

Office of Institutional Research

A Description of Financial Aid Offered to New Fall 2010 Students And the Relationship to Retention

Abstract

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The purpose of this study was to describe the financial aid that new students were offered and to present information on the relationship among types of aid offered, amount of unmet need, and retention one year later for fall 2010 first-time-in-college (FTIC) students and transfer students. The study was based on the 93% (N=2,320) of new first-time-in-college (FTIC) students and 76% (N=858) of new transfers who were offered financial aid awards for 2010.

The aid packages for new first-time-in-college (FTIC) students differed significantly from offers to new transfer students. In particular, new transfer students were more likely to be offered a grant (63% vs. 47%) or a loan (87% vs. 74%). Transfers were less likely than FTIC students to be offered a scholarship (13% vs. 63%) or a waiver (9% vs. 19%). Despite the financial aid offer, 58% of FTIC students and 77% of transfers still had unmet need, even when loans were included as part of the package. Many Boise State students came from very modest means, as indicated by an expected family contribution (EFC) of \$0 for 40% of the fall 2010 new students. Although the aid offer initially decreased as EFC increased, the aid offer then increased so that FTIC students whose EFC was more than \$25,000 had an average aid package that exceeded all but those students with an EFC of \$5000 or less. These findings appear to be due to the emphasis placed on measures of merit rather than need awards for new Boise State students. Most scholarships and waivers are based first, and often solely, on measures of merit. In addition, the state of Idaho awards fewer grants dollars compared to most other states, and, unlike most other states, bases most of the awards on merit than on need.

Modeling the relationship between retention, financial aid offers, and financial need proved complex because of the strong inter-relationships of the variables. Though the same model held for FTIC students and transfers, separate analyses were needed for Idaho residents compared to non-residents because no Idaho resident could receive waivers, and non-residents received fewer scholarships. As a result, the final models for residents and non-residents were decidedly different. For Idaho residents, (i) scholarships were associated with increased probabilities of returning, and (ii) unmet need and being a FTIC student (compared to a transfer) were associated with decreased probabilities of returning. For non-residents, (i) a Gem waiver was associated with increased probabilities of returning, and (ii) loans and unmet need were associated with decreased probabilities of returning. It should be noted, however, that these variables serve as stand-ins for a variety of other factors that could also affect retention. For example, students with more loans may also have had fewer scholarships. Scholarships are merit-based awards given to students considered to be more academically prepared for college, based on their test scores and high school GPAs, and test scores and high school GPAs are modestly related to retention.

A Description of Financial Aid Offered to New Fall 2010 Students And the Relationship to Retention

Financial aid often plays an important role in students' decision first to choose Boise State and then to continue to enroll over time. Follow-up surveys of students who did not return to Boise State have confirmed that financial difficulty was one of the main reasons that students did not return¹.

The Financial Aid office oversees the awarding of hundreds of millions of dollars in student financial aid each year. For the fall of 2010, for example, over \$145 million was offered in financial aid to Boise State students through the office of Financial Aid. The two primary criteria for award decisions are "merit" and "need." The measures of merit most typically used for entering students are high school GPA and standardized test scores.

"Need" is based on the ability of the student (or the family of the student) to pay for the cost of education. For each student, the Financial Aid Office calculates a "cost of attendance," which is an estimate of the total cost of attending Boise State, including tuition and other fees, living expenses, books, and transportation. Then, based on the parents' income if the student is a dependent (or student's income if the student is married or 24 or older), the "expected family contribution" or "EFC" is calculated based on federal rules. The expected family contribution (EFC) could be as low as zero for students whose families were low-income or as high as to cover the entire cost of attendance. The expected cost of attendance minus the EFC results in the "original need," which is the measure of need that is used for awarding need-based financial aid. "Unmet need" is the original need minus the financial aid offer.

This study includes the six basic types of financial aid awards: grants, loans, scholarships, waivers, work/study, and athletic awards. Most grants awarded are need-based Pell grants, and students offered these awards are eligible because of their lower income levels. Merit awards include scholarships and waivers. Most scholarships are awarded to Idaho residents, and waivers are limited to non-residents. Idaho residents with a 3.0 high school GPA are eligible for Idaho's Promise Scholarship worth \$400 for fall 2010. A majority of other scholarships offered by Boise State also are awarded to residents on the basis of merit, though some are based on a combination of merit and need. It must be noted that 2010 was an unusual year for scholarships because the Albertson's Foundation gave Boise State about one million dollars to distribute as scholarships. Most scholarships have been awarded for one year only, though a few were for multiple years if students continued to meet GPA requirements (more multi-year scholarships were offered for 2011). Waivers include Gem waivers, which provide a full waiver of out-of-state tuition worth about \$9450 per year, and Western Undergraduate Exchange (WUE) waivers, which provide a partial waiver of out-of-state tuition worth about \$6400 per year. Waivers are awarded based on merit, that is, test scores and high school GPA, and cover multiple years. Several waiver restrictions based on major and home state exist, especially for the WUE, which is limited to western states. Athletic awards are another merit-based form of award. Work/study is neither need- nor merit-based, yet often is awarded to lower income students as part of an effort to meet their financial need.

¹ See for example, RR 2012-12 titled "Why students do not return to or withdraw from Boise State" on the IAAR website <http://iassess.boisestate.edu/wp-content/uploads/2012/05/RR-2012-02-Why-Students-Do-Not-Return-to-Boise-State.pdf>

For students who were new full-time enrollees in fall 2010, the group included in this study, 93% of the first-time-in-college cohort and 76% of the transfer cohort received some form of financial aid. The purpose of this study was to describe the financial aid that new students were offered and to present information on the relationship among type of aid offered, amount of unmet need, expected family contribution (EFC), and retention one year later for fall 2010 first-time-in-college (FTIC) students and transfer students.

