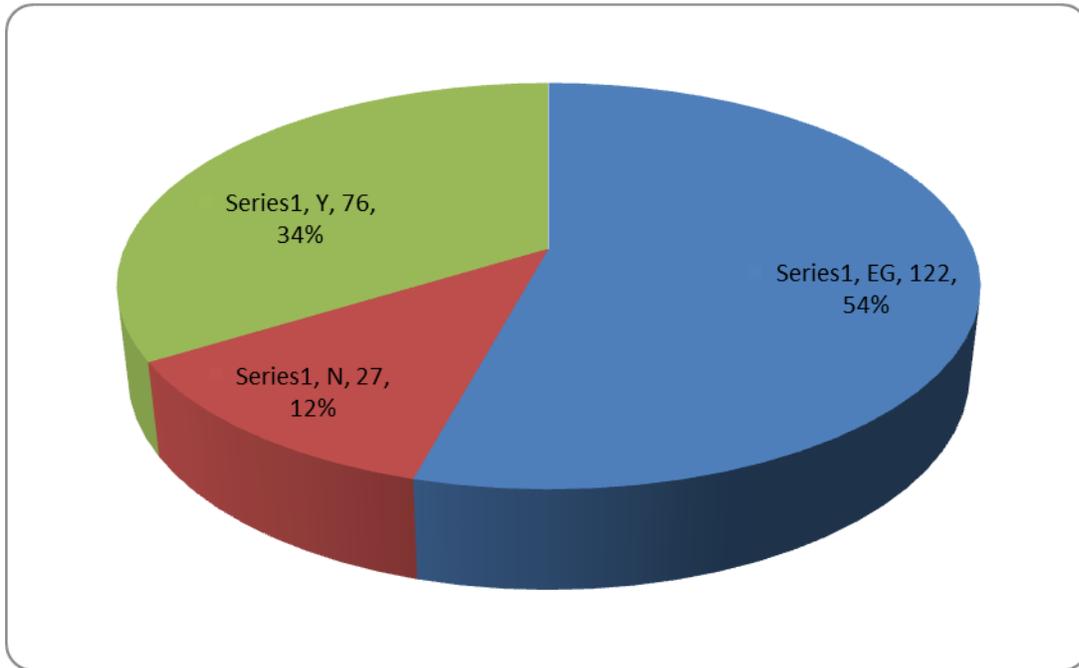
emergency loans often. From *Figure 5*, the degree type that demonstrated greatest emergency loan need is masters' students. Masters' students are less likely to get subsidized by the university through a grant or assistantship. Also, *Figure 5* shows that certificate students borrowed the least amount from emergency loans. Certificate students are working professionals seeking a credential that may increase their chance for promotion. *Figure 6* shows the percentage of graduate students that took emergency loans that have graduated.

Figure 5: emergency loan need by degree type



Degree type legend: C: Certificate; D: Doctorate; M: Masters

Figure 6: Percentage of graduate students with emergency loans that graduated or are still in school



Graduation type legend: Y: graduated; N: dropped out of school; EG: still in graduate school

