

Augusta State University

Master of Public Administration

Capstone project

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“Social Cost-Benefit Analysis (SCBA) for *Centro Educativo Central Savannah River Area (CECSRA) Nonprofit Organization*”

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Abstract

Social Costs-Benefit analysis is applied to the Centro Educativo Central Savannah River Area in order to examine the wide variety of effects that this program has as an educational social investment. The present value of all benefits, costs, transfer payments, and secondary effects are presented in an accounting framework in order to evaluate distributional effects. A contingent valuation approach is used to estimate student, volunteer, and host society benefits. A Kaldor-Hicks criterion is used to determine whether the school is efficiently carrying out its mission and purpose. A sensitivity analysis is applied for a time program operational framework of fifteen years using discount rates of 4.5, 5.5 and 6.5 percent. Accordingly, the program has large net value for society as a whole as well as for the program's members. The approach and methodology provided in this case study will help policy makers and stakeholders to evaluate similar schools.

Introduction

In the last two decades “Hispanic¹ workforce immigration” has dramatically increased throughout the U.S. (Baker and Harris, 2006). As a result, immigration has become one of the thorniest issues on the policy agenda in the United States. The current situation in the Southeast -a region which historically has not been a destination for Hispanic workers in large scale- is particularly acute.

Several significant issues or barriers arise from the rush of Hispanics to the United States, the South and, specifically, the Southeast. These pose serious problems and challenges to public policy makers, human right advocates, and service delivery personnel. Many are associated with language and assimilation issues. Others are associated more directly to problems or barriers which include the areas of education, health, public safety, transportation, housing, and the legal system (Young, 2005).

The poor educational background of Hispanics and lack of English proficiency present many problems both locally and regionally. For this reason, Hispanic educational issues must be considered as a fundamental concern for the whole society and not just for public agencies. Fortunately, in order to alleviate this situation, educational nonprofit organizations like the Centro Educativo Central Savannah River Area (CECSRA) have arisen throughout the region.

The purpose of this study is to perform a Social Cost-Benefit Analysis (SCBA), and thus to address the following two research questions: 1) how efficiently has CECSRA carried out its mission and purpose? 2) and to what extent does the local and regional community benefit from immigrant Hispanic educational gain? The necessity to

¹ The debate about which term (Hispanic or Latino) must be used is still ongoing, but the U.S. Government uses Hispanic over the Latino term on all federal forms and documents to define people who were born in a Hispanic country or area (such as Mexico, Puerto Rico, Cuba, Central or South America) or have a heritage tracing back to a Hispanic country or area. Hence, in this work will be used the term Hispanic following the U.S. Government standard.

address these questions stems not only from the fact that the donors have assumed the cost of the operation, but also they assume that the students will contribute to the betterment of society as a result of further education. With the creation of CECSRA the hope is that challenges associated with low education levels such as school overcrowding, the free use of some public services like health care and housing, the ignorance of rules and law, and fears concerning the survival of American identity will be overcome. These are the same types of challenges that Young (2005) describes as well as the ultimate reason for why the stakeholders of CECSRA support the school.

Background

Social Cost-Benefit Analysis applied to educational programs is not new, in fact it is a long standing practice among researchers and decision makers since education is one of the main public policy issues discussed in the policy agenda. Thus, the most prominent examples of this kind of analysis were made by Spiegelman (1968); Long, Mallar, and Thornton (1981); and Barnett (1985). These researchers analyzed the long run economic and policy implications of investing time, money, and effort in education for disadvantaged children. The three studies conducted their analyses from society's perspective, which means that they pioneered the practice of linking efficiency with distributional outcomes. They established the now well-accepted criteria of evaluating an educational policy or program as efficient if it yields larger social benefits than social cost measured in present value units.

These studies focused on special elementary educational programs for disadvantaged students, highlighting the private education's returns in the form of higher future salary for the students. They also studied education's social returns in the form of

reduced crime rates –which in turn means better welfare for society, lower property damage, and lower crime prevention costs – as well as reduction in welfare program expenditures, and positive taxpayer effect. It must be mentioned that the contribution of Long, Mallar, and Thornton (1981) work to this project is the fact that they introduced the use of an explicit accounting framework. This is a useful tool that allows identifying at a glance the benefits, costs, and distributional effects in the form of transfer between the groups involved, as well as the component estimates and the unmeasured program effects. Another significant contribution is the social time preference rate (a discount rate) calculated by Spiegelman (1968) which allows to researchers perform a sensitivity analysis and lends objectivity to the analysis.

Consequently, based on the studies previously mentioned and taking into consideration the CECSRA's characteristics, some of the variables under study are present values benefits, present value costs, present value transfer payments and present value secondary effects. On the participants' side the groups analyzed in distributional terms are, CECSRA's students, children and family of the CECSRA students, donors, volunteers and paid staff, and Our Lady of Peace (OLP) Catholic Church community. Although the program was open to operate indefinitely over time, fifteen years was chosen as a significant period of time in which benefits accrue to society. A positive net present value under Kaldor-Hicks criterion was found since research about education's returns has made progress in the last decades and today education's returns are far larger than any program costs.

The school

The *Centro Educativo Central Savanna River Area* (CECSRA) located in North Augusta, South Carolina is the nonprofit organization under review. CECSRA was created in the hope that immigrants can achieve their dream of obtaining an education and in so doing improve job opportunities. The mission of the CECSRA has as its core a social assistance role by providing educational and technical training for work and successful cultural assimilation. Thus, CECSRA centers its operation on helping Hispanics living in the area to start, continue, or finish their basic education, giving them the tools to begin university education in the United States or to pursue technical training. A secondary, but no less important role of CECSRA is to help Hispanics to engage in mainstream American culture so that they can positively contribute to the social life of the community where they live.

In mid-2004, Alexander McDonald (who was priest of OLP Catholic Church at North Augusta) and Mrs. Maria Mallar (current Chief Executive Officer of CECSRA and teacher of OLP School) met to talk about the Hispanic's community needs. They noticed a lack of education and the lack of support for this need, which made them decide to open an adult school. Hence, on December of 2004 the priest contacted members from Catholic Charities, who referred him to Mrs. Alma Puente (a Hispanic community leader) in Columbia, South Carolina. She in turn, put the father McDonald and Mrs. Mallar in contact with the Mexican Consulate in Raleigh N.C. and with Mr. Carlos Soto (teacher at the University of South Carolina). Both encouraged Mrs. Mallar to start operations. Mr. Soto provided training to Mrs. Mallar on the minimum requirements for the Plaza Comunitaria program.

Thus, by late January the project was announced to the Hispanic community. At the same time, Mrs. Puentes requested financial support for the school from Catholic Charities. In February 2005 the CECSRA began operation as a study group community. By the summer of 2005 Mrs. Mallar traveled to Patzcuaro Michoacan in Mexico where she received formal training about the Plaza Comunitaria project. After coming back she began to reorganize CECSRA according to the requirements from CONEVyT (National Council for Lifelong Learning and Work Skills), which is the Mexican institution in charge of the Plaza Comunitaria Program.

The Church provided computers and internet connection to CECSRA as it was an essential requirement to the program's certification. Finally, CECSRA applied in 2006 and between April and May of the same year, the school received the official certification that allowed it to apply for an Institute of Mexican Abroad (IME by its acronyms in Spanish) grant. A Board of Directors was elected. And they started working immediately on the application forms for the grant because they were close to the application's deadline. In September, 2006 CECSRA was notified that it was granted \$10,000 dollars. In 2008, CECSRA reapplied for the grant and was granted \$4,000 dollars.

Thus, CECSRA is funded by the Mexican Government (through the Institute of Mexican Abroad IME grant, and providing educational material), Our Lady of Peace Church Members of the Diocese of Charleston (providing supplies as well as two times a year money donation), Parents who have children in Our Lady of Peace School² (providing physical space and utilities), the South Carolina Outreach Program (which at

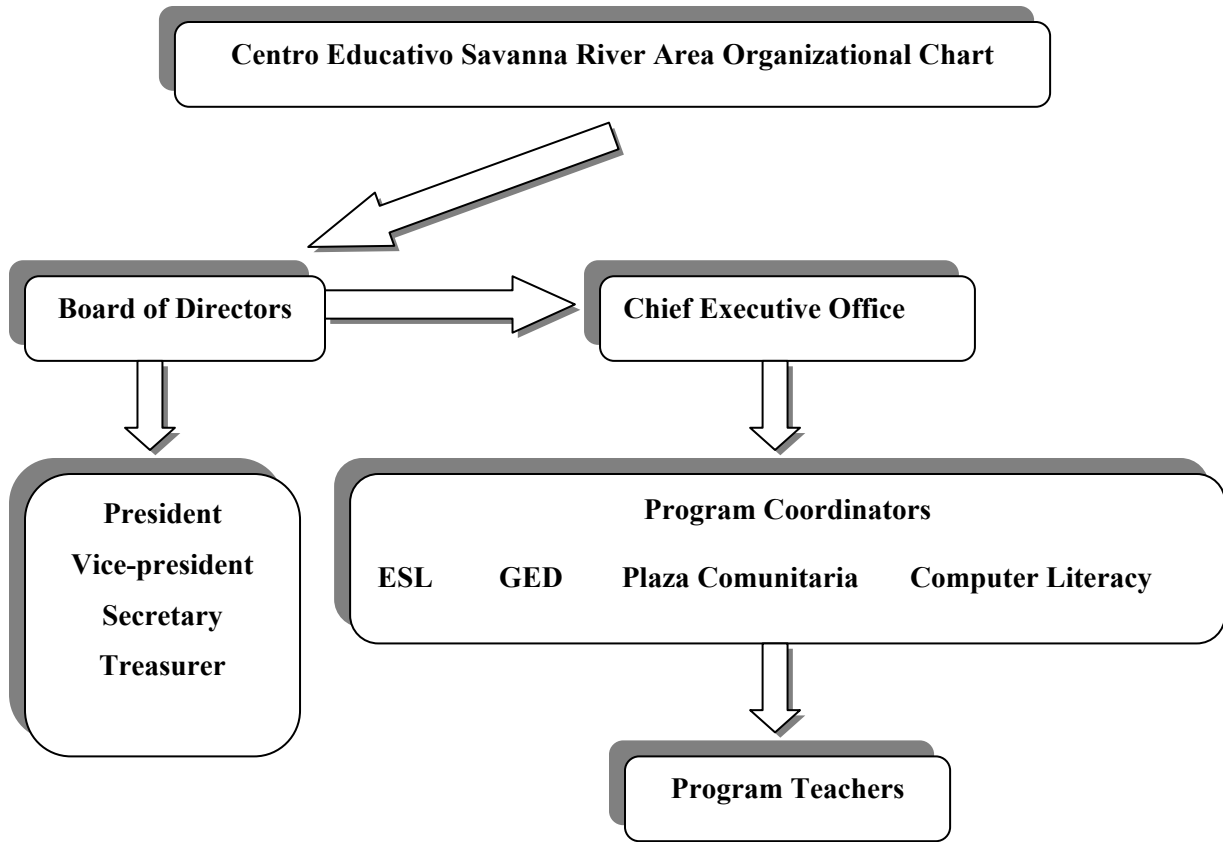
² This is because all the facility costs of Our Lady of Peace Catholic School are being paid by parents who pay fees every month, hence parents and not the school's administrators or owners pay for the CECSRA's facility and utility costs indirectly

the beginning provided money used to paid salary of the paid staff), the local Hispanic ministries³(providing money for the paid staff salary), Our Lady of Peace Outreach program (providing supplies) ASU students and Center for Immigration Studies (providing voluntary work), and local community's volunteers. Hence, the fundraising plan for CECSRA has been based on grants, group donations, in the form of material gifts donation and voluntary work, and pledges from Our Lady of Peace. Moreover, CECSRA has a zero-salary-cost-plan, since only the Chief Executive Officer receives payment for her services. The Board of Directors, program coordinators and the teachers offer their services free of charge, although occasionally some staff and volunteer members receive a payment for their work. Each of the donors listed above represents the genuine stakeholders of the school.

CECSRA is open only one day and two nights per week offering the following four programs: English as a Second Language (ESL), General Educational Development (GED), *Plaza Comunitaria* (literacy program, at the elementary and middle school level), and Computer Skills. Today, the school has 15 *Plaza Comunitaria* students and 31 students enrolled in GED, ESL and Computer Skills programs. CECSRA's organizational structure is comprised of a Board of Directors including a president, a vice-president, a secretary and a treasurer. In addition, a chief executive officer supervises the four program coordinators who organize and direct the teachers in the four programs offered. The CECSRA organizational chart is illustrated below:

³ The Local Hispanic Ministries is a subgroup of the OLP Catholic Church at North Augusta.

CECSRA's organizational chart



Literature review

Introduction

To understand the returns or benefits of education, it is necessary to develop an exhaustive and mutually exclusive classification grouping the four main benefits of education⁴. Thus, education has Private or Social benefits and Market or Non-market benefits, from which a combination can be established as follow: Private/Market, Private/Non-market, Social/Market, and Social/Non-market. Therefore, Private/Market

⁴ McMahon's (1997) paper entitled "Recent Advances in Measuring the Social and Individual Benefits of Education" represents possibly the most exhaustive literature review about education's benefits. His work is comprised of five papers from others authors from which he wrote "Conceptual Framework for Measuring the Total Social and Private Benefits of Education" which is the first paper of the whole work. However, to understand his paper, a graduate level of economics knowledge is required. For this reason his work does not constitute a cornerstone in this section. Nevertheless, his contribution and effort must be mentioned and recognized.

benefits refer to earnings and jobs conditions. Private/Non-market benefits refer to individual and family wellbeing. Social/Market benefits refer to the economic growth through technology innovation and scientific advances. And Social/Non-market benefits refers to externalities, public goods (or spill over), tax, and transfer effects. Table 1 illustrates the foregoing discussion. The first section is based on a literature review of education’s benefits, the second and final section is a discussion about the benefits from immigrants’ educational gains.

Benefits of Education

Benefits or Returns of Education	<i>Private</i>	<i>Social</i>
<i>Market</i>	Earnings or Wage	Economic Growth
<i>Non-market</i>	Individual and Family Wellbeing	Externalities, Public Goods, Tax, and Transfer Effects

Source: own creation base on Owens (2004).

Education’s benefits

Private/Market

This category defines benefits received from the labour market by the individual who acquires the additional schooling. Becker (1962) and Schultz (1963) formalized the study of “returns of education” with their pioneering work that today forms the basis of the school of Human Capital. Both authors pinpointed that schooling, training courses, expenditure on medical care, and talks on the virtues of punctuality and honesty create human capital because they raise earning and productivity. They pointed out that education and training are the most important investment in human capital. Since then, countless studies have been developed to measure the returns of education in both

macroeconomics and microeconomics levels. Regarding the microeconomic level, research has focused on the earnings gained due to education.

Accordingly, the general consensus among researchers is the existence of a positive relation between higher education and higher earning or wage. Thus it is expected that the more years a person spends in school the more earnings this person will have (Ashenfelter and Kruger, 1994; Weiss, 1995; Ashenfelter and Rouse, 1998; Psacharopoulos and Harris, 2002; Chevalier et. al. 2004). There is not a general consensus about the percentage rate increased by each extra year in the school because variations in the estimated effects can be explained by differences in methodology and assumptions used.