Financial aid awards that new students were offered and their unmet need

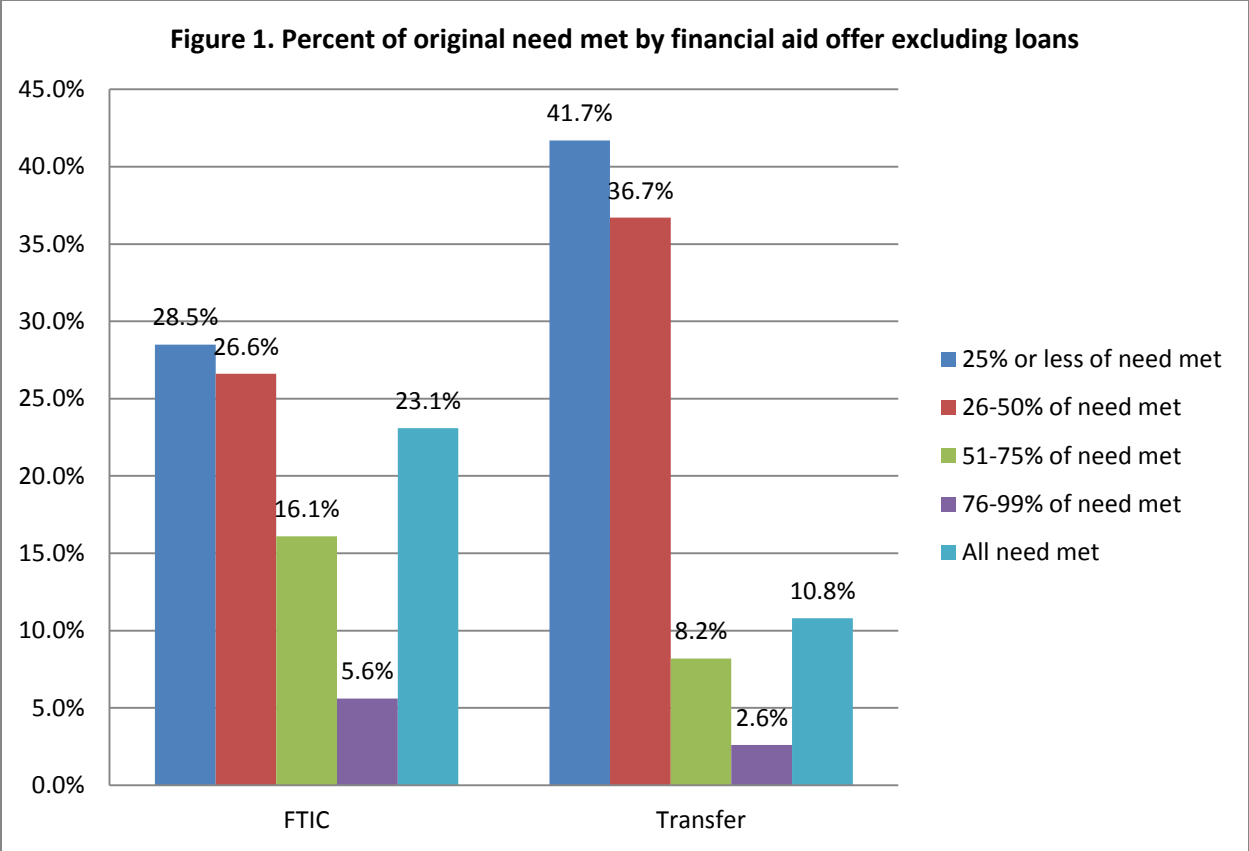
The following information is based on the 2,320 first-time-in-college (FTIC) students and 858 of new transfer students who were offered some form of financial aid for the 2010-11 academic year. As shown by Table 1 below, loans were the most frequent aid type that both FTIC and transfer students were offered. For FTIC students, 74% were offered a loan and 63% were offered a scholarship. For new transfers, 87% were offered a loan and 63% were offered a grant as the second most popular form of aid. Very few transfer students (13%) were offered scholarships. Athletic awards were the least common form of financial aid, offered to only 3% of FTIC students and 1% of new transfers, and had the highest average offer amount.

Table 1. Type and average amount of financial aid offered to fall 2010 new students based on all new fall 2010 students who received an aid offer

Aid Type	First-time-in-college (N=2,320)			New transfer (N=858)		
	Percent offered this aid type	Mean amount if offer made	Std deviation	Percent offered this aid type	Mean amount if offer made	Std deviation
Athletic	2.7%	\$13,079	\$8,229	1.3%	\$13,931	\$8,399
Grant	46.6%	\$4,915	\$1,714	62.8%	\$4,531	\$1,910
Loan	74.2%	\$6,703	\$3,850	86.8%	\$8,388	\$3,895
Scholarship	62.8%	\$1,607	\$2,596	12.8%	\$2,939	\$3,177
Waiver	18.6%	\$7,996	\$1,346	8.7%	\$7,293	\$1,517
Work/study	9.3%	\$3,868	\$503	9.2%	\$3,954	\$209
Any aid	100.0%	\$10,474	\$6294	100.0%	\$11,667	\$5437

Despite the financial aid package that they were offered, 58% of first-time-in-college (FTIC) students still had unmet need when loans were included as part of the offer package, and 77% had unmet need when loans were excluded. For new transfers, the figures were 70% when loans were included and 89% when loans were excluded from the calculations. As shown by Figure 1, over half of the FTIC students and over three-quarters of new transfer students had 50% or less of their financial needs met by the aid package that they were offered. For FTIC students offered financial aid, the average unmet need was \$7,546 when loans were included and \$10,026 when loans were excluded. For new transfer students, the average unmet need when loans were included was \$6,594 and \$11,885 when loans were excluded.

Figures 2 and 3 and Table 2 display the amount of unmet need beyond the financial aid offer along with the total aid offer when loans are excluded based on the level of expected family contribution. Negative numbers indicate that need still remains and positive numbers indicate that the offer exceeded financial need, typically due to a merit award such as scholarship, waiver, or athletic award.