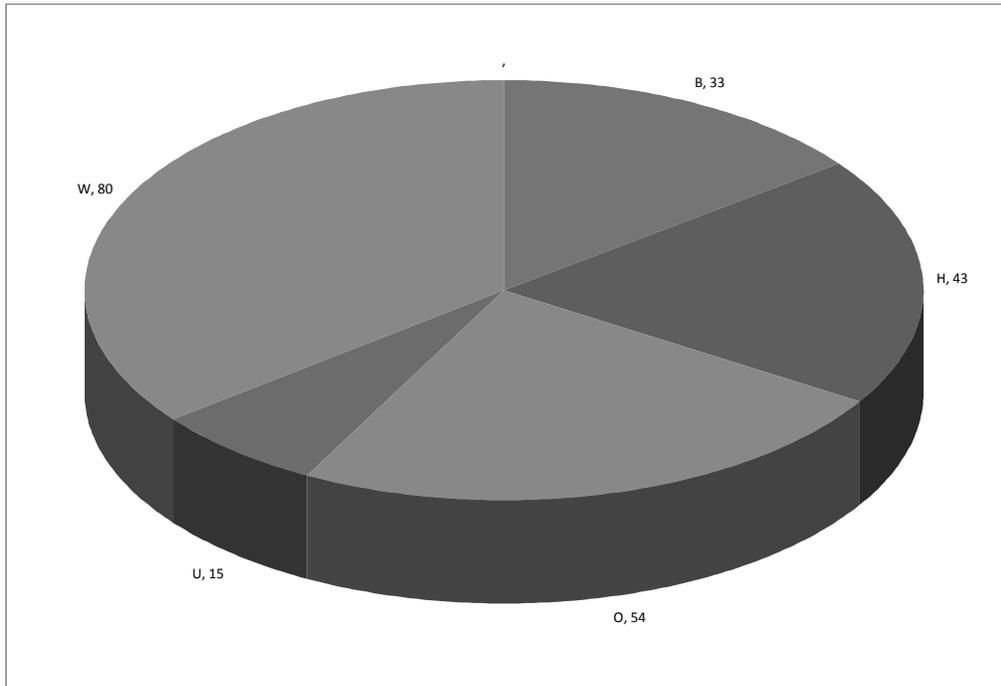
5.3 ETHNICITY

Figure 7 shows the number of different ethnic groups that had emergency loan need. Students of color are debt-averse. Malveaux (2004) observed that graduate students of color are vulnerable in a system that already treats graduate students unfairly, and few will be motivated to galvanize around the plight of the overworked and underpaid graduate employee.

Figure 8 presents that White students have the highest emergency loan need compared to other ethnicities. Asian and White students have less aversion to expressing their emergency loan need to resolve an immediate financial problem. Hispanic and African American students are debt-averse. The aversion can be significant enough that Hispanics and Blacks will opt out of going to graduate school to avoid the creation of more academic debt. St. John (1998) reported that Black students were carrying a lighter debt load than their White and Asian peers.

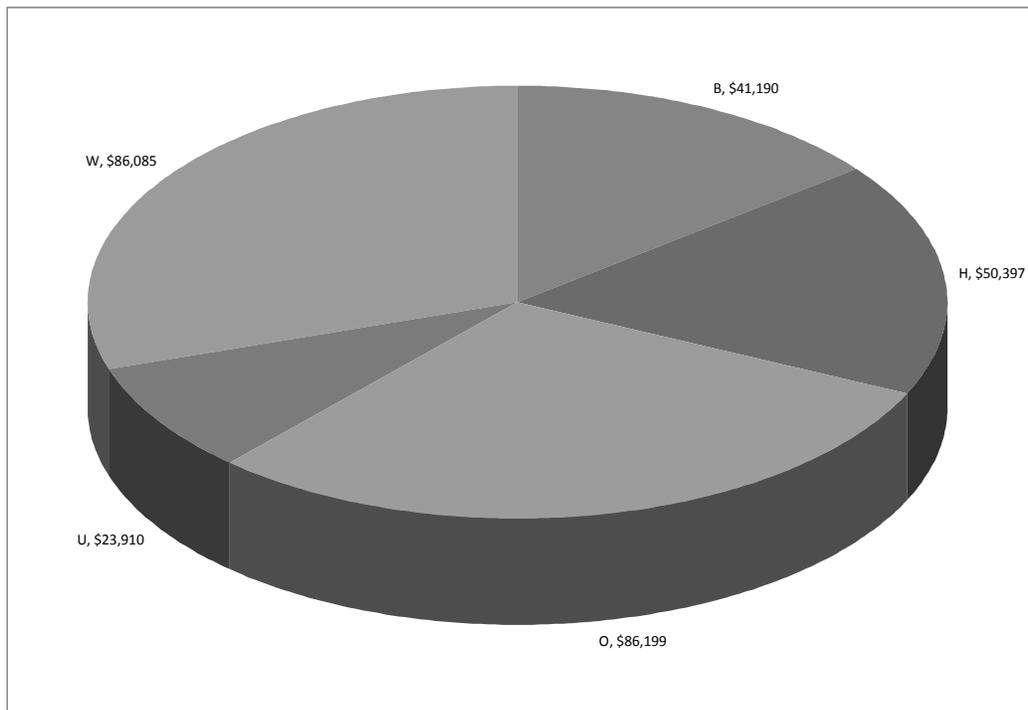
Additionally, 59% of African American student borrowers felt extremely or very burdened by student loan payments.