On the other hand, some researchers have challenged the original statement of human capital theory, which states that education enhances productivity. Instead, they argue for what is referred to as “signalling theory”, which asserts that earnings may rise in response to education not because of any effect on productivity but simply because education may act as a “signal of productivity” (Spence, 1973; Groot and Oosterbeek, 1994). Signalling theory has developed some interesting insights. For example the more education workers have the less likely they are to quit or be absent. Furthermore, they are less likely to smoke, drink or use illicit drugs, and are generally healthier. These characteristics are often not directly observed but desirable for employers; hence the “signal” that education sends is clearly in terms of productivity (Weiss, 1995).

Whether education enhances or just reflects productivity, it is less important for other researchers, whose main interest is how phenotype, genetic and family socioeconomic status background play in the returns of education. Hence, studies of

twins have been undertaken to isolate the variables previously mentioned and study their impact on different educational attainment as well as earnings between individuals genetically identical and with the same family socioeconomic status (Ashenfelter and Kruger, 1994; Ashenfelter and Rouse, 1998). The results of such studies demonstrate differences in the percentage rate increased by each extra year in the school among twins that choose different levels of education beyond college. Finally, Haveman and Wolfe (1984) point out that difference in schooling is also associated with differences in nonwage remuneration in the form of fringe benefits and working conditions such as subsidized dining or a pleasant office.

Social/Market

This category defines benefits in the form of Gross Domestic Product (GDP) increases as a consequence of technology innovation and scientific advances, which fosters advances in living standard conditions over time. This is the macroeconomic analysis of education started with the Becker (1962) and Schultz (1963) statement which suggest that economic growth closely depends on the synergy between new knowledge and human capital. Since then, economists have sought to measure the social/market influence of education over economic growth by references to the GDP. The pioneer work over this point belongs to Robert Slow (1956), whose growth model relies on saving, population growth, and technology innovation to explain the GDP's growth among nations.

Riddell (2004) traces the three main dimensions in which education contributes to economic growth. The first one is the research function of educational institutions as important sources of new ideas and advances in knowledge. The second is related to the

teaching function of universities and colleges because educational institutions train many of the individuals who will make future discoveries. Finally, knowledge is transferred to new generations, which will become more productive and therefore will contribute to increases in GDP. Another important advantage of education regarding technology innovation and economic growth is the decrease in resistance to technology. For instance, Wozniak (1987) notes that education and information enhance the capacity to overcome the resistance created by adoption costs and uncertainty, thereby raising the probability of adopting profitable innovations.

Private/Non-market

Schooling generates impacts valued by people that are not recorded in earnings differences; those are the wellbeing gains that people obtain from schooling. Such benefits are not reflected in the traditional economic estimations about the private returns to schooling obtained from the labour market. Haveman and Wolfe (1984) were the pioneers who highlighted the need to include the private/non-market effects in education's benefit analysis. They proposed a method to estimate the private/non-market education's benefits, but most important is the fact that they gathered and created a catalogue (after surveying several studies) of all possible private/non-market benefits. They also sorted the catalogue by channel of impact, economic nature of impact, nature of existing research on magnitude of impact, and status of economic benefit estimates.

Eight years later, they updated and improved their work (see Haveman and Wolfe 2002). Others have further improved their work, such as Riddell (2004) and Owens (2004). Thus, after reviewing articles from Haveman and Wolfe (1984 and 2002), Riddell

(2004), and Owens (2004), the following private/non-market education's benefits can be established:

- Direct effects on other member of the family when one family member is more educated.
 1. Intra-family productivity. Education of one spouse has an effect on the earning of other spouse.
 2. The individual choices in reference to the labour market, marriage and family size which are all positively related with the education of one spouse (for a full discussion see Haveman and Wolfe 2002, and Owens 2004).
- Intergenerational effects.
 1. Parents' education has strong effects on children accrued over an extended period of time (for a full discussion see Greenwood 1997, and Riddell 2004).
 - 1.1 Lower fertility.
 - 1.2 Lower incidence of teenage childbearing of more educated parents.
 - 1.3 Less child abuse and neglect.
 - 1.4 More substantial family investment in children.
 - 1.5 Less costs to educate children of educated parents.
 - 1.5 Lower criminal propensity in children.
 - 1.6 Better child health.
- Own non-market effects (for a full discussion see Haveman and Wolfe 1984, and 2002).

1. Own health. Increased schooling appears to relate to better health and increased life expectancy (for a full discussion see Owens 2004, and Riddell 2004).
2. Consumer choice efficiency. Evidence suggests that schooling leads to more efficient consumer activities such as knowledge and saving regarding market transactions.
3. Labour market search efficiency. More schooling is negatively related to the costs of job search. Moreover, more schooling increases regional mobility.
4. Marital choice efficiency. Studies of assortative mating suggest that schooling is associated with better choices regarding marital partners.
5. Attainment of desired family size. More schooling may enable one to gather information on how to avoid unwanted births.
6. Entertainment. Schooling is also asserted to change tastes, increasing the enjoyment of meritorious consumption activities such as reading, music, and art.
7. Leisure. The wage rate increment associated with an additional year of schooling implies an increase on the value of both incremental and inframarginal leisure hours. Thus schooling induces changes in the value of leisure and, perhaps, the quantity chosen.

Social/Non-market

Beyond the gains to one's self and family are those seldom-noted and rarely evaluated external and public goods effects of one's education that accrue to others in

society (Haveman and Wolfe 2002). As in the case of the private/non-market benefits, there is not a single theory or model that explains all the social/non-market effects.

Instead, there are several studies and authors that attempt to demonstrate the existence of a specific social/non-market benefit of education according to their research interest.

Nonetheless, Haveman and Wolfe (1984, and 2002) compile and discuss those studies, to which are added more elements by Riddell (2004), and Owens (2004). Those benefits are:

1. Human capital externalities. This benefit arises when the decision to invest in more education by one individual, which consequently raises their productivity, also increases the productivity of other individuals. This is due to the sharing of knowledge and skills through formal and informal interaction among workers with different levels of education (for a full discussion see Moretti 1998, 2002, and 2003).
2. Lifelong and adult learning opportunities. These benefits occur at later ages as a consequence of prior formal education (for a full discussion see Owens (2004)).
 - 1.1. Later retirement and work after retirement with a reduction on social security fund cost which are a social benefit.
 - 1.2. Knowledge that is disseminated and acquired through articles, books, television, computer software, encyclopaedia, and informal communication written by educated people.
 - 1.3. The capacity to learn and adopt new technologies

- 1.4. Self-confidence derived from the ability to communicate more effectively and to take on new roles and responsibility in the community.
3. Charitable giving. There is evidence that the amount of time and money devoted to charity is positively associated with the amount of schooling that someone has received.
4. Saving. Schooling contributes to increased saving. This has a public-good aspect to the extent that the capital market is imperfect and aggregated savings are less than optimal.
5. Political participation. A better-educated electorate makes better decisions on policy choices that affect the economy and well-being (for a full discussion see Riddell 2004).
 - 5.1. Follow the news and political campaigns.
 - 5.2. Attend political meetings.
 - 5.3. Discuss political matters with friends
 - 5.4. Trust in the federal government
6. Criminal activity reduction. There is evidence that education reduces criminal activity through four channels (for a full discussion see Owens 2004).
 - 6.1. The income effect. Education raises skill level and wage rates which then lowers crime
 - 6.1. Direct effects on patience and/or risk aversion. Schooling may increase patience or risk aversion behaviours, thereby reducing the

likelihood of committing crime. This suggests that more patient and more risk adverse individuals would place more weight on the possibility of future punishments

6.2. Direct effects on the return to crime. There is evidence that suggests that there is a positive association of education on white-collar crime and also possible that there is an effect of training and skill on poverty crime.

6.3. Delinquency and the direct effect on the pleasure gained from crime. Academic achievement does not reduce crime directly; rather instead of men remaining under supervision either in school or in a job, they are not on the street getting into trouble.

7. Tax and transfer effects. Several studies discuss that individuals with more education are less likely to rely on public transfers, even when eligible for benefits. Moreover, the quantitatively most important effect is the impact of higher lifetime earnings on government tax receipts (for a full discussion see Riddell 2004).

About private/non-market and social/non-market benefits measurement.

Although Haveman and Wolfe (1984, and 2002), Riddell (2004), and Owens (2004) do a good job including the private/non-market and social/non-market for a full accounting of schooling's gains, Acemoglu (2002) notes their lack of methodological consistency taking into consideration that the authors used a summary approach and citing a large number of studies claiming these types of schooling's returns. More

precisely, they took existing association from the data as the causal effect of education, in the words of Acemoglu (2002):

It is quite possible that individuals who are more educated made better fertility choices or better consumer choices, but this does not mean that this is the causal effect of education on these choices. Individuals who obtain education are different, not only because their ability, but also because of their parental and social background. It is quite likely that this background factors-not the education itself- lead to different consumer, fertility, or other social choices. (p. 133)

This concern leads to the question of what we actually know about any of these effects in a more careful, empirical and theoretical setting. On this point, Shultz (2002) comments “I look forward to a new generation of empirical research into the role of education, from which more adequate and less biased evaluation of the private/non-market and social/non-market returns to education can be derived using the conceptual logic outline in the Wolfe-Haveman paper”(p.141). Nonetheless, Shultz (2002) recognizes that the remaining task is not a trivial one, in terms of collecting suitable data and their correct analysis.

Immigrants' educational gains

The literature on Hispanic immigrants (especially Mexican) and education comes largely from sociology and tends to focus on the struggle for educational attainment by taking education as one of the main variables in explaining future or present immigration success among generations (Murguia and Telles, 1996; Ferrer et al. 2004; Wojtkiewicz and Donato, 1995; Bean, et. al. 1994). Thus the literature focuses on the explanatory variables for educational attainment rather than what the effects of education are in relation to immigrants.

Hence, the studies go from the match of the typology of immigrants (age and education) and host community to phenotype (genetic characteristics) on immigrants. The general consensus among researchers is that family background (parental education, single mother, parental language proficiency, and socioeconomic status) has a strong effect on the educational gains of children (Murguia and Telles, 1996; Wojtkiewicz and Donato, 1995; Bean, et. al. 1994). There is little disagreement among results; instead, there are specialized studies that give information about the extent of influence of each explanatory variable over immigrant educational gains.

Thus, Wojtkiewicz and Donato (1995) report that family background and nativity is more important as generations pass, while Bean, et. al. (1994) finds the current wave of immigrants is more likely to be poorly educated than in the past and that the host community is now more hostile than in the past. Therefore immigrant children in particular struggle more in their educational attainment. Moreover, Murguia and Telles (1996) assert that phenotype and ethnicity becomes a barrier for educational achievement; the darker and more Indian looking immigrants encounter more racial discrimination. In addition, Ferrer, et al. (2004) point out that the human capital (not only education) that an immigrant brings is more favourable than one without education. In these studies education is seen as an end rather than as a means, with little mention about the social returns of immigrants' educational gains.

In the literature, there is a gap when it comes to the private/non-market, and social/non-market educational benefits for Hispanic immigrants. Nevertheless, it has been documented that local economies improve when Hispanic immigrants arrive (see for example Baker and Harris' 2006 study of Georgia). This can be taken as the

Social/Market benefit of Hispanic immigrants. In addition, there are studies about the effect on the labour market due to Hispanic immigrants; normally, these studies partially capture the Private/Market benefits for those immigrants when the methodology requires calculating native and immigrant's wages for comparison analysis.

Regarding the private/non-market and social/non-market benefits of education among Hispanic immigrants nothing has been said, probably because it is well recognized that immigrants have a lack of education. On the contrary, it has been documented that -along with the economic improvement- the social order of the host society suffers some disruption when immigrants arrive. According to most researchers, the lack of education among Hispanics causes social order disruption to the host society. Thus, it can be assumed that if Hispanic immigrants get education, then the social/non-market benefit will come in the form of the return to the social harmony that the host community had before immigrants came.

In addition, the Heritage Foundation in its work entitled "The Fiscal Cost of Low-skill Immigrants to the U.S. Taxpayer⁵" analyzes the net fiscal deficit created by low-skilled (referring to those without a high school diploma) immigrants. The think tank group calculated for fiscal year of 2004 that a household's net fiscal deficit for this kind of workers was \$19,588, as they received \$30,160 dollars from public benefits, versus a total amount of \$10,573 dollars of taxes that they paid. Thus, low-skill immigrant households impose substantial long-term costs on the U.S. tax payer. The avoidance of this net fiscal deficit can be taken as another social/non-market benefit for the host society if Hispanic immigrants get education. This capstone project will fill this gap in

⁵ The research was used as a testimony before the Subcommittee on Immigration Committee on the Judiciary United States House of Representative May 1, 2007

literature by highlighting the possible social/non-market benefit of educating Hispanics immigrants in the area.

Methodology

Participants

The participants in this study are the volunteers and students of the school. Through its lifetime the school has recruited several students and several volunteers, but only a few have consistently attended classes. For this reason only these few volunteers (roughly 15) and students (roughly 30) will be taken into consideration for filling the contingent valuation survey.

Apparatus

In order to answer the research questions it will use a Social Cost-Benefit Analysis as proposed by Young and Steinberg (1995) to guide this study. Young and Steinberg (1995) define cost-benefit analysis CBA in its simple form as follow:

CBA is a framework for decision making about and evaluation of organizational programs, activities, and initiatives for public-sector and private nonprofit organizations operating in an environment of market failure. It is analogous to the profit criterion used for making decisions and evaluating performance in the commercial business sector, but it is based on social cost and benefits rather than cost and benefits. (p. 112)

The logic behind CBA in its simplest form is to compute the economic benefits and the economic costs incurred by a policy or program, irrespective of who benefits and who pays, and suitably discount these costs and benefits over time to reflect opportunity values. The foregoing procedures are intended to maximize economic efficiency which is meant to put resources to their most highly valued uses. However, in the public and

nonprofit sector, there is a special concern with the issue of distributional justice (Young and Steinberg, 1995).

The CBA in its basic form does not explicitly attend to the question of “who gets what?” In other words, basic CBA does not take into consideration the issue of distribution in the sense of equity and fairness which are the base of a distributional analysis. This is important because some programs or policies are specifically designed to address the needs of certain groups, yet in the course of the actions one group may win (benefit) which implies that another loses (cost). Thus, a distributional analysis among different groups involved in a program developed by government or by a nonprofit organization is necessary and that is the basis as well as the idea behind Social Cost Benefit Analysis.

Economists have worked to incorporate distributional consequences into their Social Cost-Benefit Analysis with the development of the Kaldor-Hicks criterion that states, “Those who gain from a policy or action must be able to compensate those who lose, not that they actually do so. In simpler term, efficiency is promoted when a policy or action generates greater benefits than costs to society (thus society as a whole gains in net⁶), regardless of whom receives the benefits, bears the costs, or whether the losers are compensated” (Fuguitt and Wilcox, 1999, p. 108). In the words of Young and Steinberg (1995) the Kaldor-Hicks criterion:

Is both the concept that makes costs-benefit analysis practical as an analytical tool widely applicable to situations where full compensation of

⁶ For example, in a society with two people, suppose initially person A has \$40 and person B has \$80. Assuming that some policy or program changes the situation where now person A has \$55 and person B has \$76 this situation would be considered efficient under the Kaldor-Hicks criterion. This change is efficient, although person B is now worse off, because person A could in theory pay person B anywhere between 1 and 15 dollars (more likely 4) to accept this alternative situation and person A still would remain better off after paying to person B (merely the possibility for compensation exists).

cost bearers is unlikely as well as controversial as an overriding gauge of performance for an organization concerned with social issues. After all, if compensation of costs bearers does not actually take place, who is to say whether society as a whole is better off when some gain and some lose? How do we compare the welfare of one person with that of another? Is society really better off because I gain \$20 while you lose only \$10? Even in situations where no individual incurs a net loss, application of the costs-benefit principle is somewhat controversial because we may care about improving the lot of the least fortunate in society or making the distribution of society's wealth more equitable. (p. 115)

At this point it is also important to define the notion of costs and benefit for the purpose of a SCBA using the economic view of cost and benefit. Accordingly, the economic cost will be the opportunity cost⁷ of resources used, while the economic benefit will be represented by the willingness to pay⁸ for a given action. The opportunity cost of a resource used can easily be estimated by direct market price because most of the resources are purchased in the competitive market. In contrast, benefit estimation often represents a challenge since many public and nonprofit services are not sold in a competitive market rather they are sold at subsidized prices, given for free, or are associated with external benefits (Young and Steinberg, 1995).

