Planning Methods: Final Report
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December 13, 2012
Abstract
To date, the Community Empowerment Fund (CEF) has seen an increase in the number of members seeking resources to combat meager financial situations. The purpose of this study is to measure the effectiveness of CEF’s program components on helping to relieve financial burdens faced by its members. An analysis was done on CEF’s member database to find correlations between program participation and successful outcomes. Results showed that CEF’s interference led significant proportions of its membership to gaining both employment and housing. Furthermore, the greater the amount of contact between a member and a CEF advocate, the more likely the member will develop strategies to combat their financial situation. As the organization looks to the future, it is crucial for them to align resources in areas that will have the most impact. Additional research is needed in order to control for the variables of time and a member’s level of engagement.

Introduction
Increasing attention is being paid to the importance of program evaluation in the social service sector. With the availability of financial resources decreasing and the needs of those living in poverty increasing, proper evaluation is seen as one means to help direct resources most efficiently.

There are inherent challenges, though, to proper evaluation of social service agencies. These are due to the do-what-needs-to-get-it-done culture of the sector, the reliance on sweat equity, and the seemingly endless needs to be addressed. Often program staff want to give their clients as much as possible, so it becomes difficult to identify what exactly the inputs are. Also, it is not unusual to find that caseworkers sometimes improvise as they work with clients (Manturuk, 2012).

These characteristics aptly describe the Community Empowerment Fund (CEF), which is currently at a crossroads. The goal of this report is to help CEF better understand how to maximize its limited resources for greatest effectiveness. Specifically, through a statistical-based evaluation of its programs, this study addresses the question: does length of membership in CEF and graduation from its self-empowerment curriculum improve individuals’ outcomes? The hypothesis is, if a member has maintained a relationship with CEF for longer periods of time and has graduated from its programs, then their self-identified goals will be more likely be attained than those who have shorter memberships.

This work builds upon recent efforts undertaken internally by the organization to improve intake processes, data collection, and outcome measures. While the results of the study are encouraging, the findings suggest that even a statistical evaluation of seemingly well-defined program measures leaves many questions as to how to most effectively tie limited resources to successful outcomes. In many ways, this only confirms the quandary faced by the sector as a whole.

Background
The mission of CEF is to cultivate opportunities, assets, and communities that support the alleviation of homelessness and poverty in Orange and Durham counties. To that end, CEF, a nonprofit student-driven organization, offers savings opportunities, micro-loans, financial education, and assertive support to individuals who are homeless or precariously housed and who are underemployed. In three years, CEF has gone from eight UNC students helping five

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1 One of the authors, Eric Breit, is a board member of CEF.
homeless individuals, with a budget of $3,500, supported by campus resources; to more than 75 UNC and Duke students and two part-time employees supporting the needs of more than 300 clients, with a budget of $70,000 as a stand-alone 501c3.²

CEF advocates are responsible for helping members define personal goals for the program, while encouraging them to achieve independence in housing and financial situations.³ Services include offering members savings accounts, self-empowerment classes, small business training, and microloans. Coaching is available that focuses on goal setting and financial literacy. Classes cover a plethora of topics including financial literacy, job readiness, health, and small business development.

In *Tackling Homelessness through Economic Self-Sufficiency*, Jones (2000) discusses the human capital potential that lies within microfinance organizations. She refers to human capital as “the positive externalities that accrue when individuals take control of their lives, develop self-esteem, and succeed in the economic market place” (Jones, 2000, p. 387) This human capital is certainly a benefit of the microfinance approach that CEF takes with its members. The measure of human capital is not directly addressed by this report’s statistical analysis, yet in many ways it is at the core of what CEF provides its members. That human capital is central, yet immeasurable, gets at the heart of the challenge of evaluation for CEF and similar organizations.

The Microenterprise Fund for Innovation, Effectiveness, Learning, and Dissemination (FIELD), devoted to the expansion and sustainability of microenterprise development efforts and based at the Aspen Institute, recently released a report, *Catching Fire: The University Microenterprise Movement in 2012*. In it, FIELD highlighted CEF’s strength as its “highly systemized, ongoing, relationship-based support given by over 87 active student advocate” (Aspen, 2012, p. 21). That support is increasingly leading to tangible outcomes, in the form of housing, employment, and financial savings. Understanding the connection between the inputs (forms of support) and outcomes in essential to the longevity of its work.