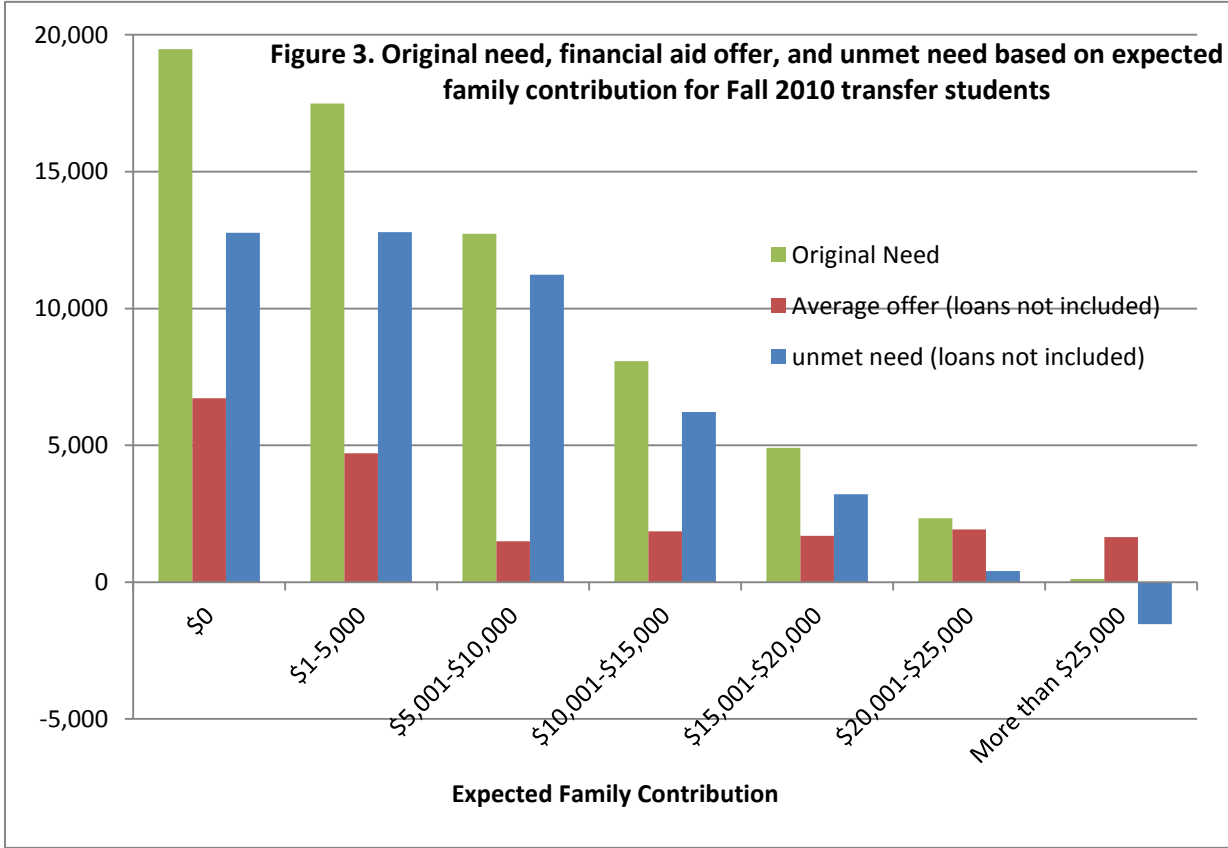
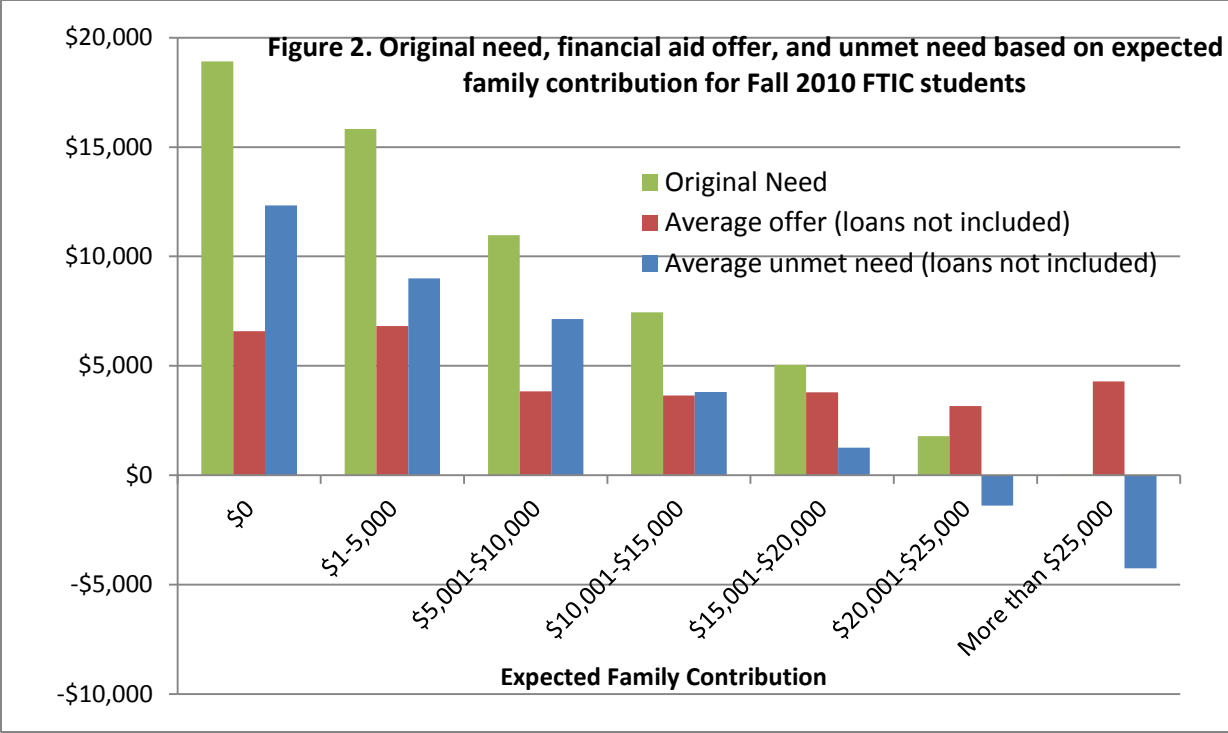
If aid were completely need-based, the figures and table would show the aid offer to be closely related to the EFC: students with high EFC would receive little if any aid; those with low EFC would receive the most aid. However, the relationship between EFC and the aid offer is not straightforward, especially for first-time-in-college (FTIC) students. Although the aid offer initially decreases as EFC increases, the aid offer then increases so that FTIC students whose EFC is more than \$25,000 have an average aid package that exceeds all but those students with an EFC of \$5000 or less. Because there is only weak correspondence of the aid offer to EFC, there remains a strong upward trend in the unmet need as EFC decreases.