Figure 7: emergency loan need by ethnicity



Ethnicity legend: B: Black; H: Hispanic; O: American Asian; W: White; U: Others including unreported

Figure 8: emergency loan need sums by ethnicity

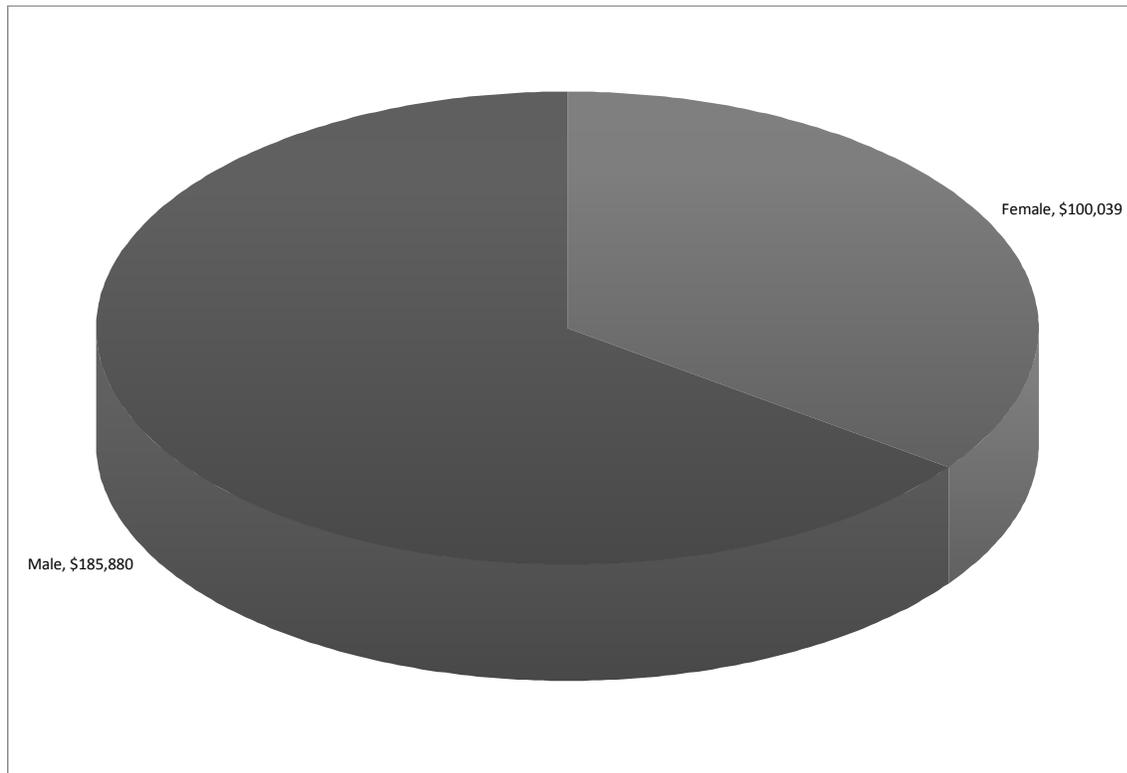


Ethnicity legend: B: Black; H: Hispanic; O: American Asian; W: White; U: Others including unreported

5.4 GENDER

Figure 9 shows that emergency loan need is high among males; and that male emergency loan need is nearly twice the value of need requested by females. The percentage of males and females that are in graduate schools is approximately the same. Our study opens the door for future researchers to investigate why males have a greater emergency loan need compared to females. Churaman (1992) noted that 70% of students from female single-parent families received financial aid versus 47% of from male single-parent families, and 44% from two-parent families.