**Method**

Data used for this analysis was obtained from CEF’s contact database.⁴ Prior to the commencement of this research, we met with CEF staff and students, to determine what data would be most relevant for statistical analysis. CEF staff, students, and volunteers then honed in on the chosen data, reviewed client information, and updated records as necessary, to ensure that results would be as accurate as possible.⁵ There were a total of 346 member records that were used for this analysis.

Demographic information available about members included the following: age, gender, race, marital status, whether they lived with dependents, level of education, whether they had a disability, and whether they were veterans. It was determined that CEF services mostly single, minority males, with disabilities. Analysis showed that 85 percent of CEF’s members currently reside in Orange County or the City of Durham. Demographic information from CEF was then compared to data obtained from the Point in Time Count, a federally mandated count of all

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² More information about CEF can be found at www.communityempowermentfund.org.
³ CEF uses language common to credit unions and microfinance agencies to describe its work. “Advocates” are case managers, most of whom are college students. “Members” are the individuals being served by CEF, traditionally known as clients or consumers.
⁴ CEF uses salesforce.com, an online, cloud-based data management software. In its three years of existence, CEF has become increasingly sophisticated in its data management, having migrated from using shared Google docs and spreadsheets in a relatively short period of time.
⁵ The date of last entries, prior to data being shared with the authors for final analysis, was December 9, 2012.
homeless persons, sheltered and unsheltered, in cities across the U.S. The Orange County and Durham homeless population is mostly comprised of men and CEF’s membership is no different. A breakdown of the racial composition of CEF members can be found in Figure 1.

<table>
<thead>
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<th>Racial Breakdown</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
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<tr>
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<tr>
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</tr>
<tr>
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<td></td>
<td>9</td>
<td>9.25%</td>
</tr>
<tr>
<td>Total</td>
<td>172</td>
<td>121</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Figure 1: Racial Breakdown of CEF Membership

Of CEF’s 346 members, 37 have graduated from the program, 50 have received permanent housing with CEF assistance, 74 have obtained gainful employment, and 71 have opened savings accounts. The savings amounts range from $15 to $9,448 and have a mean value of $192. In consultation with CEF staff, it was decided to focus on whether there was a correlation between the attainment of housing, employment, and savings with the length of time as a CEF member and whether they graduated from the program (the explanatory variables).

Results

**CEF impact on permanent housing attainment:** A two-sample test of proportions determined that there was a correlation between obtaining permanent housing and having graduated from CEF’s core curriculum.\(^6\) (38 percent of graduates obtained housing, and 12 percent of non-graduates obtained housing; difference in means = .26; test statistic = -4.28; p-value < 0.0001).\(^7\) (See Figure 3.)

A two-sample t test was also conducted, which indicated a correlation between length of membership and whether housing was obtained. The mean number of days of membership for those who obtained housing was 431; while the mean number of days of membership for those who did not obtain housing was 244 (difference in means = 186; test statistic = -5.94; p-value < 0.0001).

It is understood that CEF’s work with its members does not occur in a vacuum, and that there are many possible confounding variables that could impact an individual’s ability to obtain housing. Two were considered for this analysis: race and level of education. Two-sample tests of proportions were done for each in relation to housing obtainment and neither suggested a statistical significant impact (for difference in proportion for non-white and white members obtaining housing, test statistic = -.31, and

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6 Permanent housing is defined as having a lease or mortgage, with friends.

7 All statistical tests use a 95 percent confidence interval.
p-value = .75; for difference in proportion for some college-level education and no college-level education obtaining housing, the test statistic = -.92, and p-value = .36).

Income level would also be considered a significant variable in housing obtainment. For the purposes of this sample population, though, it should be considered irrelevant, as all members live at a level significantly below the poverty line, and most if not all of those who obtained housing did so with some form of public assistance, whether it was through a Section 8 voucher or assistance with utility deposits.

**CEF impact on employment attainment:** Like with housing, a two-sample test of proportions determined that there was a correlation between employment attainment and having graduated from CEF’s core curriculum. (54 percent of graduates obtained employment, and 17 percent of non-graduates obtained housing; difference in means = .37; test statistic = -5.20; p-value < 0.0001).