Transfer students show a somewhat different trend (see Figure 3). Average offer is substantially higher in students with lower EFC than in those with high EFC, with the result that there is some leveling off of Unmet Need at low EFC values. Recall that transfer students are also less likely to receive an offer of a scholarship or waiver compared to FTIC students, which are both merit-based.

Table 2. Average financial aid offer without loans and amount of unmet need based on level of expected family contribution (EFC)

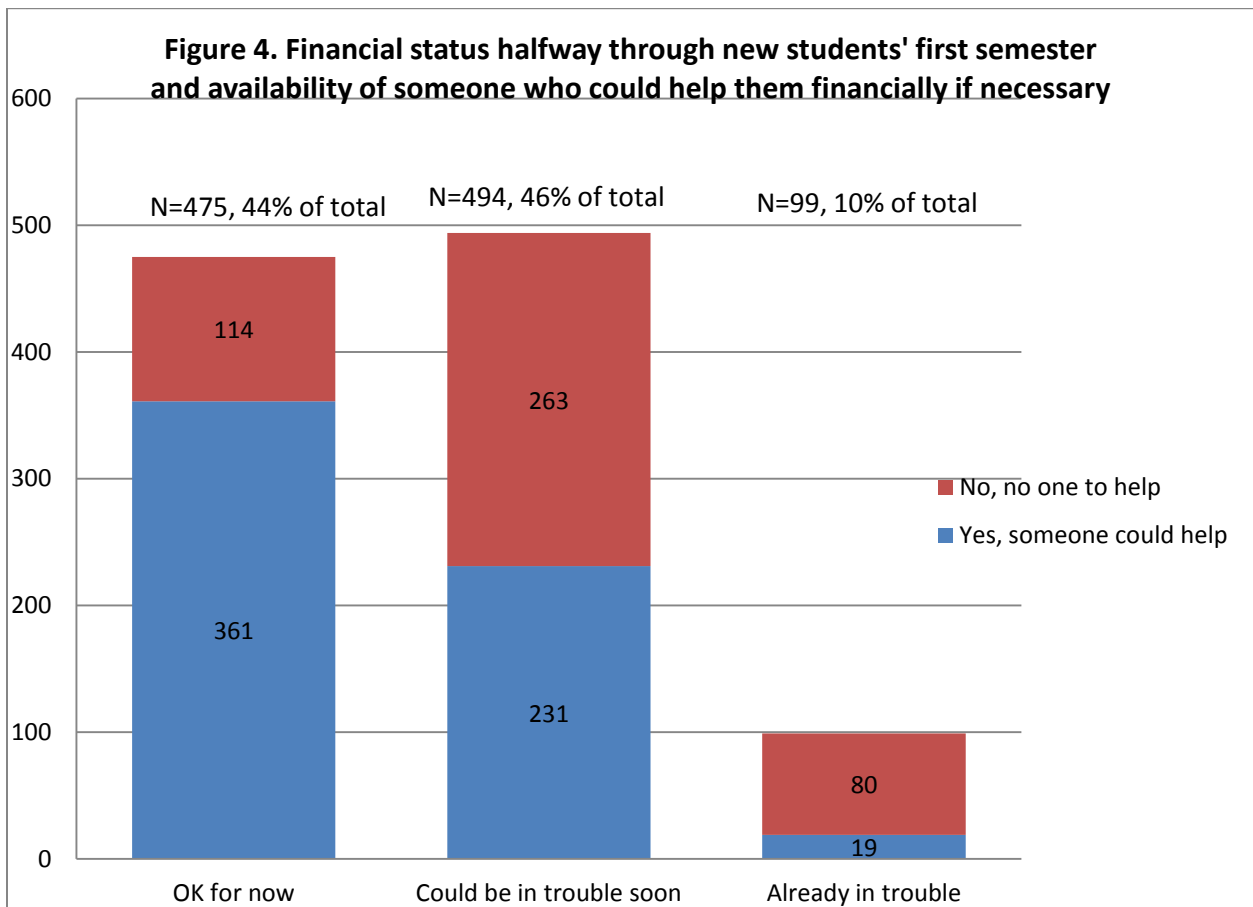
Expected family contribution (EFC)		FTIC		TRANSFER	
		Unmet need when loans are excluded	Aid offer (without loans)	Unmet need when loans are excluded	Aid offer (without loans)
\$0	Mean	-12,327	6,585	-12,762	6,721
	N	832	832	308	308
	Std. Deviation	5617	5006	4782	3746
\$1-5000	Mean	-9,004	6,818	-12,787	4,709
	N	516	516	261	261
	Std. Deviation	5108	4428	5244	3563
\$5001-10,000	Mean	-7,134	3,831	-11,234	1,500
	N	257	257	120	120
	Std. Deviation	5098	5049	5506	2820
\$10,001-15,000	Mean	-3,807	3,641	-6,217	1,861
	N	182	182	47	47
	Std. Deviation	4589	4769	5298	3685
\$15,001-20,000	Mean	-1,265	3,792	-3,217	1,694
	N	141	141	41	41
	Std. Deviation	4192	4771	4242	2776
\$20,001-25,000	Mean	1,379	3,166	-411	1,928
	N	90	90	29	29
	Std. Deviation	3735	4305	3381	3735
MORE THAN \$25,000	Mean	4,246	4,283	1,533	1,652
	N	302	302	52	52
	Std. Deviation	4885	4910	3029	3058

Note: Unmet need was calculated by summing all of the award offers except loans and subtracting that amount from original need. A negative number indicates that need exceeded the offer package, and a positive number indicates that the offer exceeded the need.