To measure program benefits means to figure out the willingness to pay from those who receive the benefit. Often a market price does not exist for these benefits because they are not directly sold although these resources do have utility. To deal with

⁷ Opportunity cost is the cost (sacrifice) incurred by choosing one option over an alternative one that may be equally desired. Thus, opportunity cost is the cost of pursuing one choice instead of another. This is commonly measured in terms of the value that could have been produced by employing those resources in their next best uses. Normally prices on the market adequately reflect the opportunity cost, but when market does not exist the opportunity cost must be estimated indirectly, for instance, by observing the prices of similar resources in related market.

⁸ What the market price reflects on the consumers' side is the level of satisfaction, utility or benefit that the good gives to the consumer. Thus, the level of benefit is being measured through the consumer willingness to pay for what it is believed that if a consumer is willing to pay a high price is because the benefit that receives from the product is high and vice versa. Once again, when a market price does not exist for the good under evaluation the willingness to pay must be estimated indirectly.

this problem, economists have developed the concept of a “contingent valuation technique” referred to as a stated preference model (in contrast to a price-based revealed preference model). To value nonmarket effects surveys respondents are asked to state their preference hypothetically, indicating their valuation as if a market would exist for the particular resource, good or service (Fuguitt and Wilcox, 1999). In other words, the contingent valuation method is called “contingent” because it uses information on how people say they would behave given certain hypothetical situation, contingent on being in the real situation (Whitehead and Blomquist, 2006).

In order to carry out an adequate SCBA there are two important concepts that help to illustrate the distributional as well as the efficiency of an action by determining who gets what. Those concepts are 1) *Transfer payments*: shifts of resources from one group of individuals to another that do not involve a net change in the value of resources available to society as a whole; and 2) *Secondary effects*: the ripples created in the economy by changes in the prices of resources associated with the primary program activity under evaluation. All the foregoing concepts and ideas can be put together in a simple accounting framework combined with a matrix format that brings together the relevant dimensions of SCBA such as:

- Costs: different elements of opportunity cost that must be accounted.
- Benefit: different elements of gain.
- Beneficiaries and cost bearers: The different social groups that receive benefits and/or bear costs.
- Transfer payments: Transfers of resources between beneficiary and cost-bearing groups.

- Timing of costs, benefits, and transfer: the patterns of incidence of costs, benefits and transfer payments over time.
- Bottom lines: The net present values of benefits and costs to each group, and the net difference between benefit and cost for society as a whole as well as for each possible course of action.

SCBA is illustrated in the following diagram:

Social Cost Benefit Analysis Matrix Framework

	Group 1	Group 2	Group 3	All Society
PV of Benefits				
Benefit a	+			+
Benefit b			+	+
Benefit c		+		+
PV of Costs				
Cost d		-		-
Cost e			-	-
Cost f			-	-
PV of Transfers				
Transfer g	+		-	0
Transfer h		-	+	0
PV of Net Benefits				
(a+b+c)-(d+e+f)	+	(+) or (-)	(+) or (-)	(+) or (-)

PV = present value

Source: Young and Steinberg (1995)

By applying the methodology described above to the case of CECSRA the first step is to identify the key players (directly or indirectly) in the program: a) CECSRA students, b) their children and family, c) all donors, d) Volunteers (ASU students and local community) and paid staff e) OLP’s Church Members and parents who pay a fee for

their children at OLP School, f) and the host society, the Central Savannah River Area community.

The second step would be to identify the benefits and the costs for CECSRA program as well as transfer payment and secondary effects.

- Benefits can be defined as: 1) Potential returns of education in terms of higher salary for CECSRA students, 2) Potential better personal welfare for CECSRA student 3) Potential welfare improvements for their family in general and children in particular, 4) Volunteer's benefit, and 5) Host society's benefits.
- Costs can be defined as: 1) Salary of staff, 2) Supplies, 3) Facility costs, and 4) Volunteers' time
- Transfer payments can be defined as: Any kind of gifts and donation form the following groups 1) ASU student and local community, 2) OLP's Church Members, and Parents who have children in OLP School, 3) ASU center for immigration studies, 4) OLP's Outreach program, and 4) Mexican Government
- Secondary effects can be defined as: 1) Potential Increase of the CECSRA's student labor cost

The advantage of using an accounting matrix framework is that it will allow us to indicate at least the direction (whereas positive or negative) and potential impacts on a particular group when calculations can not be performed. This is important because some calculation could present methodological challenges beyond the researcher's capability as well as time availability. At this point it is recognized that the real challenges are the estimation of most of the benefits since as Young and Steinberg (1995) assert "unlikely

costs most of the programs benefits have a pattern of incidence over time that extends beyond the time program operational framework”.

The SCBA matrix framework for CECSRA as well as the Benefits, Costs, and Transfer Payment matrix frameworks are outlined below:

Social Cost Benefit Analysis Matrix Framework for Centro Educativo Central Savannah River Area

	CECSRA students	Children and Family	All Donors	Volunteer and paid Staff	OLP's Church Members and Parents who have children in OLP School	Society
<i>PV of Benefit</i>						
CECSRAs' student Potential higher salary	XXX(+)					XXX(+)
CECSRAs' student potential better own welfare	XXX(+)					XXX(+)
Potential better welfare for family and children		XXX(+)				XXX(+)
Volunteer's benefits				XXX(+)		XXX(+)
Host Society's benefits						XXX(+)
<i>PV of Cost</i>						
Salary for paid staff			XXX(-)			XXX(-)
Supplies			XXX(-)			XXX(-)
Facility costs			XXX(-)			XXX(-)
Volunteer time				XXX(-)		XXX(-)
<i>PV of Transfer Payments</i>						
CECSRA	XXX(+)	XXX(+)	XXX(-)	XXX(-)	XXX(-)	0
<i>PV of Secondary Effects</i>						
Potential Increase of the CECSRAs' student labor force						XXX(-)
<i>PV of Net Benefits</i>						
Benefits - Costs	(+) or (-)	(+)	(-)	(+) or (-)	(-)	(+)or(-)

Source: Own elaboration based on Young and Steinberg (1995) example.

Note: 2) Secondary effects must be shown but not counted to avoid double count with the benefit of potential higher salary. 3) Transfer payment must add zero horizontally always

Benefit Matrix Framework for Centro Educativo Central Savannah River Area

	CECSRA students	Children and Family	Volunteer and paid Staff	Society
1) CECSRAS' STUDENT POTENTIAL HIGHER SALARY				XXX(+)
2) CECSRAS' STUDENT POTENTIAL BETTER OWN WELFARE				
Warmth from the group	XXX(+)			XXX(+)
Learn new skill	XXX(+)			XXX(+)
Social networking	XXX(+)			XXX(+)
Obtain references	XXX(+)			XXX(+)
Positive effect on your spouse's earning		XXX(+)		XXX(+)
Be able to advise		XXX(+)		XXX(+)
Better life for children		XXX(+)		XXX(+)
Better health	XXX(+)			XXX(+)
Efficient consumer choices	XXX(+)			XXX(+)
Efficiency labor search	XXX(+)			XXX(+)
Efficient marital choices	XXX(+)			XXX(+)
Desired family size		XXX(+)		XXX(+)
Entertainment	XXX(+)			XXX(+)
Self confidence	XXX(+)			XXX(+)
Saving	XXX(+)			XXX(+)
Cultural assimilation				XXX(+) ¹
Contribute to the tax system				XXX(+) ²
4) POTENTIAL BENEFITS FOR VOLUNTEERS				
Altruistic satisfaction			XXX(+)	XXX(+)
Use your skill			XXX(+)	XXX(+)
Get recognition			XXX(+)	XXX(+)
Warmth from the group			XXX(+)	XXX(+)
Teaching experience			XXX(+)	XXX(+)
Learn new skill			XXX(+)	XXX(+)
Social networking			XXX(+)	XXX(+)
Build résumé			XXX(+)	XXX(+)
Guide the school			XXX(+)	XXX(+)
Involvement			XXX(+)	XXX(+)
Avoid net fiscal deficit				XXX(+) ³
Return to social harmony				XXX(+) ⁴
TOTAL	XXX(+)	XXX(+)	XXX(+)	XXX(+)

Source: Own creation

Note: 1,2,3,4 will be added to form HOST SOCIETY'S BENEFITS.

Costs Matrix Framework for Centro Educativo Central Savannah River Area

Costs	Donors	All Donors			OLP's Church Members* and Parents who have children in OLP school~	ASU students and local community	<u>TOTAL</u>
		Mexican Government	South Carolina Outreach Program* / OLP's Outreach Program~	ASU Center for Immigration Studies			
<i>SALARY FOR PAID STAFF</i>		XXX(-)	XXX(-)				XXX(-)
<i>SUPLIES</i>							
Desks					XXX(-)		XXX(-)
Chairs			XXX(-)		XXX(-)		XXX(-)
Tables					XXX(-)		XXX(-)
Computers					XXX(-)		XXX(-)
Printers					XXX(-)		XXX(-)
TV					XXX(-)		XXX(-)
DVD					XXX(-)		XXX(-)
Educational books and videos		XXX(-)					
Blackboards					XXX(-)		XXX(-)
Copy machine					XXX(-)		XXX(-)
Kitchen appliances					XXX(-)		XXX(-)
Bookshelves					XXX(-)		XXX(-)
File cabinet			XXX(-)				XXX(-)
<i>FACILITY</i>							
4 classrooms					XXX(-)		XXX(-)
Power (light)					XXX(-)		XXX(-)
Internet payment					XXX(-)		XXX(-)
water					XXX(-)		XXX(-)
Heater					XXX(-)		XXX(-)
Maintenance					XXX(-)		XXX(-)
<i>VOLUNTEER TIME</i>				XXX(-)		XXX(-)	XXX(-)
<u>TOTAL</u>		XXX(-)	XXX(-)	XXX(-)	XXX(-)	XXX(-)	XXX(-)

Source: Own creation

Transfer Payment Matrix Framework for Centro Educativo Central Savannah River Area

Donors (-) / Receivers (+)	CESRA		Society as a whole
ASU students and local community	XXXX (-)	XXXX (+)	0
OLP's Church Members	XXXX (-)	XXXX (+)	0
Parents who have children in OLP school	XXXX (-)	XXXX (+)	0
ASU Center for Immigration Studies	XXXX (-)	XXXX (+)	0
OLP's Outreach Program	XXXX (-)	XXXX (+)	0
Mexican Government	XXXX (-)	XXXX (+)	0
Society as a whole	XXXX (-)	XXXX (+)	0

Source: Own creation

Procedure

Benefits

As mentioned before, many nonprofit benefits are not sold in the market, but sold at subsidized price or given for free. For these reasons benefits' estimation require "willingness to pay" approach. Contingent valuation technique will be used to build surveys (see appendix A) and thus to estimate: 1) the potential higher salary for the CECSRA students, 2) the potential better welfare for family and children of the CECSRA students, 3) the potential volunteers' benefits and 4) the potential host society's benefits. The purpose of this technique is to obtain approximate estimation by asking the basic question: what are the beneficiaries willing to pay for these benefits?

CECSRAs' students potential higher salary estimation will be based on the special study of the U.S. Census Bureau entitled, The Big Payoff: Educational Attainment and Synthetic Estimates of the Work-Life Earnings (2002). In addition, the salary information of the Augusta Technical College, that provides salary information by

programs (technical carrier), can be taken as the possible future salary for the CECSRA alumni. A combination of all these studies will be included in the SCBA.

CECSRAs' Students Potential salary: The earning scale that fits the best with Hispanic immigrants' case will come from the analysis previously mentioned.

Potential better personal welfare of the CECSRA students: This category stems from the personal non-market effects in the literature review and will be included in the contingent valuation surveys developed for the CECSRA students, and thus to calculate approximately their willingness to pay for these benefits.

Potential better welfare for family and children: This category stems from the direct effects on other members of the family when one family member is more educated as well as from the intergenerational effects in the literature review. These categories will be included in the contingent valuation surveys developed for the CECSRA students to ask them their willingness to pay for these benefits.

Volunteers' benefits: The CECSRA has two types of volunteer workers, young and old (mature). The literature about volunteering identifies several benefits for the two types of workers, thus benefits of satisfaction refer to the older workers of CECSRA. Rouse and Clawson (1992) suggest that benefits for older workers are achievement, affiliation and preferred purposive incentives. Achievement motives are: using skills they perform well, using their time constructively, and improving their community. Affiliation motives refer to concern for and helping others, working with other volunteers and the warmth and friendliness of their volunteer group. Purposive incentives are: helping their volunteer organization, receiving satisfaction from the volunteer job, and the feeling involvement to make a difference in their community. Regarding young

workers (most of which are ASU students) it is assumed that they benefit in several ways such as getting experience and teacher training. On this point, Bergel (1994), and Handy and Srinivasan (2004), assert that the most important benefit for young workers are opportunities to learn new skills and obtain experience to become more productive members of the community, to develop social networking among volunteers and with staff members (increase the social capital of volunteering), and to obtain references for employment, job and career opportunities.

The foregoing characteristics about volunteer workers can be applied to the CECSRA ones. To get some idea of how much these benefits are worth to the volunteer, they must be asked how much they estimate the value of these benefits in monetary terms, in other words, how much they would be willing to pay to get these benefits. Once again, the concept of contingent valuation technique is the base for the calculation of the benefits for volunteers.

Host society: As mentioned before two problems associated with Hispanics immigrants are the social order disruptions to the host society as well as the net fiscal deficit created by the low-skill immigrants. Both students and volunteers will be asked how much they value avoiding these problems in the contingent valuation survey. Extra information about it such as Rector (2007) study will be used to complement their response.

Cost

Most of the cost calculation will be gathered in reference to observable market prices unlikely to data collection of benefits. Consequently there will not be a problem to calculate the incurred expenditure of most of the cost.

Salary for paid staff: This data will come from CECSRA's printed budget reports. It must be mentioned that there are a couple of occasionally or temporarily paid staff and teachers (volunteers), whose salary must be printed in the same budget reports.

Supplies: CECSRA counts on the following supplies: desks and chairs, computers, print machines, a TV and a DVD; educational resources such as books, videos white dry-eraser boards, a copy machine and kitchen tools such as refrigerator and microwave oven. To do these calculations we will necessary collect the prices of these items, and calculate its total expenditure in a year

Facility cost: In the case of CECSRA the facility cost are four rooms with total availability to the CECSRA's operational schedule, the power (light) expenditure for the use of the computers, the copy machine, the TV, the kitchen tools, and the internet payment. Because all these facilities are provided for free by Our Lady of Peace School, a personal interview with the financial administrator or accounting chairman will take place to ask for the accounting records of these expenditures. If they don't have such record for CECSRA, it will be necessary to calculate the opportunity costs of the next best use of the classrooms.