A two-sample t test was also conducted, which indicated a correlation between length of membership and whether employment was obtained. The mean number of days of membership for those who obtained employment was 391; while the mean number of days of membership for those who did not obtain housing was 239 (difference in means = 152; test statistic = -5.59; p-value < 0.0001).

Two potential confounding variables were considered, to assess other possible influences on employment obtainment: education level and gender. A two-sample tests of proportions for employment attainment and education level suggested no statistical impact, with the difference in proportions for members with some college-level education and no college-level education obtaining employment being .04 (test statistic = -.90; p-value = .37). There was a statistical correlation, though, between gender and employment obtainment: 15 percent of male CEF members obtained employment with assistance from the organization, while 30 percent of female members obtained employment (difference in means = .15; test statistic = 3.40; p-value = 0.0007). As a result, further research was conducted to determine whether this was due to women being members longer. But this was not the case: there was no statistically significant difference between the length of membership for men and women: men averaged 255 days and women averaged 293 (test statistic = 1.66; p-value = 0.0970).

**CEF impact on savings:** Bivariate regression analysis was done to determine the correlation between CEF participation and improved personal financial management. Both number of days as a CEF member and number of CEF classes attended had a statistically significant, if moderate, effect on a members ability to save money. Statistical results are as follows:

- for member days: test statistic = 4.75, p-value < 0.0001, and R-squared = .06; and
- for number of classes attended: test statistic = 6.61; p-value < 0.0001, and R-squared = .11 (Figure 3).

The analysis suggested that number of

![Figure 3: Scatterplot graph of dollars saved (y axis), based on number of classes attended](image-url)
CEF classes attended had a stronger effect on dollars saved. The coefficient of 70.23 begins to suggest the relative value of a class, if each class attended results in an additional savings of $70.

**Discussion**

While this analysis does suggest that the work of CEF plays a significant part in members’ abilities to improve their lives, an accurate determination of the robustness of the findings requires additional research. This is due to several reasons.

**Sample size:** While the number of members and the subsets of members in housing, with employment, and with savings accounts is large enough to be deemed appropriate for statistical analysis, the various statistical tests did reveal not insignificant standard deviations and standard errors of the sample population.

**Distinguishing between membership and class attendance:** This analysis suggested that CEF members benefit from both attending classes regularly and from simply being a member. Insufficient information was available to determine whether one had more impact than the other (although it does appear that class attendance does have a stronger correlation with amount saved, than simply being a member). Additional research is required to determine whether individual interaction and group learning complement each other in CEF’s program design, or whether one is more meaningful than the other.

**The passage of time:** The primary challenge to the robustness of the findings is the fact that there are innumerable factors external to CEF that could impact the lives of its members. This research has attempted to control for some of them, related to potential demographic influences. But we believe that time could be a significant confounding variable. The more days one has, generally, to find housing and employment, the more likely they will obtain them, regardless whether it is with or without assistance. A comparison between CEF member outcomes and outcomes for a control group (homeless not receiving CEF services) would be instructive. It is also important to point out that the length of membership does not equate to length of time it took to obtain housing and employment. This could be addressed by considering the date of housing and employment attainment, and comparing this to number of days as member.\(^8\)

A discussion with CEF staff regarding the preliminary findings of this study led to suggestions about ways to improve evaluation to take into account confounding factors. One possibility discussed was developing a “level of engagement score,” by assigning numeric values to points of participation in the program. This could begin to get at the human capital component and bring to light the comprehensive nature of CEF’s work, beyond specific outcomes, which are more easily influenced by other factors.

**Conclusion**

While CEF is a small organization, its impact is undeniable. In the last six months alone, its membership has increased by 150 percent. An analysis of the program’s outcomes showed that graduates of the program benefit from participation and obtain both employment and permanent housing at higher rates than members who do not graduate from CEF classes. This research is only the start in what should be an ongoing analysis of program effectiveness. The process of starting a nonprofit organization is not an easy task and credit should be given to the student leaders of CEF who emphatically pursue a future where people are financially responsible and equipped to handle financial difficulties.

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\(^8\) The dates of housing and employment obtainment were available for some members. They were not used for this analysis due to uncertainty as to their accuracy.
References