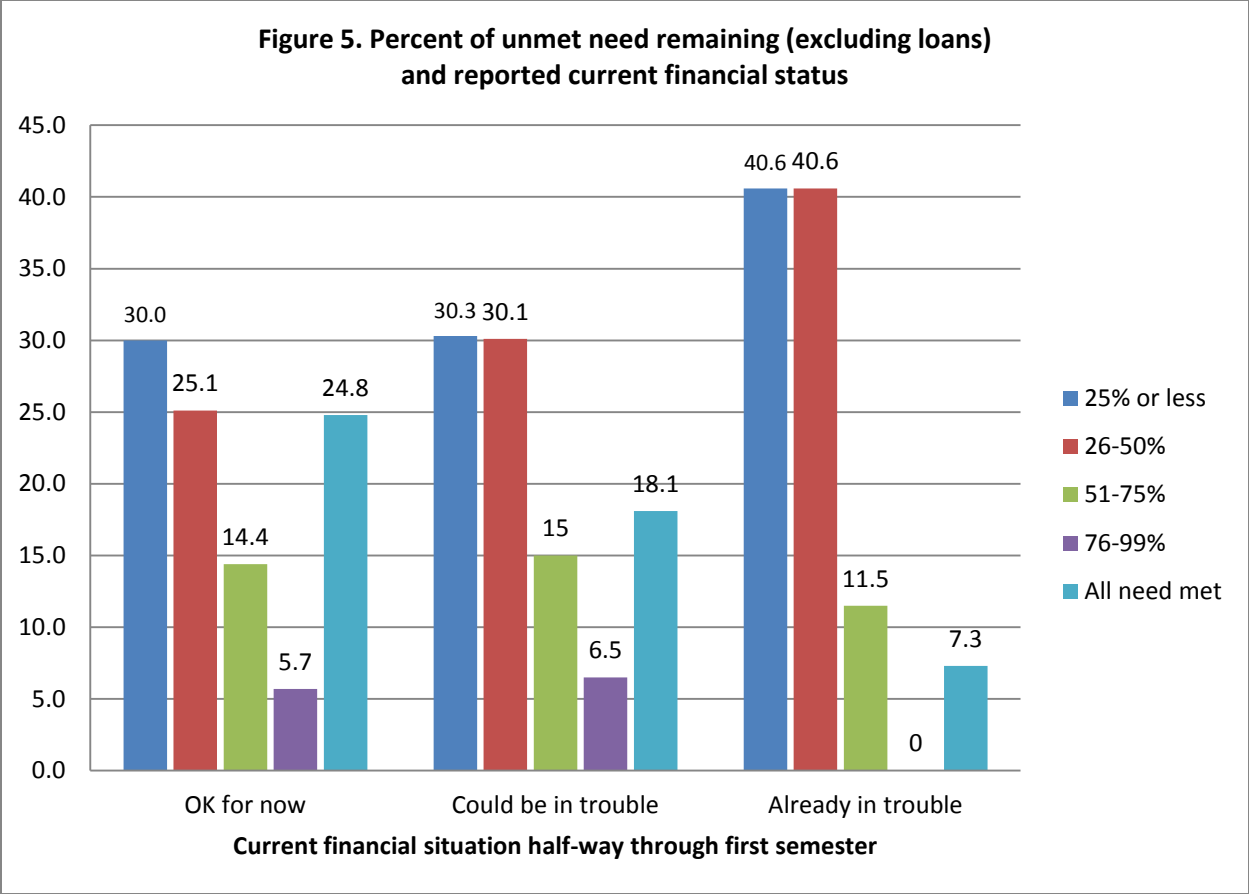


What new students reported about their financial situation during their first semester

Students who were new to Boise State in fall 2010 were asked mid-way through their first semester to take a survey about their first semester experiences. A total of 699 or 28% of the FTIC group and 384 or 34% of new transfers responded to the survey. Two questions were directed toward students' financial status during their first semester. One question asked what their current financial situation was; a follow-up question asked if they had anyone they could turn to for financial help if needed. As shown by Figure 4 below, 44% of the respondents described their current financial situation as "I'm OK for now; no changed needed." An additional 46% described their current financial situation as "I need to find a way to get more money or I'm going to be in trouble." The remaining 10% described their situation as "I'm already in trouble." In addition, as shown by Figure 4, students who were most in need of financial help were also least likely to have it available.



What is the relationship between students' reported financial situation and amount of unmet need remaining after their financial aid offer? As shown by Figure 5, students whose financial situation was currently "OK" were most likely to have all of their need met (24.8% of the "OK" group). In contrast, only 7.3% of the "already in trouble" group had their need met. Over 80% of students who were already in trouble had half or less than half of their financial needs met by their financial aid packages when loans were excluded compared to 55% of the currently "OK" group.



Relationships among need, financial aid and retention

For students who received a financial aid offer, what is the relationship between receiving different types of financial aid, need, and retention one year later? Which variables best predict whether or not a student will be retained? The first question can be answered by looking at each financial aid variable in relation to the percentage retained. The second question requires studying the relationships among all of the financial aid variables in order to decide on the “best” set to include in a model to predict retention.

Table 3 displays the simple relationships between offering each of the six types of aid and the percentage retained one year later. The most dramatic difference in retention rates between aid recipients and non-aid recipients was found for athletic awards where 90.5% of new student athletes receiving an offer of athletic aid were retained compared to 68.0% of students who were not offered athletic awards. By comparison, virtually no difference in the percent retained was found for students offered work/study compared to those who were not offered it. Contrary to expectations, an offer of a grant or loan was associated with lower retention rates; however, this result may be an analytical artifact as discussed below.

Note again that these are “simple” relationships, meaning that only these two variables are considered and any other factors that might affect retention because they are related both to retention and the variable under consideration are hidden. For example, because grants are

associated with lower retention rates, does that mean that we could improve our retention rates by not offering grants any longer? Or is it more likely that the factors related to receiving the grant (e.g., lower socioeconomic status and first-generation to attend college) are playing a hidden role in the outcome of lowered retention rates for this group? Receiving an offer of work/study monies was unrelated to retention. Perhaps there is no relationship. However, anecdotal information indicates that at least some students are not using the money offered through work/study, either because they could not find a work/study or because they did not wish to use the monies.