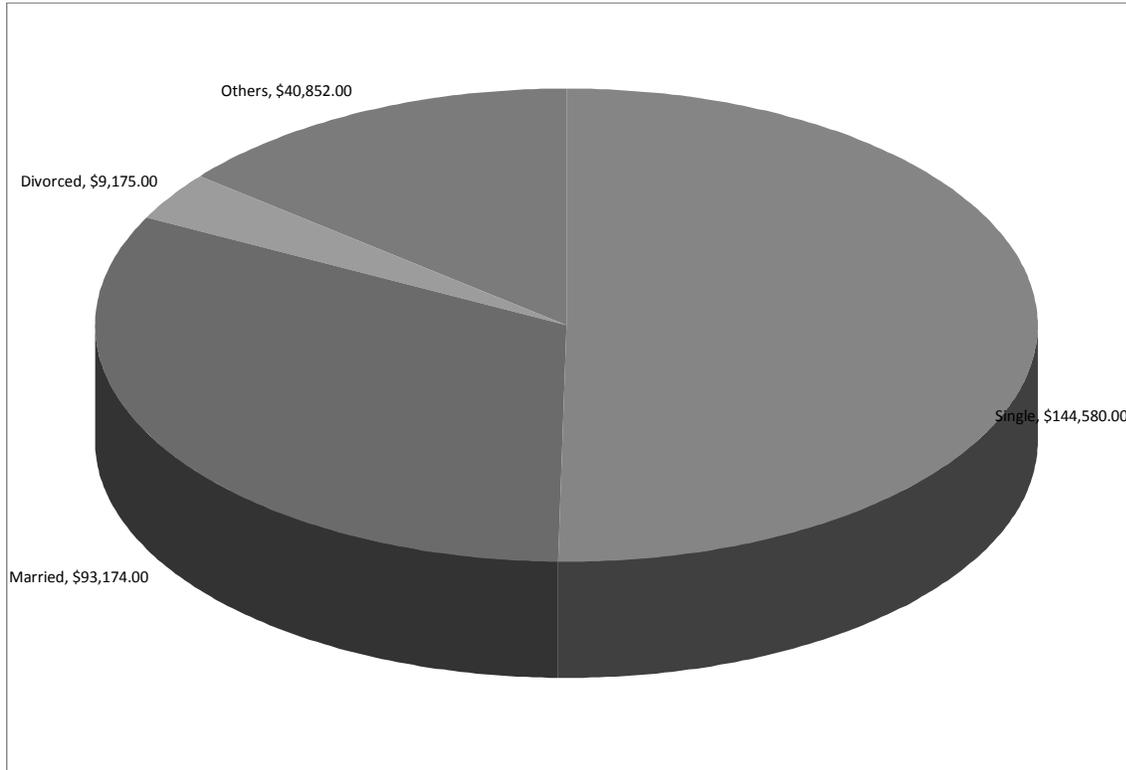
Figure 9: emergency loans need sums by gender



5.5 MARITAL STATUS

Figure 10 reflects that single students have greater emergency loan need than couples. One of the reasons why singles borrowed more from emergency loans is that in graduate schools there are more single students. Our study opens the door for future researchers to investigate specific factors that influences graduate students in the different types of marital states that borrowed from emergency loans.

Figure 10: Sum by marital status of emergency loan need request



6. Conclusion

This research indicates that the nation may be facing a significant challenge in training graduate-educated leadership for the future. Emergency loan need affirms that stop-gap revenue is necessary to address unanticipated expenses. However, it also identifies that graduate students are under persistent financial stress. This brings to the surface a detrimental issue in the way graduate education is financed. The nation may lose ground with the diversity agenda because fewer debt-averse students from communities of color will want to borrow higher sums to achieve a graduate or professional education.

To address some of the challenges in graduate schools, we investigate the trends in higher education that cost the gross domestic products. Our study has three main practical implications: first the educational model provides insights on how variables (employment, income, production, internet, etc.) reshape and influence education; second, our study provides insights that emergency loans serve

as signals that educational loans' debt is costing the US economy; and finally, if these challenges are not addressed immediately, our study provides insight that the RCM could lead to significant problems in graduate schools.

The non-traditional population victims of the recession may be graduate education ready but debt-ridden; attempting to complete an advance degree produces a zero-sum outcome for them. This is nonomics where you spend more to owe a greater sum without relief from the financial distress that generated the environment of instability. The great American tragedy over the next ten to twenty years may be not creating avenues for people that are victims of loss production and technical jobs to re-enter science, technology, engineering, and math programs in graduate schools. This is a disciplined domestic population that trained can become professors, entrepreneurs, and highly valued personnel in corporate and federal research programs. If taxed due to the un-rabbling of the economy, this talented population will enlarge the employed working poor populace unable to contribute to economic expansion and add to the resource drain on the economy through the use of social services just to sustain their families.

Responsible Centered Management (RCM) is a program and cost management strategy equal to others that have come and gone. The purpose of this strategy is to more effectively manage the scarce resources that states allocate to universities. If RCM becomes a redistribution of funds to reward high performers, this works as long as there is a set-aside to insulate institutions from the need to increase fees. RCM is not an improvement when students have to borrow more and have emergency loan need to sustain them through completion. Though debt forgiveness programs may assist, they do not address the fundamental problem of being indentured to debt for ten to twenty years while raising a family or trying to build a small business.

The research team acknowledges that the insight of Mr. Dane Ferguson contributed to the clarity of the data. As a human resource specialist, his perceptions about the non-traditional students helped make clearer stresses related to the notion of retraining to start-over.

In summary, the research raises many questions that other researchers may refine to broaden our understanding of the role played by debt in the acquisition of graduate education. The core question for us may be that the shift toward commoditization of education undermines the esteemed republican values that contribute to a thriving market economy. It is a clear fact that what the nation is doing to underwrite graduate education has a trap-door of high debt that does more to steal the future than inspire achievement.

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