Volunteer time: Volunteer time will be taken from the Independent Sector calculation of the volunteer time and because the Central Savannah River Area belongs to Georgia and South Carolina an average of the salary for these to states will be taken.

Transfer payments: Every donation, as well as every gift (of any kind), represents a transfer payment, except when the gift or donation is used to secure resources to carry out the organization's words (in simpler terms, when the gift or donation is used for the organization to pay expenditure.) Hence, all donation and gifts that are not being used

for any payment must be calculated to determine the transfer payment from all the groups to CECSRA

Potential increase of the CECSRA's student labor cost: As a result of getting education the ripples created in the economy is the change in the price of the CECSRA's students' labor force. Said effect is the long run consequence of CECSRA program; however, this change has already been counted as a benefit for CECSRA student. The same benefit will represent a cost increase for CECSRA's students' employers. This calculation won't be counted twice; nevertheless as a distributional matter it must be shown.

More about data collection and estimation

Once the analysis has generated all costs and benefits, the values must be summed over the fifteen years of time program operational framework chosen as a time horizon for the purpose of this analysis, since as mentioned before, benefits and costs tend to be distributed over several years. To be able to do this, the benefit and cost streams must be discounted to obtain the present value. Working with "present value" is necessary because a dollar today does not have the same value as a dollar in the future. The reason for why a dollar received today is worth more than a dollar received in five or ten years is that a dollar today can be invested and generate a return; then, the next year can be reinvested and generate a second return, and so on. Hence in two years, the holder of the dollar will have the dollar plus two years compounded interest.

Summarizing, when a program's benefits and costs are distributed over different time periods, each dollar represents a different quantity depending on when it is incurred. It is therefore required to change all of these dollar values to a common unit of

measurement. The typical practice is to discount the future benefits and costs to values in the present, defined as the date resources are first committed to the program. To present value calculation for the benefits the following formula will be used.

$$PVB = \frac{FVB_t}{(1 + d)^t}$$

PVB is the present value of the benefits, FVB is the future value of the benefits, “d” is the discount rate, and “t” is the time period. For every year a present value must be calculated as follows:

$$PVB = \frac{FVB_0}{(1 + d)^0} + \frac{FVB_1}{(1 + d)^1} + \frac{FVB_2}{(1 + d)^2} \dots + \dots + \frac{FVB_n}{(1 + d)^n}$$

Thus, the general formula for the present value of the benefits is:

$$PVB = \sum_{t=0}^t \frac{FVB_t}{(1 + d)^t}$$

Likewise, the project cost over time must be discounted to the present value.

$$PVC = \frac{FVC_t}{(1 + d)^t}$$

PVC is the present value of the costs, FVC is the future value of the costs, “d” is the discount rate, and “t” is the time period. For every year a present value must be calculated as follows:

$$PVC = \frac{FVC_0}{(1 + d)^0} + \frac{FVC_1}{(1 + d)^1} + \frac{FVC_2}{(1 + d)^2} \dots + \dots + \frac{FVC_n}{(1 + d)^n}$$

Thus, the general formula for the present value of the costs is:

$$PVC = \sum_{t=0}^t \frac{FVC_t}{(1+d)^t}$$

Having calculated all benefits and costs as shown above the research questions can be answered. Thus, whether CECSRA has efficiently carried out its mission and purpose or not, and to what extent the local and regional community benefits from immigrant Hispanic educational gain, will depend on the Kaldor-Hicks criterion. This criterion asserts that a single program promotes efficiency if the social benefits outweigh the social costs. This means that the total net present value (TNPV) must be positive. TNPV is the present value of incremental net benefits generated through the program's time. If TNPV is bigger than zero, then from society's perspective, pursuing the policy promotes greater efficiency than not pursuing it. Mathematically, the TNPV can be calculated as follows:

$$TNPV = PVB - PVC = \sum_{t=0}^t \frac{FVBt}{(1+d)^t} - \sum_{t=0}^t \frac{FVCt}{(1+d)^t} = \sum_{t=0}^t \frac{FVBt - FVCt}{(1+d)^t}$$

Another straightforward way to test the Kaldor-Hicks criterion for CECSRA is using a benefit-cost ratio (B/C) which stems from the net present value formula; however, division and not subtraction is employed as follows:

$$B/C = \frac{FVBt}{FVCt} = \sum_{t=0}^t \frac{\frac{FVBt}{(1+d)^t}}{\frac{FVCt}{(1+d)^t}}$$

The CECSRA program will promote efficiency if the benefits outweigh the costs (PVB is bigger than PVC) yielding a benefit cost ratio (B/C) bigger than 1. The more the benefits exceed the costs, the larger is the ratio's value.

Discount rate and sensitivity analysis

The discount rate ("d" in the formula provided above) is a theme that deserves special attention since the whole analysis, as well as its results and interpretation, is highly sensitive to the discount rate choice. Its power is derived from its location as a part of the TNPV's denominator. Moreover, the effect is increased because $(1+d)$ is raised to the "t" power and thus grows exponentially as the number of time periods increases. Thus, the higher the discount rate, the greater the denominator, and therefore the lower the TNPV.

Hence, the choice of a specific discount rate can deeply influence the results of the analysis and lead to distinctly different conclusions about the program's efficiency. Fuguitt and Wilcox (1999) suggest three types of discount rates that must be taken into consideration; these are the rate of return from the best alternative investment, the cost of borrowing funds, and the social rate of time preference. These three rates have their own rationality, theoretical and practical justification, and advantages and disadvantages; although there is no consensus and resolution to the theoretical debate about which rate is best, Fuguitt and Wilcox (1999) favor the Social Rate of Time Preference (SRTP).

The SRTP is the rate at which society as a whole is willing to trade present consumption for future consumption⁹. This rate is similar to the individual rate of time

⁹ In other words, when society decides to allocate resources to a particular program (in this case to CECSRA) means that a stream of social resources is going to be allocated into the future for which society foregoes the use of the resources for any other use in the present. Therefore, a Social Rate of Time Preference (essentially a reward for postponing consumption until a later date) must be given to society so

preference, which is expressed in financial markets. Thus, individuals have a positive time preference, meaning that a person values the present more than the future. Likewise society has a positive time preference, but the SRTP is lower than the individual rate. So far researchers have not agreed what the social rate is nor how smaller this rate is compared with the individuals' rate. Unlike individuals' time preferences, social time preference rates are not observed in the market.

Thus, economists have worked to specify the social time preference rate, proposing several approaches such as the synthetic discount rate, the weighted average, and the shadow price of capital, but once again there is not a general agreement. Due to the lack of consensus and the lack of time and knowledge to calculate our own STPR, this analysis will take the Spiegelman's STPR developed in his model to evaluate educational programs. Spiegelman (1968) created a 4.5 STPR as a midway between the rate of productivity increase and the corporate long-term borrowing rate.

As it can be implied, the selection of a discount rate becomes a critical decision because it can easily enable subjectivity influenced by the analyst. To provide objectivity, a selective sensitivity analysis must be performed for the discount rate. Thus, the analysis must take the 4.5 percent as the lower of three discount rate followed by 5.5 and 6.5 percent. Each rate will be computed in the TNPV calculation and all three TNPVs for the program will be reported and interpreted. A useful tool to perform the sensitive analysis is the "discount factor", that is the fraction $1/(1+d)^t$ which is multiplied by $FVB_t - FVC_t$ to obtain the TNPV. All the discount factors that will be used in the sensitive analysis are

that it will be willing to forego to receive a benefit from present consumption to receive a benefit in the future from the present investment today. Thus, this kind of interest payment reflects the rate of compensation required to offset the social preference for receiving consumption benefits in the present compared to the future.

presented in the following table; each one will be multiplied by the result of benefits minus costs.

Discount Factors

Year	d = 4.5 %	d = 5.5 %	d = 6.5 %
1	0.9569	0.9479	0.9390
2	0.9157	0.8985	0.8817
3	0.8763	0.8516	0.8278
4	0.8386	0.8072	0.7773
5	0.8025	0.7651	0.7299
6	0.7679	0.7252	0.6853
7	0.7348	0.6874	0.6435
8	0.7032	0.6516	0.6042
9	0.6729	0.6176	0.5674
10	0.6439	0.5854	0.5327
11	0.6162	0.5549	0.5002
12	0.5897	0.5260	0.4697
13	0.5643	0.4986	0.4410
14	0.5400	0.4726	0.4141
15	0.5167	0.4479	0.3888

Own elaboration base on Fuguitt and Wilcox (1999)

Results

*Benefits matrix results*¹⁰

CECSRAs' students potential higher salary estimation was based on the US Census Bureau, which provides with an annual amount of \$23,127.75 as the high-school earning for Hispanic and base on the salary information from Augusta Technical College (see appendix C), which provides annual salary information by programs (technical carrier). \$18,500 dollars was the possible future salary chosen for the CECSRA alumni. In the case of the CECSRA students, it must be recognized that age is an important variable that may or may not undermine their probabilities of making \$23,127.75 a year. Moreover, in salary information provided by the Augusta Tech Career Service office, the projections go from \$13,850 (for a law clerk) to \$56,200 (for a sales service manager). Realistically, \$18,500 was chosen because other variables such as migration status can also affects their chances of getting a job like a sales service manager, so \$18,500 is the middle point between \$13,850 and \$23,127.75. Surprisingly, \$18,500 (proxy) is the corresponding salary for jobs such as Nurse Aid, Nursing Assistant, and Certificated Nursing Assistant which is in the case of the female CECSRA students the most desired profession. Thus, \$18,500 was multiplied by the number of student surveyed (27) giving a total amount of \$499,500 dollars.

The potential better personal welfare as well as the potential better welfare for family and children calculations stem from the contingent valuation students' survey. Students were asked the following three questions: 1) If the school implements tuition and fees charge in the short run, would you be willing to pay it, taking into consideration all the benefits mentioned?, 2) If yes, how much money are you willing to pay per fees

¹⁰ See appendix B for detailed calculations of all benefits.

monthly?, and 3) from the quantity you chose, what percentage would you allocate to the eighteen benefits presented to you? The students responded that they collectively would be willing to pay an amount of \$6,900 dollars in fees annually. From this quantity, students allocated an amount of \$3,999.6 dollars to personal welfare and an amount of \$1,506 to children and family welfare, and the rest of the \$6,900 went to society benefit.

The volunteers' benefits calculations stem from the contingent valuation volunteers' survey. Volunteers were asked: 1) If the school ask you to donate or contribute money in the short run, would you donate money to the school, taking into consideration all the benefits mentioned?, 2) If yes, how much money would you donate per month?, and 3) from the quantity you chose, what percentage would you allocate to the twelve benefits presented to you?. Hence, they responded that they collectively would be willing to donate an amount of \$1,740 dollars annually, from which they allocated an amount of \$1,158 to the benefits that they receive by volunteering at CECSRA, and the rest of the \$1,740 went to society's benefit.

Host society's benefits calculation is the addition of "cultural assimilation and contributes to the tax system" on the students' side plus the addition of "avoid net fiscal deficit and return to social harmony" on the volunteers' side. Collectively, the four concepts added an annual total amount of \$938.4 dollars. It is pertinent to mention here that on the students' side the concepts were seen as a willing to pay; while on the volunteers' side the concepts were seen as willing to avoid. Thus, volunteers are willing to pay to avoid a problem. The whole benefits matrix is shown below.

Benefit Matrix for Centro Educativo Central Savannah River Area

Benefits \ Beneficiaries	CESRA students	Children and Family	Volunteer and paid Staff	Society	TOTAL
1) CECSRAS' STUDENT POTENTIAL HIGHER SALARY	\$499,500.00				\$499,500.00
<i>2) POTENTIAL BETTER PERSONAL WELFARE</i>					
Warmth from the group	\$237.60				\$237.60
Learn new skill	\$1,218.60				\$1,218.60
Social networking	\$249.00				\$249.00
Obtain references	\$135.00				\$135.00
Better health	\$615.90				\$615.90
Efficient consumer choices	\$183.00				\$183.00
Efficiency labor search	\$411.00				\$411.00
Efficient marital choices	\$139.20				\$139.20
Entertainment	\$126.60				\$126.60
Self confidence	\$424.80				\$424.80
Saving	\$258.90				\$258.90
<i>3) POTENTIAL BETTER WELFARE FOR FAMILY AND CCHILDREN</i>					
Desired family size		\$227.70			\$227.70
Positive effect on your spouse's earning		\$204.00			\$204.00
Be able to advise		\$381.30			\$381.30
Better life for children		\$693.00			\$693.00
Cultural assimilation (HSB)				\$257.40	\$257.40
Contribute to the tax system (HSB)				\$99.00	\$99.00
<i>4) POTENTIAL BENEFITS FOR VOLUNTEERS</i>					
Altruistic satisfaction			\$114.00		\$114.00
Use your skill			\$159.00		\$159.00
Get recognition			\$21.00		\$21.00
Warmth from the group			\$75.00		\$75.00
Teaching experience			\$180.00		\$180.00
Learn new skill			\$159.00		\$159.00
Social networking			\$105.00		\$105.00
Build résumé			\$3.00		\$3.00
Guide the school			\$108.00		\$108.00
Involvement			\$234.00		\$234.00
Avoid net fiscal deficit (HSB)				\$414.00	\$414.00
Return to social harmony (HSB)				\$168.00	\$168.00
TOTAL	\$503,499.60	\$1,506.00	\$1,158.00	\$938.40	\$507,102.00

Source: Own creation

Note: 1) HSB means host society's benefits; 2) Willingness to pay for future higher salary was substituted by the information on the table, but the number can be consulted in appendix section.

Costs matrix results

The salary for paid staff¹¹ calculation stem from a personal interview with the CECSRA's accounting officer, who disclosed accounting records of the school and thus was determined that annually the paid staff receives an amount of \$6,440 dollars. In the first year of the school's activities the salaries were paid by the South Carolina Outreach Program (\$3220) and the Local Hispanic Ministries (\$3220). By the second years of activities until now, the staff paid salary is being paid by the Mexican Government (\$2,600), OLP's Outreach Program (\$1,920), and the Local Hispanic Ministries (\$1920).

After conducting an inventory search, personal phone calls with personnel from OLP's Church and School accounting department and administrative personnel from OLP's Outreach program, and prices search on the market, the supplies costs were calculated as \$20,427.44. This quantity was donated as supplies' gift as follows: the church donated some chairs, tables, computers (computers' price includes printers' price), a copy machine, kitchen appliances, and bookshelves. The OLP School donated desks, a TV and DVD, and four white dry-eraser boards. The OLP Outreach program donated some chairs, and a file cabinet, while the Mexican Government donated educational books and videos. It must be highlighted that these supplies represent fixed costs; this fact must be taken into consideration before conducting the present value calculation later on.

Facility costs were calculated by taking the price that the OLP School charges for the rent of its event room. The School charges \$350 dollar per event regardless of the time. This price includes power, water, heating, maintenance, and cleaning service

¹¹ The salary for paid staff includes the salary of the school's Chief Executive Officer, the technician on chair of the computers' upkeep, occasionally mentors, and a summer babysitter; See in appendix B the detailed costs calculation table.

(before and after the event). Therefore, due to the similarities in size and facilities consumption, \$350 dollar would be the rent per classroom that the CECSRA would otherwise pay to OLP School if they would charge CECSRA for the use of its four classrooms. Consequently, 350×4 (number of classrooms) $\times 2$ (the number of times per week that CECSRA uses them) $\times 4$ (weeks per month) $\times 12$ (months per year) equals \$134,400. Clearly, this price includes the annual price of power, water, heating, maintenance, and cleaning services.