Table 3. Percent retained one year later based on type of aid offered

Aid Type:	Percent retained who:		
	Were not offered this aid type	Were offered this aid type	Significance level
Athletic	68.0%	90.5%	***
Grant	71.8%	65.3%	***
Loan	73.1%	67.2%	**
Scholarship	67.7%	69.3%	ns
Waiver	66.0%	81.7%	***
Work-study	68.5%	68.4%	ns

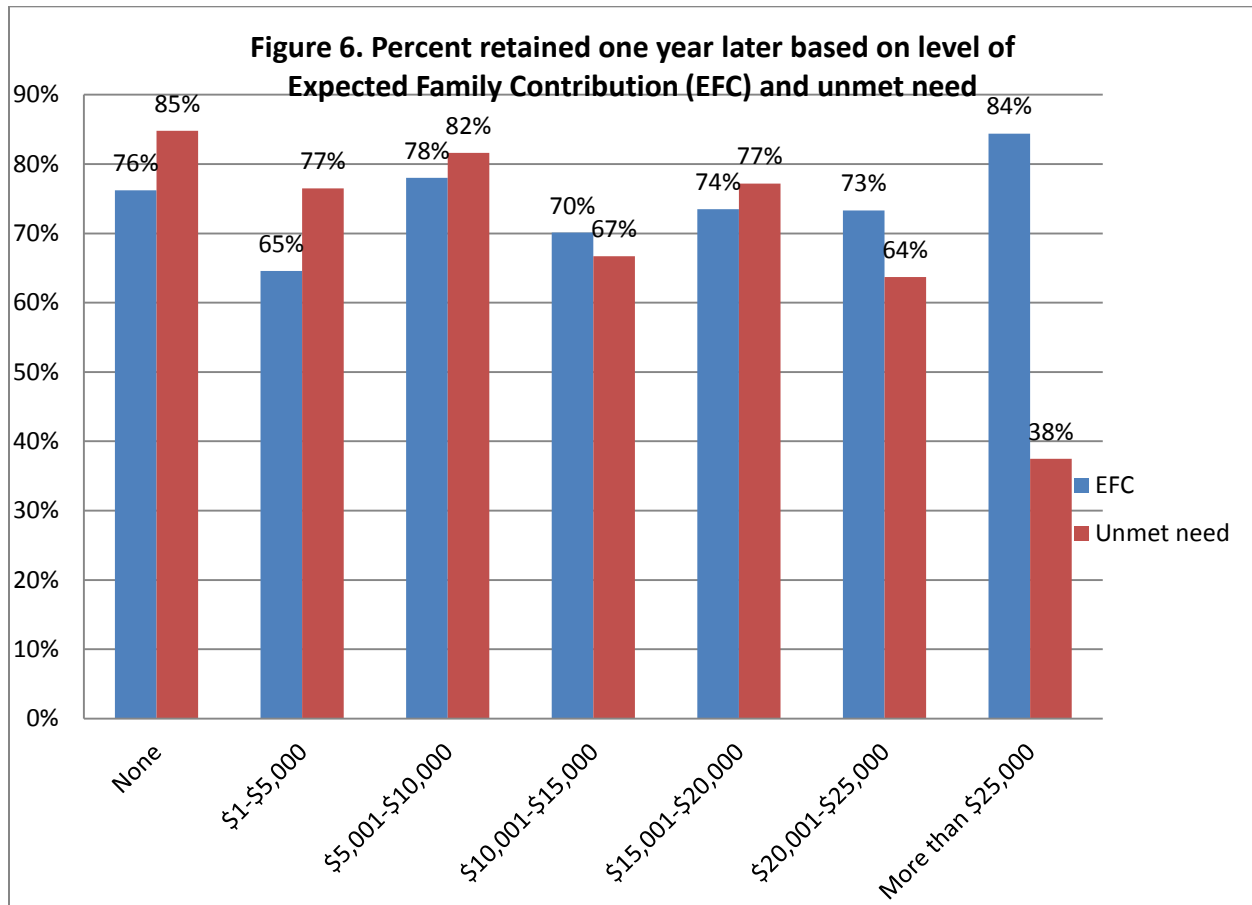
*p=.05, ** p=.01, *** p=.001 or smaller, ns=non-significant (using Chi-square to test for significance)

Figure 6 displays the percentage that were retained one year later based on the level of expected family contribution (EFC) and the amount of unmet need after the financial aid package was offered to the student. Students with an EFC that exceeded \$25,000 had the highest retention rate. Conversely, students with unmet need greater than \$25,000 had the lowest retention rate. Again, the figure displays the simple relationships between EFC and retention or unmet need and retention, but obscures the complex inter-relationships among other variables.

The second question addressed in this section—what is the “best” set of variables to predict retention—moves beyond simple relationships. As part of the process, all of the financial aid variables and their distributions were reviewed to determine the best form of measurement (categorical or interval). In addition, the correlations among the variables were studied (see Appendix A) and determinations were made about which variables to select when correlations between two variables exceeded .50. The final set of variables used to predict retention one year later included:

- FTIC (1 if student was first-time-in-college, 0 if transfer)
- Unmet need (Dollar value of unmet need excluding loans expressed in 1000s)
- Compared to no offer of a waiver:
 - (a) WUE (1 if offered any award, 0 otherwise)
 - (b) Gem (1 if offered any award, 0 otherwise)
- Compared to no scholarship award:
 - Scholarship award was \$400 or less, i.e. Promise Scholarship only (0/1)
 - Scholarship award was between \$401 and \$1000 (0/1)
 - Scholarship award exceeded \$1000 (0/1)

- Work/study (1 if offered an award, 0 otherwise)
- Grant (Dollar value of grant award expressed in 1000s)
- Loan (Dollar value of loans expressed in 1000s)



The measures of Original Need and Expected Family Contribution (EFC) were eliminated from the analysis because of strong correlations with other variables, especially unmet need. The offer of an athletic award was also eliminated because the effect was very strong, and this type of financial aid was received by very few.

Another data issue that needed to be addressed was the different types of financial aid that were offered depending upon whether the student was an Idaho resident or out-of-state resident and the effect residency might have on the analysis. In particular, GEM and WUE waivers are only offered to non-residents, and only Idaho residents can receive the \$400 Promise Scholarship. Therefore, separate analyses were conducted for residents (N=2,277) and non-residents (N=901).

Finally, the differences between FTIC and transfer students had to be considered. The two groups had somewhat different financial aid offers and retention rates. The bottom line question was “Do financial aid variables have a different relationship with retention for transfers compared to FTICs?” A check of the interactions between student type (FTIC or transfer) and

the other financial aid variables indicated that the relationships were similar (i.e., none of the interactions were significant) so FTIC and transfer students were combined for the analysis.