The Independent Sector estimates that volunteer time per hour is worth \$18.77 in Georgia and \$15.52 in South Carolina. Thus, an average of the two states (\$17.145) was multiplied by eleven volunteers included in the study, assuming that each one worked one hour per week. As a result, annually the CECSRA costs for volunteer time is \$9,052.56. ASU students, local volunteers, and the ASU Center for immigration studies are bearing this cost. The cost matrix table is shown below.

Costs Matrix for Centro Educativo Central Savannah River Area

Costs	Donors	All Donors				OLP's Church Members* and Parents who have children in OLP school~	ASU students and local community	<u>TOTAL</u>
		Mexican Government	South Carolina Outreach Program* / OLP's Outreach Program~	ASU Center for Immigration Studies	Local Hispanic Ministries			
<i>SALARY FOR PAID STAFF</i>		\$2,600.00	\$1920.00~		\$1,920.00			\$6,440.00
<i>SUPLIES</i>								
Desks						\$200.00~		\$200.00
Chairs			\$2750.00~			\$508.75		\$3,258.75
Tables						\$1078.69*		\$1,078.69
Computers						\$5000.00*		\$5,000.00
Printers						XXX(-)		
TV						\$140.00~		\$140.00
DVD						\$65.00~		\$65.00
Educational books and videos		XXX(-)						
White dry-eraser board						\$140.00~		\$140.00
Copy machine						\$10,000.00*		\$10,000.00
Kitchen appliances						\$145.00*		\$145.00
Bookshelves						\$100.00*		\$100.00
File cabinet			\$300.00~					\$300.00
<i>FACILITY</i>								
4 classrooms						\$134400.00~		\$134,400.00
Power (light)						XXX(-)		
Internet payment						XXX(-)		
water						XXX(-)		
Heating						XXX(-)		
Maintenance						XXX(-)		
<i>VOLUNTEER TIME</i>				\$822.96			\$8,229.60	\$9,052.56
<u>TOTAL</u>		\$2,600.00	\$4970.00	\$822.96	\$1,920.00	\$151,777.44	\$8,229.60	\$170,320.00

Source: Own creation

Note: Numbers with * belong to the South Carolina Outreach Program*, while numbers with ~ belong to OLP's Outreach Program~. The same criterion applies to the fifth column before the last column.

Transfer payment matrix results

As previously stated, a transfer payment is a shift of resources from one person or group to another that does not involve a net change in value of resources available to society as a whole, for example, a payment of money from the government to an individual (in the form of food stamps) from which no good or service is required in return. Commonly, transfer payments are in the form of taxes, gifts, donations (including money, supplies, space, utilities, and volunteer time), welfare payment, and excess profits that are entered as costs in the bookkeeping sense, but are not costs in an economic sense. For this reason, the computation of transfer payment is irrelevant to the calculation of the net benefits and costs, nevertheless when distributional consideration is introduced to the analysis the picture changes. This is because from the viewpoint of particular groups transfer payments constitutes net change in resources, meaning that for the donor group it represents real costs, while for the receiver group it represents real benefits.

Accordingly, and as it has been shown along this study, CECSRA has maintained itself through all donation and gifts that it has received from all donor groups shown in the matrix cost above; consequently, all those donations and gifts represent transfer payment from all groups to CECSRA. Hence, all the transfer payments involved in the CECSRA case are shown in the transfer payment matrix table¹². It must be clarified that all donation in money that has been used to pay the salary of the paid staff were discounted from the calculations. This is because when a gift or donation is utilized to secure resources used to carry out the organization's work, then this action represents a cost in the economic sense because new value is created throughout the payment (clearly,

¹² See in appendix B the detailed transfer payment calculation table.

this violates the transfer payment definition). Therefore, the \$3,220 that the South Carolina Outreach Program donated in its first year of operations, the \$1,920 from Local Hispanic Ministries, the \$1,920 from OLP’s Outreach program, and the \$2,600 from the Mexican Government, used to pay the \$6,440 annual salary does not appear in the following transfer payment matrix. Additionally, it must be noticed that the Mexican Government transfer payment in the form of educational books and video supplies was not calculated but shown on the table. Finally, it must be remarked that transfer payment must add zero horizontally because it is showing how the funds are allocated; in other words, the same amount that a group gains, the other loses.

Transfer payment matrix for CECSRA

Donors (-) Receivers (+)	Students children and family of CECSRA		Society as a whole
ASU students and local community	\$8,229.60 (-)	\$8,229.60 (+)	0
OLP’s Church Members	\$16,832.44 (-)	\$16,832.44 (+)	0
Parents who have children in OLP school	\$134,945.00 (-)	\$134,945.00 (+)	0
ASU Center for Immigration Studies	\$822.96 (-)	\$822.96 (+)	0
OLP’s Outreach Program	\$3,050 (+)	\$3,050 (-)	0
Mexican Government	XXX(-)	XXX(+)	0
Society as a whole	\$163,880.00 (-)	\$163,880.00 (+)	0

Source: Own creation

Secondary effect results

As mentioned before, secondary effects are the ripples created in the economy by changes in the price of resources associated with the primary program activity under evaluation. In the case of the Central Savannah River Area, the students are part of the

Hispanic cheap labor force that allows certain industries such as landscaping and construction to make substantial profits. However, once the students from CECSRA graduate and pursue higher education (probably technical) they no longer will be willing to work in those industries. Although, this looks like a negative effect (at least for these industries' employers), a better salary means a higher CECSRA students buying power that will stimulate, in a positive way, the whole local economy through a multiplier effect¹³. Nonetheless, such effects have already been shown in the calculation of CECSRA student potential higher salary (the other side of the coin). On the analysis this must not be computed twice to avoid double counting, however, as a distributional matter it is important to show it because reveal how cost and benefits of the program affect different groups or communities.

Present value transformation

CECSRA was created to operate indefinitely, but for the purpose of this analysis fifteen years was chosen as a time in which society will accrue all the benefits that are direct consequences of the school's program. Furthermore, some benefits and costs tend to be distributed over several years. As it was affirmed in the methodology section, money donated and invested today in the school, but which will be consumed through the school life (in this case fifteen years) and not in the year that was donated and received, have a different value in the future. This is because a dollar today will have a different value in five or ten years from now. This means that, although it has been assumed that

¹³ In economics, the multiplier effect refers to the idea that expenditure can lead to an even greater increase in income (in this case in the amount of aggregated local income). In other words, an initial change in aggregate demand (in this case derived from a Hispanic higher buying power) can cause a further change in aggregate output for the economy (in this case, a positive stimulation to the local business cycle).

benefits and costs calculation (shown in the previous section) will be constant throughout the years, every year will technically have a different benefit and cost value due to the change in the money value. Therefore, the future costs and benefits must be calculated into present-day value. In other words, future costs and benefits must be changed into present value before adding them (to consult detailed calculation about the present value transformation see appendix D).

Present value of benefits

The present values of the CECSRA students’ potential higher salary, as well as the rest of the benefits’ present values, were calculated using the discount factor developed on page thirty-eight (a SRTP of 5.5% is being used from now). Thus, for every year, the corresponding discount factor was multiplied by \$499,500 from the benefit matrix. By adding the result for the 15 years, the present value of potential higher salary was \$5,013,771.68. The calculation procedure is outlined below.

Present value of Hispanics' Potential higher Salary

Discount factor	Higher salary	Result
0.9479	499500	473459.72
0.8985	499500	448776.98
0.8516	499500	425381.03
0.8072	499500	403204.76
0.7651	499500	382184.61
0.7252	499500	362260.29
0.6874	499500	343374.69
0.6516	499500	325473.64
0.6176	499500	308505.82
0.5854	499500	292422.57
0.5549	499500	277177.80
0.5260	499500	262727.77

0.4986	499500	249031.06
0.4726	499500	236048.40
0.4479	499500	223742.56
Total		5013771.68

The rest of the benefits’ present values were calculated using the same procedure already shown. Accordingly, by adding the result for the fifteen years, the present value of potential better personal welfare were \$40,146.31, potential better welfare for family and children were \$15,116.60, volunteer’s benefits were \$11,623.52, and host society’s benefits were \$9,419.27. Jointly, the total benefits’ present values were \$5,090,077.37.

Present value of costs.

The present value of the salary for paid staff, as well as the rest of the costs’ present value, was calculated using the same discount factor that was previously used (which includes a SRTP of 5.5%). Thus, for every year the corresponding discount factor was multiplied by \$6,440 from the cost matrix. By adding the result for the fifteen years, the present value of salary for paid staff was \$64,642.02. The calculation procedure is outlined below.

Salary for paid staff		
Discount factor	Salary	Result
0.9479	6440	6104.27
0.8985	6440	5786.03
0.8516	6440	5484.39
0.8072	6440	5198.48
0.7651	6440	4927.47
0.7252	6440	4670.58
0.6874	6440	4427.09
0.6516	6440	4196.30

0.6176	6440	3977.53
0.5854	6440	3770.17
0.5549	6440	3573.62
0.5260	6440	3387.32
0.4986	6440	3210.73
0.4726	6440	3043.35
0.4479	6440	2884.69
Total		64642.02

The rest of the costs’ present values were calculated using the same procedure just shown. Accordingly, by adding the result for the fifteen years, the present value of supplies was \$13,669.47¹⁴, facility costs were \$1,349,050.88, and volunteers’ time were \$90,865.80. Jointly, the total costs’ present value was \$1,518,228.18.

Present value of transfer payment

The present value of the all donors’ transfer payment, as well as the rest of the transfer payments, was calculated using the same discount factor that was previously used (which includes a SRTP of 5.5%). The all donors transfer payment quantity here was built by adding \$822.96 plus \$3,050 from the transfer payment matrix which equals an amount of \$3,872.96. Thus for every year the corresponding discount factor was multiplied by \$3,872.96. By adding the result for the fifteen years, the present value of the all donors transfer payment was \$38,875.15. The calculation procedure is outlined below.

¹⁴ It must be taken into consideration that, before multiplying by the discount factor, the supplies amount (\$20,427.44) was divided by 15 because supplies are fixed costs that ,as oppose to variables cost, are not recurrent every year, instead fixed cost are consumed over the years. Therefore, the amount of \$1,361.83 is taken as supplies cost during 15 years. Thus, \$1,361.83 was multiplied by the corresponding discount factor for every year giving a total amount of \$13,669.47

Present value of all donors transfer payment

Discount factor	All donors	Result
0.9479	3872.96	3671.05
0.8985	3872.96	3479.67
0.8516	3872.96	3298.27
0.8072	3872.96	3126.32
0.7651	3872.96	2963.33
0.7252	3872.96	2808.85
0.6874	3872.96	2662.42
0.6516	3872.96	2523.62
0.6176	3872.96	2392.05
0.5854	3872.96	2267.35
0.5549	3872.96	2149.15
0.5260	3872.96	2037.11
0.4986	3872.96	1930.91
0.4726	3872.96	1830.24
0.4479	3872.96	1734.83
Total		38875.15

The rest of the transfer payments’ present values were calculated using the same procedure just shown. Accordingly, by adding the result for the fifteen years, the present value of OLP’s Church Members and Parents who have children in OLP School was \$1,523,478.34, and ASU students and the local community was \$82,605.28. Jointly, the total transfer payment’s present value was \$ 1,644,958.77.

Present value of secondary effects

The present value of secondary effects is the same as the present value of the CESRA student potential higher salary, which means an increase in the cost of the

students as a labor force for the local and regional employers. Thus the total secondary effects' present value was \$5,013,771.68.

Conclusions

Once the total present value of benefits and cost is computed, the costs must be subtracted from benefits to determine the total net present value (TNPV). Accordingly, \$5,013,771.68 minus \$1,518,228.18 equals \$3,571,849.20 which is the TNPV. This TNPV allows the analysis to answer the two research questions that inspired this study: 1) Has the CECSRA carried out its mission and purpose efficiently? and 2) To what extent does the local and regional community benefit from immigrant Hispanic educational gain?

At first glance the answer to the first question seems to be YES in the simple sense of cost and benefits, but what about distributional concerns? Is the Central Savannah River Area really better off because the Hispanic community is gaining value at the cost of the host community resources consumption? To answer this question the Kaldor-Hicks criterion must be brought to scene. This criterion asserts that a policy or program is efficient "from society perspective" if the total present value of benefits is bigger than the total present value of costs (to the extent that those who gain must be able to compensate those who lose) similar to what is happening in CECSRA case. Kaldor-Hicks's efficiency criterion requires a commitment from society for distributional justices, especially when it comes to equity and fairness concerns for improving the situation of the least fortunate (or making the distribution of society's wealth more equitable). This is because what the criterion implies is that a policy or program is

justifiable for society as a whole, to make some worse off if this means a greater gain for another.

To put it in clearer terms it is necessary to test the Kaldor-Hicks criterion in an alternative way by using a benefits-cost ratio (benefits divided by costs), hence \$5,013,771.68 divided by \$1,518,228.18 equals approximately 3.35. What this ratio is revealing is that CECSRA will continuously carry out its mission and purpose in a way in which it has in the past, present, and future, producing more than three times the value that the school is receiving from society. This fact entails that the school could in theory compensate its donors (by giving back all the value that it has received) and still keep more than two times of the donated value. This is the reason why it is been said that CECSRA has, is, and will be carrying out its mission and purpose efficiently as long as its costs and benefits structure does not suffer drastic alterations. Notice that eventually, all the value that CECSRA is creating will be released to society and this fact leads us to the second research question.

This study has been conducted using a distributional analysis perspective by displaying who gets what; in other words, it has been shown in every matrix table along the paper who beneficiaries are and who bears the cost of the program. This partially explains the extent at which the local and regional community benefits from immigrant Hispanic educational gain. By reference to the benefits matrix table, it can be concluded that not only the CECSRA students (as well as their children and family), but the volunteers and the host society (Central Savannah River Area community) are receiving some kinds of benefits in one way or another. For example, ASU students benefit from the fact of having a place where they can not only use their skills, but also reaffirm what

they are being taught in the school, and even gain teaching abilities. Furthermore, the host society benefits from the fact that an educated immigrant is more likely to follow the rules.

Nonetheless, it can easily be argued by direct comparison between the costs and benefits matrix tables that the costs exceeds the benefits, which the local and regional community receives from the program, while the larger majority of benefits is being received by the CECSRA students. This fact can be explained in part, due to the method used for calculating all the benefits received by the other groups. However, it must be remembered that what these numbers are expressing (for the case of contribution to the tax system, for instance) is not the real amount of money that CECSRA students will contribute with the tax system (\$99 dollar annually on the benefit matrix table), but how much they value the possibility of being able to contribute to the tax system. In other words, the amount the students are willing to pay to be able to contribute to the tax system.

Thus, to calculate the real amount of money in the form of taxes that those students will contribute to the tax system requires much more information beyond personal assessment and higher sophisticated statistical techniques to make the appropriate projection. The same can be said for calculating the accurate amount of money that the health system is going to save if those students reach better personal, pediatric, and family health and no longer burden the public health system. The quantity of money saved in the form of reduced crime rates, (which in turn means lower property damage and lower crime prevention costs), and the money saved for facing negative effects of schools overcrowding of Hispanic children, will represent savings and

therefore, benefits to the host society. Certainly, to preserve the host society's harmony (no change at all, especially no extra expenditure, due to Hispanic presence) is worth more than the annual \$168 dollars expressed by volunteers on the benefits matrix table. Finally, it must also be said that the larger benefit is the CECSRA's students' potential salary. This, in turn, means a bigger buying power that will stimulate the business cycle of the community, which is also beneficial to society.

So, to what extent does the local and regional community benefit from immigrant Hispanic educational gain? The information contained here is not enough to accurately answer such a question, but the insights disclosed here, permit us to indicate the direction for future research, attempting to address the question. The Social-Cost Benefits Analysis matrix is outlined below.

Sensitivity analysis

As it was stated in the methodology section, for the sake of enabling the objectivity of the analysis, a sensitivity analysis was performed. Hence, the whole process to calculate the present value (projected to fifteen years) of every benefits and cost was repeated, using a discount factor with a SRTP of 4.5% and 6.5%. Thus a new Social-Cost Benefits Analysis matrix was created for every SRTP, which can be consulted in the appendix E.

Here, a sensitivity of net benefits (quantified benefits less costs) table by groups is shown, this table discloses how numbers are affected depending of the SRTP used. Naturally, the larger the SRTP the smaller the numbers are. The impact of every SRTP is better appreciated by analyzing the percentage decrement from one SRTP to the other,

which in general, does not exceed the 6.5%. Actually 6.5% is the percentage decrement from 4.5 to 5.5, while 6.3% is the percentage decrement form 5.5 to 6.5.

Therefore, it can be said that the social rates of time preference do not have a sizeable impact (less than 7% in scale form 1 to 100%) on the net present value calculation. This means that the whole analysis is not highly sensitive to the choice of SRTP. Consequently, the social rates do not alter the conclusion concerning the promotion of the social efficiency by the CECSRA, since every total net present value is positive and bigger than \$3,000,000.00, regardless of if it is 4.5%, 5.5%, or 6.5% SRTP. Other way to reaffirm this is by calculating the benefit/cost ratio for every SRTP case. Accordingly, 3.35 is still the benefits/cost ratio, regardless of which SRTP is being used. The Sensitivity of Net Benefit to SRTP table is shown after the Social Cost Benefit Analysis Matrix table.

Social Cost Benefit Analysis Matrix Framework for Centro Educativo Savannah River area						
	CESRA students	Children and Family	All Donors	Volunteer (ASU students and local community) and paid Staff	OLP's Church Members and Parents who have a children in OLP school	Society
PV of Benefit						
CECSRAs' student potential higher salary	\$5,013,771.68					\$5,013,771.68
Potential better personal welfare	\$40,146.31					\$40,146.31
Potential better welfare for family and children		\$15,116.60				\$15,116.60
Volunteers' benefits				\$11,623.52		\$11,623.52
Host Society						\$9,419.27
PV of cost						
Salary for paid staff			\$64,642.02			\$64,642.02
Supplies					\$13,669.47	\$13,669.47
Facility costs					\$1,349,050.88	\$1,349,050.88
Volunteer time				\$90,865.80		\$90,865.80
PV of transfer payments						
Centro Educativo Central Savannah River Area	\$1,644,958.77		\$38,875.15	\$82,605.28	\$1,523,478.34	\$0.00
PV of Secondary effects						
Potential Increase of the CECSRAs' student labor force						\$5,013,771.68
PV of Benefits - Costs	\$6,698,876.76	\$15,116.60	\$103,517.17	\$161,847.56	\$2,886,198.69	\$3,571,849.21

Note: 1) secondary effects must be shown, but not counted to avoid double count. 2) Transfer payment must add zero horizontally. 3) \$161,847.56 from Volunteer (ASU students and local community) and paid staff is the result of (\$90,865.80-\$11,623.52) + \$82,605.28. 4) Added horizontally in "PV of Benefits – Costs" row, \$9,419.27 (host society benefits) must be added to benefits in order to obtain \$3,571,849.21. 5) of the transfer payment receive by CECSRA students must be split between CECSRA students and their children and family.

Sensitivity of Net Benefits to Discount Rate (Quantified Benefits less Costs)

	CESRA students	Children and Family	All Donors	Volunteer (ASU students and local community) and paid Staff	OLP's Church Members and Parents who have a children in OLP school	Society
PV of Benefits - Costs						
S RTP						
4.5%	\$7,167,353.73	\$16,173.76	\$110,756.51	\$173,166.15	\$3,088,041.13	\$3,821,641.69
5.5%	\$6,698,876.76	\$15,116.60	\$103,517.17	\$161,847.56	\$2,886,198.69	\$3,571,849.21
6.5%	\$6,275,149.38	\$14,160.42	\$96,969.35	\$151,610.14	\$2,703,636.53	\$3,345,917.25
Percentage decrement						
Percent change						
From 4.5 to 5.5	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
From 5.5 to 5.6	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%

Source: Own creation

Limitation and recommendation for future researches

Cost-Benefit analysis has been applied to a wide variety of policy and program problems. Generally speaking, it is one of the most useful analytical tools at the disposal of policy and program analysts. Nonetheless, there are limitations to cost-benefit analysis. Many of them can be traced back to methodological and measurement difficulties. Also, like many analytical schemes, cost-benefits analysis makes certain assumptions, sometimes ideological assumptions, which color the analysis (Bozeman, 1979).

Methodological and measurement difficulties

Benefits

To estimate the potential better personal welfare, the potential better welfare for family and children, volunteer’s benefits, and the host society benefits for the CECSRA, require the use of a data set collected during a period that is likely longer than fifteen

years, which simply does not exist right now. To deal with such problems (and to avoid excluding these benefits from the analysis) a contingent valuation approach was used. The pros and cons of the contingent valuation technique have been discussed over a period of four decades without reaching consensus and agreement; although several advances have been made.

For this project, a contingent valuation survey was developed and a survey of this kind has predetermined methodological difficulties and challenges that must be mentioned. Hence, it is highly recommended to apply a pretest to ensure that everything on the survey works the way it is intended. As a result, the pretest may reveal problems with individual questions, due to the lack of time a pretest was not conducted. Moreover, a contingent valuation survey with evaluation questions, consisting of close-ended answers (dollar interval response categories), commonly suffer the following flaws: 1) starting point bias, 2) quick unconsidered answer, 3) approximate data value, and 4) strategic bias.

On the valuation scenario (the hypothetical scenario), which is probably the most important part of this kind of survey, contributions and donations as a payment vehicle (the way of paying for the change in resource allocation) and policy implementation (the regulation or enforce payment) are troublesome. This is precisely because contributions and donations are not enforceable, and this can explain why five out of twelve volunteers responded NO to the question of whether or not they would donate money to the CECSRA. This was not the case with CECSRA students, who answered YES to the same question, because fees were perceived as a realistic and enforceable payment vehicle.

Costs

As was shown before, the salary for paid staff, the supplies cost, the facility cost, and the volunteer time was calculated using different procedures for each one. The most reliable and accurate calculation is the first one, while supplies and facility costs are good approximations but not exact calculations. Thus, the supplies calculation stems from information disclosed by the accounting department and administrative personnel from OLP's Church, School and Outreach program, as well as from price observations of similar resources in related commercial market places, while facility cost stems from the assumption of the "next best use".

Hence, an important concept, that can give more accuracy to the calculation, like depreciation (to subtract used values), was not taken into consideration. Likewise, the cost of some of the facilities that was paid two, three or more years ago, was not changed into present value (from the past to the present). Additionally, the costs of desks, chairs, TV and DVD, dry-eraser boards, and kitchen appliances were gathered by price reference of similar resources in the market. However, it was impossible to find exactly the same make and model of all of these items since the retail market is extremely dynamic and every day new models arise and the old ones are eliminated from the market.

Furthermore, it was assumed that the "next best use" (which constitutes the base of the concept of opportunity cost) of the four classrooms (facilities costs) that the OLP's School allows use by the CECSRA would be to rent it to any other organization or group for any other purpose. It must be kept in mind that before the school allowed the CECSRA to use its classrooms, the classrooms remain empty with only occasional use. Finally, it must be recognized that the calculation of the voluntary time also requires

figuring out what would be the next best use of the CECSRA volunteers' time if they were not working for the school, i.e., what they are losing by being in the CECSRA every Wednesday morning and every Thursday night, and how much they value what they are losing. This calculation requires a contingent valuation method, assuming that they would not have worked for payment in any other place. To avoid this process it was taken the Independent Sector calculation of volunteer time, assuming that they have faced all the challenges related with voluntary time calculation.

Assumptions

As can be noted with this project, the analysis relies heavily on assumptions, some of which can be labeled as unrealistic, unobservable, or unverifiable assumptions. Nonetheless, these assumptions result from abstractions necessary to study a complex theme such as "efficiency from society perspective". Hence, plausible and realistic conclusions or predictions can be deduced from those unrealistic assumptions, as has been asserted by distinguished economists like Milton Friedman and Paul Samuelson. However, for the sake of enabling methodological consistency and avoiding methodological bias it is necessary to reveal the most important assumptions made in this research.

Thus, some of the particular assumptions have already been exposed along with the research, for example, that similar supplies prices are representative of the supplies costs used at CECSRA, and that the next best use of the four classrooms used by CECSRA would be to rent to another organization. But there are some other general assumptions that may or may not be obvious to the readers and therefore must be pointed out here. Therefore, the main three assumptions are 1) that the potential better personal,

family and children, as well as society general improvement are direct consequences of the CECSRA program; 2) that all the students will go through the program until they acquire their GED certification; 3) that the costs of the year 2007 are representative of the costs for the fifteen years chosen as the program operational framework as well as representative of the costs of previous years.

Certainly, researchers have demonstrated that some causal relations exist between education and the personal, family, and children welfare, as well as general society improvement (in this case the recovery of the host society harmony), but there is not agreement about to what extent education leads to personal, family, and children welfare and society general improvement. In defense of this assumption it must be said that a higher salary is also an explanatory variable of personal, family, and children welfare as well as society general improvement. Therefore, if it is accepted that as a result of the CECSRA program the students are going to earn a higher salary, then the personal, family, and children welfare as well as society improvement are even more likely.

In defense of the second assumption, it can only be said that every day in class CECSRA students are encouraged not only to go through the entire program until they obtain their GED certification, but also to do so as quickly as possible. Regarding the last assumption, it must be said that shadow prices (prices of similar items) and thinking in “next best use” terms are satisfactory ways to calculate the opportunity cost (when a direct price does not exist). Additionally, the following must be remembered: 1) the only real cost is the salary for paid staff which may or may not modestly increase over the years; 2) the voluntary work that may or may not modestly increase over the years but this is not a real cost; 3) supplies costs, can decrease instead of increase if depreciation

variable is incorporated into the analysis; 4) it is quite possible that OLP's school will allow CECSRA to operate in its facilities in the long run.

Recommendation for future researches

After commenting on the benefits and cost measurement difficulties as well as the assumptions on which the whole analysis relies, the challenges that similar future research must face and overcome are revealed. Consequently, future SCBA of CECSRA must test the validity, reliability and willingness to pay for responses on the contingent valuation survey. In other words, future researchers must assess the consistency of responses with theoretical expectations as well as the repeatability of the survey measurement. These tests can be performed by testing the relationship between willingness to pay and various socioeconomic and demographic variables, using alternative statistical techniques such as cross-tabulation and regression analysis. The volunteers' willingness to pay, requires special attention since (as it has been already asserted) donation as a payment vehicle and policy implementation, are not perceived as enforceable and therefore must be studied more by way of the "economics of voluntary contribution theory," to develop a better volunteers' contingent valuation survey.

Regarding costs, beyond trying to make a more accurate estimation of the opportunity costs, it must be mentioned here that an important cost, the "user costs", was excluded from the analysis. User costs can be defined as travel cost and the opportunity value of lost time by CECSRA students. Consequently, the out-of-pocket costs of driving from students' homes to the school can be calculated by multiplying distance traveled by appropriate mileage-cost estimates, while value of lost time can be estimated by multiplying the number of hours that they spend in the school for the salary that they are

losing if they were otherwise working, or by figuring out what would be the next best use of their time if they would not be at the school, which once again can be estimated by contingent valuation technique.

Finally, for now, the school must establish a follow-up record of after-school life of the alumni to create a database to compare reality with the general assumptions number one and two. In other words, it will be several years in the future before general assumptions one and two will be empirically tested. In the meantime, these assumptions must be accepted as the necessary abstraction step to analyze this social phenomenon.

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Appendix A

The first survey presented in this section is for volunteers, while the second is for students. Both surveys were designed base on Whitehead (2006) paper entitle “A practitioner’s prime on the contingent valuation method”. In his work, Whitehead asserts that the basic elements of a contingent valuation survey are:

- a) Attitudinal section
- b) Behavior section
- c) Valuation section
- d) Demographic section

Where:

Valuation section = Valuation scenario + Valuation questions

Valuation scenarios must have

- a) Description of the resource or policy context
- b) Description of the policy or propose change in resource allocation that will be valued
- c) Pay vehicle (in this case contribution or donation)
- d) Policy implementation (enforce payment)

These elements are contained in the three surveys. The third survey is the student’s survey translated to Spanish language. The survey was applied in Spanish language

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RIVER AREA (CECSRA)
CAPSTONE PROJECT FOR THE MASTER OF PUBLIC ADMINISTRATION PROGRAM
AUGUSTA STATE UNIVERSITY (ASU)

DEBRIEFING FORM

My name is Javier Juarez, and I am a graduate student of Public Administration at Augusta State University. As part of my capstone project, I am asking you to fill out a survey. Thank you very much for participating in this study. I would like to ask you to indicate your valuation of a possible situation under hypothetical conditions, assuming that some topics in the survey can be measured in monetary terms. I understand that this valuation process may seem unnatural and therefore some questions may feel unethical, as a result, answering them may make you feel a little uncomfortable. But I would, nonetheless, ask you to think seriously and carefully, taking into consideration your time and budget constraints. This hypothetical scenario is part of research regarding the worth different people put on the services provided by the Centro Educativo Central Savannah River Area (CECSRA).

CONSENT FORM

Research Purpose: This survey is an integral part of a study whose purpose is to collect information to carry out a cost-benefit analysis, and thus to address the following two questions: 1) how efficiently has CECSRA carried out its mission and purpose? 2) To what extent does the local and regional community benefit from immigrant Latino educational gain? Filling out the survey will take 10-15 minutes, and you must be at least 18 years old to participate.

Risks and Benefits: There is no physical discomfort or other risks associated with your participation in this study. Participating in this project is not likely to directly benefit you, but the knowledge that the researcher gains about your personal valuation of the benefits generated by the CECSRA programs may help the school to ensure financial assistance and improve its services.

Your Rights: All information I obtain will be completely anonymous. That is, there will not be any way to connect you or your name to your answers on the survey. In fact, I will deliberately not keep any records of who completed the survey. I do not need your name or contact information, so please do not write this information anywhere on the consent form or survey. By not providing any personally identifying information, you can be confident that your safety and security are assured; therefore, answer all of the questions truthfully. You may contact me at any time following the study to discuss any aspect of the research; however, individual results cannot be shared due to the anonymous nature of the study.

Contact Information: If you ever have any questions, comments, or concerns about this study, please feel free to contact me at the center for immigration studies at ASU at (706) 667-4432. Or contact me electronically at jjuarazp@aug.edu

CONTINGENT VALUATION SURVEY

Please read the following questions about the Centro Educativo Central Savannah River Area carefully, answer truthfully, and remember there are no wrong answers. Please circle the response that best matches your opinion. If you feel you cannot answer a question, please mark the Don't know/No Answer (DK/NA) space provided.