The analyses were conducted using SPSS's logistic regression procedure with retention one year later as the dependent variable. The overall goal was to obtain the best-fitting model while minimizing the number of parameters that needed to be included in order to best predict retention. The interactions between EFC and all other financial aid variables were included in the first stage of the analysis but were subsequently excluded because none reached significance using $\alpha=.05$. The model then was tested for overall significance using the Omnibus Tests of Model Coefficients, and the contributions of each financial aid variable were studied using the Wald chi-square statistic with a probability level of .05 as the cut-off for significance. To obtain the best final set of variables to be included in the model, changes in the -2 Log Likelihood were studied to ensure that the predictability of the model did not drop significantly. Both forward and backward variable selection was also used to confirm the final model.

Results for Idaho residents

The full model to predict retention for Idaho residents included the three scholarship variables, receipt of a work/study award, grant award dollars, loan award dollars, unmet need without loans, and the interactions of unmet need and the other variables. It excluded the GEM and WUE waiver variables. When the work/study, grant, and loan variables failed to reach significance, they were eliminated from the model after checking to ensure that the predictability of the model did not drop significantly. The final model showed overall significance using the Omnibus Tests of Model Coefficients, $\chi^2(5, N=2553) = 51.577, p<.0001$. However, the Nagelkerke R^2 was only .031, indicating a very modest relationship.

Table 4 displays the final logistic regression results for Idaho residents. Results show that scholarships were related to increased retention with higher scholarship amounts related to increased odds of returning. Compared to Idaho residents not receiving any scholarship monies, students receiving \$400 or less had their odds of returning boosted by 28%, students receiving up to \$1000 had their odds of returning improved by 58%, and students receiving more than \$1000 had their chances of being retained improved by 123%. Note that scholarships are typically awarded based on merit so students with scholarships are also more likely to have higher entering test scores and high school GPAs. Because students with higher entering test scores and high school GPAs also are somewhat more likely to be retained, it is hard disentangle the overall effect of scholarships without also considering the effect of academic preparedness on retention.

The other two variables in the equation had a negative effect on retention. For each additional \$1000 in unmet need, the odds of returning dropped by about 2%. In addition, FTIC students were only about two-thirds as likely to return compared to new transfers when they were offered equivalent financial aid packages.

Table 4. Final prediction model for Idaho residents with retention one year later as the dependent variable

	B	S.E.	Wald	df	Sig.	Exp(B) Odds ratio
Received scholarship of \$400 or less (Promise Scholarship)*	.249	.120	4.314	1	.038	1.283
Received scholarship between \$401-\$1000*	.459	.230	3.969	1	.046	1.582
Received scholarship over \$1000	.828	.156	27.989	1	.000	2.288
Unmet need without loans (units of \$1000)	-.021	.009	5.776	1	.016	.979
FTIC	-.387	.124	9.705	1	.002	.679
Constant	.864	.122	49.973	1	.000	2.374

*Compared to students receiving no scholarship monies

Results for non-residents

The full model to predict retention for non-residents included all of the same variables employed for the residents' analysis. In addition, the non-residents' model included two waiver variables for GEM and WUE waivers. Again, after checking for significant drops in prediction power, all variables which did not reach statistical significance using Wald chi-square and $p \leq .05$ were eliminated. Checks on the model were conducted using both forward and backward stepwise regression to select variables. The final model again showed overall significance using the Omnibus Test of Model Coefficients, $\chi^2(3, N=1089) = 53.418, p < .0001$. The Nagaelkerke R^2 was .085, somewhat larger than what was found for Idaho residents but still modest.

The final model can be found in Table 5. Only three variables were needed for the final model. Although the offer of a WUE waiver was not significant, the offer of a GEM waiver increased the odds of returning by 75%. Similar to Idaho residents, unmet need reduced the probability of returning for non-residents by about 4% for each \$1000 that the student did not receive. Unlike the model for Idaho residents, neither scholarships nor enrolling as a FTIC student affected the probability of returning.

Also, loans for non-residents were associated with reduced odds of returning by 4-5% for each \$1000 in loan offers. This latter result, however, is likely an analytical artifact.

Table 5. Final prediction model for non-residents with retention one year later as the dependent variable

	B	S.E.	Wald	df	Sig.	Exp(B)
Unmet need without loans (units of \$1000)	-.041	.010	17.743	1	.000	.960
Amount of loans offered (units of \$1000)	-.046	.012	14.388	1	.000	.955
GEM waiver	.561	.231	5.912	1	.015	1.752
Constant	1.775	.187	90.071	1	.000	5.903

Summary and Discussion

The purpose of this study was to describe the financial aid that new fall 2010 first-time-in-college and transfer students are offered and to present information on the relationships among type of aid offered, amount of unmet need, and retention one year later. Almost all (93%) first-time-in-college (FTIC) students and about three-quarters (76%) of new transfer students were offered aid. Of all the aid types, students were most likely to be offered loans (74% of FTIC and 87% of transfers). Over 60% of FTICs were offered scholarships, though the average amount of \$1600 was modest compared to other categories. For new transfers, over 60% received grants with an average award of over \$4500.

Most students did not have their financial needs fully met by their offered financial aid package. When loans were excluded, 77% of FTICs and 89% of transfers still had unmet need. Almost 30% of FTIC and over 40% of transfers had a quarter or less of their need met by their offered financial aid package. Is the amount of unmet need for Boise State students higher than that for students at other institutions? An analysis² provided by *The Chronicle of Higher Education* seems to indicate that Boise State students do have higher levels of unmet need. While *The Chronicle* reports that 2007-8 full-time students at public four-year institutions had an average unmet need of \$5,096, first-time-in-college students in this study had an average unmet need of \$10,026. If Boise State students indeed have more unmet need compared to others, it might help to explain the high number of Boise State students working compared to students on other urban campuses as consistently shown by our National Survey of Student Engagement (NSSE) results.