(1) How did you learn about the existence of the Centro Educativo Central Savannah River Area (CECSRA) program?

Newspaper Radio Friend School Neighbor Church Internet Other: _____

(2) Did someone ask you to become a volunteer?

YES NO
(Please go to question 4)

(3) If not, how did you decide to volunteer for CECSRA programs?

(4) On the following scale, please mark how informed you consider yourself regarding CECSRA programs.

Extremely well informed Well informed Informed Not informed DK/NA

(5) On the following scale, please mark how informed you consider yourself regarding the total benefits as well as who receive those benefits from CECSRA programs.

Extremmely well informed Well informed Informed Not informed DK/NA

(6) On average, how many hours per week do you dedicate to:

Volunteer time	0	1-10	11-20	21-30	31-40	41-50	51-60
Paid job	0	1-10	11-20	21-30	31-40	41-50	51-60
Religious activities	0	1-10	11-20	21-30	31-40	41-50	51-60
Family time	0	1-10	11-20	21-30	31-40	41-50	51-60
Recreational time	0	1-10	11-20	21-30	31-40	41-50	51-60

(7) Do you volunteer for any other nonprofit organization in this area?

YES NO

(8) Do you support in any other way other nonprofit organizations?

YES

NO

(9) In which way?

Valuation section

Valuation Scenario (Hypothetical scenario)

The Centro Educativo Central Savannah River Area (CECSRA) was created with the hope that immigrants could achieve the goal of obtaining an education and in so doing improve job opportunities for themselves. The mission of CECSRA has as its core a social assistance role by providing educational and technical training for work and successful cultural assimilation. Thus, CECSRA centers its daily operation on helping Mexicans and Latinos living in the area to start, continue, or finish their basic education, giving them the tools to begin university education in the United States, or to pursue technical training. A secondary, but no less important role of CECSRA is to help Latinos engage in mainstream American culture so that they can positively contribute to the social life of the community where they live. So far, CECSRA is funded by the Mexican Government through an IME grant, donations from Our Lady of Peace Catholic Church (OLP) members, and grants from other nonprofit organizations. Some supplies and facility space are donated by OLP Catholic Church.

Do you identify your ideology with the mission of CECSRA?

YES

NO

CECSRA is currently solvent but, it must be recognized that time and circumstances will change. Thus, it is anticipated that the number of Hispanic students for CECSRA will increase, bringing changes and challenges for the organization. In other words, as the Hispanic population increases the cost of virtually everything will increase as well. Given the projected growth of the Hispanic community, it is imperative to find a different financial plan for CECSRA. Therefore, as changes take place, CECSRA will need to maintain its current sponsors and look for new ones.

Have you thought about this possibility before?

YES

NO

Hence, CECSRA is consider a school tuition rate scale where reasonable fees will be charged for the courses, as well as to ask to our volunteer staff to become sponsors by donating or contributing money. But before you think about it, I encourage you to consider the benefits that you obtain by volunteering in CECSRA. Such benefits are:

- a) Altruistic, moral and charity satisfaction
- b) The opportunity to use your skills

- c) To use your time constructively and thus getting recognition and respect from others in your community
- d) To enjoy the warmth and friendliness of the rest of the group
- e) To gain teaching experiences
- f) The opportunity to learn new skills (for example, Spanish language) and obtain experience to become more productive members of your community
- g) To develop social networks with volunteers, and staff members (thus increasing your social capital)
- h) To build a résumé and obtain references for employment, job and career opportunities.
- i) The opportunity to guide the school’s outputs in preferred direction according to your ideology about how things must be done in the organization
- j) The feeling of involvement to make a difference in your community in a more equitable way

Finally, there are two benefits that deserve special mention:

- k) It has been argued that there is a net fiscal deficit created by low-skill Latino (referring to those without a high school diploma) workers, which U.S. taxpayers bear”. Thus, some studies suggest that low-skill immigrant households impose substantial long-term costs on the U.S. tax payer. As Latinos get education, this long-run cost can be avoided, and this is a social benefit that can be achieved due to your work and donation to the school.
- l) It has been documented that the social order of the host society suffers some disruption when immigrants arrive (referring to concerns such as school overcrowding, the free use of some public services like health care and housing, the ignorance of rules and law, and fears concerning the survival of American identity). According to most researchers, the lack of education among Latinos causes the social order disruption to the host society. Thus, it can be assumed that if Latino immigrants get education, then the social harmony that the host community had before immigrants came will be retrieved. Once again, this social benefit can be achieved due to your work and money donated to the school.

Have you considered all these benefits before?

YES

NO

Valuation Questions

- (1) If the last scenario takes place in the short run, would you donate money to the school, taking into consideration all the benefits mentioned above?

YES

NO

(2) If yes, how much money would you be willing to donate per month?

\$1-10 \$11-20 \$21-30 \$31-40 \$41-50 If more, how much \$ _____

(3) From the quantity you chose, what percentage would you allocate to the twelve benefits presented above **(you can allocate zero percentage to those benefits you think are not relevant for you, allocate 100% to just one single benefit if it is the only one that matters to you, or spread the 100% among several of the choices)?**

Benefit: Altruistic satisfaction _____% Use your skill _____% Get recognition _____%
 Warmth from the group _____% Teaching experience _____% Learn new skill _____%
 Social networking _____% Build résumé _____% Guide the school _____%
 Involvement _____% Avoid net fiscal deficit _____% Return to social harmony _____%

Demographic section

(1) What is your sex? Male _____ Female _____

(2) How old are you (specify in years)? _____

(3) What is your relationship status (please only check one)?

- 1. ___ Single
- 2. ___ Married
- 3. ___ Divorced
- 4. ___ Widowed
- 5. ___ Separated
- 6. ___ Other (please specify): _____

(4) How many years of school have you completed, including elementary school? _____ years

(5) Where was most of your schooling done?

- 1. _____ United States
- 2. _____ Country of origin/birth (please specify _____)
- 3. _____ Other (please specify: _____)

(6) What is the highest degree you have earned?

- 1. _____ Middle School (U.S. grade 8)
- 2. _____ High School
- 3. _____ Associate Degree
- 4. _____ Bachelor Degree (B.A., B.S.)
- 5. _____ Graduate/Doctoral (Ph.D., M.D., J.D.)

(7) What is your current employment status?

- 1. _____ Working part-time → **Current occupation(s)/job(s)?** _____
- 2. _____ Working full-time → **Current occupation(s)/job(s)?** _____
- 3. ___ Unemployed
- 4. ___ Retired

(8) What is your personal annual income?

- | | |
|------------------------------------|------------------------------------|
| 1. ___ Less than \$10,000 a year | 2. ___ \$10,001 to \$15,000 a year |
| 3. ___ \$15,001 to \$20,000 a year | 4. ___ \$20,001 to \$30,000 a year |
| 5. ___ \$30,001 to \$40,000 a year | 6. ___ More than \$40,000 a year |

(9) What is your total household income (household includes yourself and anyone else in your household that earns an income)?

- | | |
|------------------------------------|------------------------------------|
| 1. ___ Less than \$20,000 a year | 2. ___ \$20,001 to \$30,000 a year |
| 3. ___ \$30,001 to \$40,000 a year | 4. ___ \$40,001 to \$60,000 a year |
| 5. ___ \$60,001 to \$80,000 a year | 6. ___ More than \$80,000 a year |

(10) How many individuals (including yourself) do you support financially? _____

(11) What is your religion?

- | | | |
|-----------------|--------------------------------------|---------------|
| 1. ___ Catholic | 2. ___ Protestant | 3. ___ Jewish |
| 4. ___ Islamic | 5. ___ Other (please specify): _____ | |

(12) How religious are you?

- | | |
|-----------------------------|--------------------------------|
| 1. ___ Not at all religious | 2. ___ Just a little religious |
| 3. ___ Moderately religious | 4. ___ Quite a bit religious |
| 5. ___ Extremely religious | |

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DEBRIEFING FORM

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CONSENT FORM

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Risks and Benefits: There is no physical discomfort or other risks associated with your participation in this study. Participating in this project is not likely to directly benefit you, but the knowledge that the researcher gains about your personal valuation of the benefits generated by the CECSRA programs may help the school to ensure financial assistance and improve its services.

Your Rights: All information I obtain will be completely anonymous. That is, there will not be any way to connect you or your name to your answers on the survey. In fact, I will deliberately not keep any records of who completed the survey. I do not need your name or contact information, so please do not write this information anywhere on the consent form or survey. By not providing any personally identifying information, you can be confident that your safety and security are assured; therefore, answer all of the questions truthfully. You may contact me at any time following the study to discuss any aspect of the research; however, individual results cannot be shared due to the anonymous nature of the study.

Contact Information: If you ever have any questions, comments, or concerns about this study, please feel free to contact me at the Center for Immigration Studies at ASU at (706) 667-4432. Or, contact me electronically at jjuarazp@aug.edu.

CONTINGENT VALUATION SURVEY

Please read the following questions about the Centro Educativo Central Savannah River Area carefully, answer truthfully, and remember there are no wrong answers. Please circle the response that best matches your opinion. If you feel you cannot answer a question, please mark the Don't know/No Answer (DK/NA) space provided.

- (1) How did you learn about the existence of the Centro Educativo Central Savannah River Area (CECSRA) program?

Newspaper Radio Friend Neighbor Church Internet Other: _____

- (2) On the following scale, please mark how informed you consider yourself regarding the history, organization, and the sponsors of the school.

Extremely well informed Well informed Informed Not informed DK/NA

- (3) On the following scale, please mark how informed you consider yourself regarding all the potential benefits that you may obtain by finishing all the school programs.

Extremely well informed Well informed Informed Not informed DK/NA

- (4) Do you attend to any other educational institution in this area?

YES NO

- (5) If yes, which one and why?

- (6) On the following scale mark how important is for you to have a school diploma or any other school certification.

Extremely important Very important Important Not important at all DK/NA

- (7) Why?

- (8) On the following scale mark how difficult you think it is for you to get a school diploma or any other school certification in this country.

Extremely difficult Very difficult Difficult Not difficult at all DK/NA

(9) Why?

(10) On average, how many hours per week do you dedicate to:

Study at home	0	1-10	11-20	21-30	31-40	41-50	51-60
Job	0	1-10	11-20	21-30	31-40	41-50	51-60
Religious activities	0	1-10	11-20	21-30	31-40	41-50	51-60
Family time	0	1-10	11-20	21-30	31-40	41-50	51-60
Recreational time	0	1-10	11-20	21-30	31-40	41-50	51-60

Valuation section

Valuation Scenario (Hypothetical scenario)

The Centro Educativo Central Savannah River Area (CECSRA) was created with the hope that immigrants could achieve the goal of obtaining an education and in so doing improve job opportunities for themselves. The mission of CECSRA has as its core a social assistance role by providing educational and technical training for work and successful cultural assimilation. Thus, CECSRA centers its daily operation on helping Mexicans and Latinos living in the area to start, continue, or finish their basic education, giving them the tools to begin university education in the United States, or to pursue technical training. A secondary, but no less important role of CECSRA is to help Latinos engage in mainstream American culture so that they can positively contribute to the social life of the community where they live. So far, CECSRA is funded by the Mexican Government through and IME grant, donations from Our Lady of Peace Catholic Church (OLP) members, and grants from other nonprofit organizations. Some supplies and facility space are donated by OLP Catholic Church.

Were you aware of the information provided above?

YES

NO

CECSRA is currently solvent, but it must be recognized that time and circumstances will change. Thus, it is anticipated that the number of Hispanic students for CECSRA will increase, bringing changes and challenges for the organization. In other words, as the Hispanic population increases the cost of virtually everything will increase as well. Given the projected growth of the Hispanic community, it is imperative to find a different financial plan for CECSRA. Therefore, as changes take place, CECSRA will need to implement a financial plan in the form of a “business oriented model”.

Have you thought about this possibility before?

YES

NO

Hence, CECSRA is considering a fundraising program that could take the form of a tuition rate where reasonable fees will be charged for the school programs. But before you think about it, let me introduce you to all the potential benefits that, according to several researchers, a person can achieve through schooling. Such benefits are:

- a) A potential higher earning or wage. Thus, it is expected that the more years a person spends in school the more the person will earn.
- b) To enjoy the warmth and friendliness of the rest of the group.
- c) The opportunity to learn new skills to become more productive members of your community.
- d) To develop social networking not only among your peers, but also with the school's teachers and staff members.
- e) To obtain references for employment, job and career opportunities.
- f) Your education can have a positive effect on the earnings of your spouse.
- g) The ability to advise your spouse so that he/she can make better decisions regarding the labour market.
- h) A better life for your children. Research suggest that your schooling leads to better child health care, lower fertility, adequate teenage childbearing, less child abuse and neglect, more substantial family investment in children, less cost associated with the education of your children, and lower criminal propensity in children.
- i) Better health for yourself. Researchers report that increased schooling appears to be related to better health and increased life expectancy.
- j) The ability to make efficient consumer choices. Evidence suggests that schooling can lead to better choices about saving and debt.
- k) The ability to conduct better job searches.
- l) The ability to make better marital choices; schooling is associated with better choices regarding marital partners.

- m) Attainment of desired family size. More schooling may enable one to gather information on how to avoid unwanted births.
- n) Entertainment. Schooling help you better appreciate reading, music, and art.
- o) Self-confidence derived from the ability to communicate more effectively and to take on new roles and responsibility in the community.
- p) Saving. Schooling contributes to increased saving.
- q) Successful cultural assimilation by engaging in mainstream American culture. This help you avoid committing certain acts considered crime in the American culture, such as child abuse and neglect, and driving under the influence (DUI) of alcohol.
- r) The ability to contribute to the tax system. One of the biggest concerns about Latino immigrants is associated with the tax system since some researchers suggest that poorly educated immigrants impose substantial long-term costs on the U.S. tax payer

As you can see, the benefits that you can obtain from CECSRA go beyond a higher salary. Have you considered this fact before?

YES

NO

Valuation Questions

- 1) If the school implements tuition and fees charge in the short run, would you be willing to pay it, taking into consideration all the benefits mentioned above?

YES

NO

- 2) If yes, how much money are you willing to pay per tuition?

\$10-20 \$21-30 \$31-40 \$41-50 \$51-60 If more, how much \$_____

- 3) How much money are you willing to pay per fees monthly?

\$10-20 \$21-30 \$31-40 \$41-50 \$51-60 If more, how much \$_____

4) From the quantity you chose, what percentage would you allocate to the eighteen benefits presented above **(you can allocate zero percentage to those benefits you think are not relevant for you, allocate 100% to just one single benefit if it is the only one that matters to you, or spread the 100% among several of the choices)?**

Benefit: Higher salary _____% Warmth from the group _____% Learn new skill _____%
 Social networking _____% Obtain references _____% Higher salary for your spouse _____%
 Be able to advise _____% Better life for children _____% Better health _____% Efficient
 consumer choices _____% Efficiency labor search _____% Efficient marital
 choices _____% Desired family size _____% Entertainment _____% Self
 confidence _____% Saving _____% Cultural assimilation _____% Contribute to the tax
 system _____%

Demographic section

1) What is your sex? Male _____ Female _____

2) How old are you (specify in years)? _____

3) What is your relationship status (please only check one)?

- 1. ___ Single
- 2. ___ Married
- 3. ___ Divorced
- 4. ___ Widowed
- 5. ___ Separated
- 6. ___ Other (please specify): _____

4) How many years of school have you completed, including elementary school? _____ years

5) Where was most of your schooling done?