Many Boise State students came from very modest means, as indicated by an expected family contribution (EFC) of \$0 for 40% of the fall 2010 new students. The financial aid package offer was somewhat larger for those with lower EFCs, decreased for those in the mid-range of EFCs, and then increased for students whose EFC exceeded \$25,000. As a result, the unmet need was largest for students with the lowest EFCs, a pattern also shown by *The Chronicle* analysis. These findings appear to be a result of placing the emphasis on merit rather than need awards for new Boise State students. Most scholarships and waivers are based first, and often solely, on merit. A recent study by the Brookings Institution³ reported that the percent of grant aid based on need rather than merit for Idaho was 30% compared to the US average of 73%.

In addition, according to the Brookings report, the state of Idaho awards fewer grant dollars overall compared to most other states. A profile of Idaho provided in the report showed \$5,598,689 in student aid funds disbursed by a combination of five Idaho grant programs in 2009-10. The average state grant aid per student for Idaho was \$95 compared to \$627 for the US average

Many students who responded to a survey half-way through their first semester indicated that they could be in trouble if they didn't get more money soon (46%) or that they were already in trouble financially (10%). Those who needed financial help the most also were the ones least likely to report that they had someone they could rely on to help with their finances. As would

² "Poorest families face largest unmet need for financial aid." August 24, 2009. Almanac of Higher Education in The Chronicle of Higher Education. Retrieved on September 28, 2012 from <http://chronicle.com/article/Poorest-Families-Face-Largest/48066/>

³ "Beyond need and merit: Strengthening state grant programs." Retrieved May 9, 2012 from <http://www.brookings.edu/research/reports/2012/05/08-grants-chingos-whitehurst>

be expected, those who had a financial aid package that covered half or less of their financial need were most likely to already be in trouble financially in their first semester.

When looking at financial aid, financial need, and the relationship to retention, separate analyses were conducted for residents and non-residents because of their differing financial aid packages and especially the fact that only non-residents are offered GEM and WUE waivers. For Idaho residents, scholarship offers increased the probability of being retained at all three levels tested (\$400 or less, \$401 to \$1000, and over \$1000) compared to students who did not receive scholarships with more dollars associated with a larger increase in the probability of returning. Unmet need and being an FTIC student decreased the probability of returning. For non-residents, unmet need also significantly reduced the probability of returning. The other variables in the model, however, had a different effect from those for Idaho residents; the final model included receipt of a GEM waiver (but not WUE) and amount of loan dollars offered.

In the analysis of this sort of data set, nothing is perfectly causal or straightforward, so caution must be employed when interpreting the retention models. For example, both the resident and non-resident models included amount of unmet need as a factor related to decreased probabilities of returning. However, unmet need was also highly related to original need ($r=-.823$) and expected family contribution or EFC ($r=.566$), so this variable undoubtedly serves as a stand-in for a number of possible effects, including everything from socio-economic status (SES) to first generation in college, to quality of high school preparation, to having financial support to rely on, to name a few.

Similarly, although the offer of more loans also was associated with a reduced probability of returning, the loan offer amount could be a stand-in for a number of other potential effects. Perhaps the students who were offered more loans were also the students less likely to receive scholarships due to lower test scores and high school GPAs. Perhaps they or their families were less financially savvy or maybe more debt-averse, both factors which could again be related to SES and all of the many effects related to income level and the life benefits provided by higher incomes. Certainly a number of highly selective institutions have moved toward financial aid packages that exclude loans in the hope of attracting lower income students who they feel may be frightened off by the cost of attendance and accumulated debt.⁴

Scholarships are inextricably entwined with academic preparation (as evidenced by test scores and high school GPAs) making this a particularly difficult area to interpret regarding retention. It is interesting to note that grants—another form of aid that does not require repayment—were not significantly related to retention after the effects of the other variables in the model were taken into account. Most grants are awarded to low-income students, who may be more likely to be first-generation, less academically prepared, etc. A follow-up study that looked at the impact of scholarships and grants on retention after controlling for the effects of admissions test scores and high school GPA would help clarify this issue.

Still, if taken at face value, the results tell us several things. For example, athletic awards were excluded from the retention analysis because the effect of an athletic award offer was so strong that the effects of the other variables paled in comparison. We know that our athletes are individually known to staff and valued for the skills that they bring, they are part of a community, they are mentored and followed closely to ensure they are successful in their classes, and intervention in the form of tutoring is provided when necessary. In a utopian world, a similar

⁴ Hillman, N. (2012, August). Economic diversity among selective colleges: Measuring the enrollment impact of “no loan” programs. Washington, D.C.: Institute for Higher Education Policy.

approach were applied to *all* of our new students would surely result in a positive impact on retention rates.

We also saw that scholarship offers and GEM waivers were related to higher retention rates, and loans (at least for non-residents) were related to lower retention rates. Setting aside the many potential meanings behind these financial aid variables, a goal of providing financial aid packages that would result in less debt for graduates could be a worthy goal. In addition, because both scholarships and the GEM waiver are merit-based, the goal of admitting students academically prepared for college work is also worthwhile. After all, the reason financial aid exists is to help students get into college, complete college, and find worthwhile jobs where they can be productive members of society.

It is clear that most new Boise State students lack financial aid packages that will cover their educational costs, and that unmet need is a factor related to retention. Although these results show that retention is a complex affair where finances play only one part in the decision of whether to continue to enroll or not, the findings also confirm that finances are a factor in retention. A previous follow-up study of students who left Boise State showed that finances were a top reason for not returning, and this study confirms and deepens that finding by following new students over time.

APPENDIX A.

Correlations among financial aid variables (N=3,178)

	ATHL	GRANT	LOAN	SCHOL	WAIVER	WKSTDY	ORIG NEED	EFC	Unmet need w/out loans	Unmet need with loans
ATHL	1	-.073**	-.116**	-.046**	.016	-.042*	.148**	-.030	.097**	.027
GRANT		1	.067**	.001	-.221**	.146**	.479**	-.479**	-.218**	.031
LOAN			1	-.230**	-.088**	.057**	-.029	.066	-.062	-.400**
SCHOL				1	-.033	.000	-.059**	-.001	.277**	-.156**
WAIVER					1	.059**	.111**	.204**	.081**	.049**
WKSTDY						1	.190**	-.115**	.033	-.119**
ORIG NEED							1	-.683**	-.823**	.625**
EFC								1	.566**	-.374**
Unmet need w/out loans									1	.793**

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Note: Correlations above .30 are in bold font.