- 1. _____ United States
- 2. _____ Country of origin/birth (please specify _____)
- 3. _____ Other (please specify: _____)

6) What is the highest degree you have earned?

- 1. _____ Elementary school (U.S. grade 8)
- 2. _____ Middle school
- 3. _____ High school
- 4. _____ Technical training
- 5. _____ Other, specify _____

7) What is your current employment status?

- 1. _____ Working part-time → Current occupation(s)/job(s)? _____
- 2. _____ Working full-time → Current occupation(s)/job(s)? _____
- 3. _____ Unemployed
- 4. _____ Retired

8) What is your personal annual income?

- | | |
|------------------------------------|------------------------------------|
| 1. ___ Less than \$10,000 a year | 2. ___ \$10,001 to \$15,000 a year |
| 3. ___ \$15,001 to \$20,000 a year | 4. ___ \$20,001 to \$30,000 a year |
| 5. ___ \$30,001 to \$40,000 a year | 6. ___ More than \$40,000 a year |

9) What is your total household income (household includes yourself and anyone else in your household that earns an income)?

- | | |
|------------------------------------|------------------------------------|
| 1. ___ Less than \$20,000 a year | 2. ___ \$20,001 to \$30,000 a year |
| 3. ___ \$30,001 to \$40,000 a year | 4. ___ \$40,001 to \$60,000 a year |
| 5. ___ \$60,001 to \$80,000 a year | 6. ___ More than \$80,000 a year |

10) How many individuals (including yourself) do you support financially? _____

11) What is your religion?

- | | | |
|-----------------|--------------------------------------|---------------|
| 1. ___ Catholic | 2. ___ Protestant | 3. ___ Jewish |
| 4. ___ Islamic | 5. ___ Other (please specify): _____ | |

ANALISIS DE COSTO-BENEFICIO SOCIAL DEL CENTRO EDUCATIVO CENTRAL
SAVANNAH RIVER AREA (CECSRA)
PROYECTO FINAL PARA EL PROGRAMA DE MESTRIA EN ADMINISTRACION PÚBLICA
UNIVERSIDAD DE AUGUSTA (ASU).

INFORMACION GENERAL DEL CUESTIONARIO

Mi nombre es Javier Juárez Pérez, estudiante de postgrado en Administración Publica en la Universidad de Augusta. Como parte de mi proyecto final, le pido completar este cuestionario académico. Muchas gracias por participar en este estudio. Me gustaría pedirle indicarme su valoración de una situación bajo condiciones hipotéticas, asumiendo que algunos de los temas en el cuestionario pueden ser medidos en términos monetarios. Entiendo que este proceso de valoración puede parecer anormal y por lo tanto algunas preguntas pueden ser tomadas como personales haciéndole sentir incomodo (a) al responderlas. Sin embargo, le pido que piense y conteste seria y cuidadosamente tomando en cuenta su restricción presupuestaria. Este escenario hipotético es parte de la investigación acerca de como diferentes personas valoran los servicios proveídos por el Centro Educativo Central Savannah River Area (CECSRA).

FORMATO DE CONSENTIMIENTO (INFORMACION PARTICULAR DEL CUESTIONARIO)

Propósito de la Investigación: Este cuestionario es parte integral de un estudio cuyo propósito es recolectar información para llevar a cabo un análisis de Costo-Beneficio Social y así responder a las siguientes dos preguntas: 1) ¿Qué tan eficientemente ha CECSRA llevado a cabo su misión y propósito? 2) ¿En que grado la comunidad local y regional se beneficio de que los inmigrantes latinos adquieran educación? Contestar este cuestionario le tomara de 10 a 15 minutos, y usted debe tener al menos 18 años para poder participar.

Riegos y Beneficios: El responder este cuestionario no le ocasionará ningún sufrimiento o molestia física alguna. Participar en este estudio tampoco le beneficiara directamente, pero el conocimiento que se obtenga acerca de su valoración personal de los beneficios generados por CECSRA pueden ayudar a la escuela en asegurar apoyo financiero así como en mejorar los servicios que provee.

Sus Derechos: Toda la información obtenida de este cuestionario será completamente anónima. Es decir, no hay manera alguna de averiguar quien respondió el cuestionario. De hecho, no se conservará ningún registro individualizado de quienes completen el cuestionario. Por lo tanto, no es necesario saber su nombre u otros datos personales, así que por favor, no escriba dicha información en ninguna parte de estas hojas. Al no proveer su nombre o información de como contactarle puede estar totalmente confiado (a) que su seguridad esta garantizada, por lo que le pido conteste honestamente. Usted puede contactarme en cualquier momento para saber de la investigación o discutir cualquier parte de ella, sin embargo, por la naturaleza anónima de este cuestionario, resultados individuales no pudran ser compartidos.

Información de contacto: Si llegara a tener cualquier duda, comentario o preocupación acerca del estudio siéntase libre de ponerse en contacto con migo al Centro de Estudios Inmigratorios en ASU al teléfono (706) 667-4432. O electrónicamente a jjuareszp@aug.edu

CUESTIONARIO DE EVALUACION DE CONTINGENTE

Por favor lea y responda cuidadosamente el siguiente cuestionario sobre el Centro Educativo Central Savannah River Area, tome en cuenta que no existe respuesta incorrecta. Por favor encierre en un círculo la opción que elija como su respuesta. Si por alguna razón no puede contestar a la pregunta encierre en un círculo la opción “No se/ Sin respuesta” (NS/SR).

- 1) ¿Cómo se enteró de la existencia del Centro Educativo Central Savannah River Area (CECSRA)?

Periódico Radio Amigo Vecino Iglesia Internet Otro medio: _____

- 2) Por favor, elija de acuerdo a la siguiente escala ¿Qué tan informado usted se considera respecto de la historia, organización, y patrocinadores del CECSRA?

Extremadamente informado Bien informado Informado No informado NS/SR

- 3) Por favor, marque de acuerdo a la siguiente escala ¿Qué tan informado usted se considera?, respecto de todos los posibles beneficios que usted puede obtener al estudiar y terminar todos los programas del CECSRA

Extremadamente informado Bien informado Informado No informado NS/SR

- 4) ¿Asiste usted a alguna otra escuela centro o programa educacional en el área?

SI

NO

- 5) Si su respuesta es afirmativa, ¿A que otra escuela centro o programa educacional asiste y por qué?

- 6) De acuerdo a la siguiente escala marque ¿Qué tan importante es para usted tener cualquier tipo de certificados escolar?

Extremadamente importante Muy importante Importante Sin importancia NS/SR

- 7) ¿Por que?

8) Marque de acuerdo a la siguiente escala ¿Qué tan difícil piensa que sería para usted obtener cualquier tipo de certificado escolar en este país?

Extremadamente difícil Muy difícil Difícil Poco Difícil NS/SR

9) ¿Por que?

10) Cuantas horas a la semana dedica usted en promedio a las siguientes actividades:

Estudiar en casa	0	1-10	11-20	21-30	31-40	41-50	51-60
Trabajo	0	1-10	11-20	21-30	31-40	41-50	51-60
Actividades religiosas	0	1-10	11-20	21-30	31-40	41-50	51-60
Tiempo con la familia	0	1-10	11-20	21-30	31-40	41-50	51-60
Entretenimiento	0	1-10	11-20	21-30	31-40	41-50	51-60

Sección valorativa

Escenario a evaluar (Escenario Hipotético)

El Centro Educativo Central Savannah River Area (CECSRA) fue creado con la esperanza de que los inmigrantes pudieran lograr el objetivo de obtener educación y así mejorar sus oportunidades de trabajo. En el centro de la misión del CECSRA se encuentra la asistencia social al proveer de educación y preparación técnica para el trabajo y una asimilación cultural exitosa. Así, el CECSRA centra sus actividades cotidianas en ayudar a los Latinos y Mexicanos que viven en el área en iniciar, continuar o terminar su educación primaria, secundaria y preparatoria. Con esto, los inmigrantes pueden iniciar estudios profesionales (universitarios) o técnicos en los Estados Unidos. Como ya se menciona, el CECSRA contribuye a que los Latinos y Mexicanos entiendan sigan y respeten las tradiciones y costumbres de la cultura Americana (asimilación cultural) y de esta manera poder contribuir positivamente a la vida social de la comunidad donde ahora viven. Hasta ahora el CECSRA es financieramente sostenido por el gobierno Mexicano a través del Instituto de los Mexicanos en el Exterior, dinero donado por los miembros de la iglesia católica Our Lady of Peace (OLP), y donaciones de otras organizaciones no lucrativas. Espacio y sus gastos así como algunos materiales escolares son donados por la iglesia católica OLP.

¿Estaba usted conciente de la información anteriormente provista?

SI

NO

El CECSRA es hasta ahora financieramente solvente, pero debe reconocerse que el tiempo y las circunstancias cambiaran. Se anticipa que el cambio mas dramático es el incremento en el número de estudiantes de la escuela, como resultado, los costos se verán incrementados también.

Dado el incremento esperado en el número de alumnos es imperativo planificar una estrategia financiera alternativa a la actual. Cuando este incremento se presente, el CECSRA necesitará implementar una estrategia similar al modelo financiero típico de una escuela privada.

¿Había pensado antes en la posibilidad de que esto pudiera suceder?

SI

NO

Debido a todo lo anterior el CECSRA esta considerando cobrar a los alumnos una cuota justa de inscripción (matriculación), así como un cobro razonable mensual (colegiatura) por las clases impartidas. Pero antes de que se queje y pregunte cuanto se piensa cobrar, permítame presentarle la lista de todos los posibles beneficios que de acuerdo a numerosas investigaciones puede obtener al estudiar y graduarse de cualquier programa educativo como el del CECSRA.

- a) Un salario muy posiblemente más alto que el que actualmente gana. Los investigadores han reportado que en Estados Unidos se les paga mejor a los trabajadores con más educación.
- b) Disfrutar del calor y la amistad del resto de los miembros del CECSRA.
- c) La oportunidad de adquirir nuevas habilidades que le harán un miembro mas productivo en su comunidad
- d) Desarrollar conexiones sociales de trabajo e información no solo con sus compañeros de clase si no con los maestros y el resto de las personas que trabajan para el CECSRA
- e) Obtener referencias de trabajo (recomendaciones) y otras oportunidades en su vida laboral
- f) Su educación puede tener un efecto positivo en el salario de su esposo (a)
- g) Poder aconsejar correctamente a su esposo (a) con lo que podrá tomar mejores decisiones respecto del mercado laboral.
- h) Una mejor vida para sus hijos. Investigaciones han demostrado que mientras mas educación tengas cuidará mejor la salud de su hijo (s), pensara tener menos hijos (se cuida y atiende mejor de un o dos hijos que de tres, cuatro o más), se comete menos abuso y descuido de menores (las reglas y estándares americanos son mucho mas estrictos al respecto que en su país natal), tendrá la posibilidad de invertir mas y mejor en sus hijos (proveer de todo lo que su hijo (s) necesita), el costo de la educación de sus hijos se reducirá, podrá procura mejor la adolescencia de su hijo (s), y por ende, serán menos propensos a tener problemas con la justicia.
- i) Disfrutará de una mayor salud. Las investigaciones reportan que mientras mas educación obtenga podrá y sabrá cuidar mucho mejor de usted mismo incrementando con esto en sus expectativas de vida.
- j) La habilidad de tomar decisiones eficientes como consumidor. Las evidencias sugerían que más educación trae consigo mejores decisiones de ahorro y deuda (mayor conocimiento del mercado

de bienes y servicios para comprar más barato así como el mercado financiero para saber si conviene o no pedir un préstamo o comprar a crédito).

- k) La habilidad de buscar trabajo de una mejor manera (por ejemplo usando el Internet)
- l) La habilidad de tomar mejores decisiones maritales. Educación es asociada con mejores decisiones de elección de la pareja.
- m) Planificación familiar. Más educación le permite obtener información precisa y detallada de como evitar embarazos no deseados.
- n) Entretenimiento. Educación le ayuda a apreciar mucho mejor las artes como: la música, la pintura, la escultura y la lectura.
- o) Auto confianza que le ayudaría a ser un líder de su comunidad haciendo uso de su habilidad de comunicarse eficientemente lo cual desarrolla al leer y preparar presentaciones como parte de numerosos proyectos en la escuela.
- p) Ahorro: Educación contribuye a su conocimiento de las ventajas de ahorrar así como de ¿Cómo usar sus ahorros eficientemente?
- q) Asimilación cultural exitosa al contraer (entender, seguir y respetar) la cultura Americana. Esto le ayuda a no cometer inconscientemente ciertos actos considerados crimen en la cultura Americana (E.U. hace de su cultura sus leyes) tales como el abuso y el descuido de menores, y manejar bajo las influencias del alcohol.
- r) La capacidad de contribuir al sistema impositivo (impuestos) como cualquier ciudadano norteamericano que estudió mas haya del high school. Este es uno de las grandes desventajas asociadas con la migración Latina discutida donde quiera que se hable del tema migratorio ya que algunas investigaciones sugieren que los latinos escasamente educados (sin poder comprobar haber concluido estudios de preparatoria) imponen costos sustanciales de largo plazo- al pagar menos impuestos- que los ciudadanos norteamericanos.

Como puede darse cuenta, los beneficios que puedes obtener al graduarte del CECSRA van mucho más allá de un mayor salario. ¿Habías considerado estos beneficios anteriormente?

SI

NO

Preguntas valorativas

- 1) Si el CECSRA decidiera implementar una cuota de inscripción y pagos mensuales en el corto plazo (muy pronto), ¿estaría dispuesto (a) a pagarlos tomando en consideración todos los beneficios anteriormente mencionados?

SI

NO

2) Si su respuesta es afirmativa, ¿cuanto dinero estaría dispuesto a pagar por cuota de inscripción?

\$10-20 \$21-30 \$31-40 \$41-50 \$51-60 Si mas, cuanto \$ _____

3) ¿Cuanto dinero estaría dispuesto a pagar de colegiatura mensual?

\$10-20 \$21-30 \$31-40 \$41-50 \$51-60 Si mas, cuanto \$ _____

4) De la cantidad que eligió en la pregunta anterior, ¿qué porcentaje asignarías a los dieciocho beneficios presentados anteriormente? **(Usted puede asignar cero por ciento a aquellos beneficios que piense no aplican en su caso, asignar hasta cien por ciento a un solo beneficio si es el único que le interesa o simplemente repartir su cien por ciento entre los beneficios que crea usted recibiría).**

Beneficios: Salario mas alto _____% Amistad de los del grupo _____% Aprender nuevas habilidades _____% Conexiones sociales _____% Obtener referencias _____%
 Salario mas alto para su esposo (a) _____% Aconsejar correctamente _____% Mejor vida para su hijo (s) _____% Mejor salud para usted _____% Poder tomar decisiones eficientes como consumidor _____% Búsqueda de trabajo eficiente _____% Decisiones maritales eficientes _____% Adecuada planificación familiar _____% Entretenimiento _____%
 Auto confianza _____% Ahorro _____% Asimilación cultural _____% Contribuir con el sistema impositivo _____%

Sección demográfica

1) ¿Cual es su sexo? Hombre _____ Mujer _____

2) ¿Cual es su edad (especificar en años)? _____

3) ¿Cual es su estado de relación (por favor escoge solo uno)?

1. ___ Soltero (a) 3. ___ Divorciado (a) 5. ___ Separado (a)
 2. ___ Casado (a) 4. ___ Viudo (a) 6. ___ Otro (especifica por favor): _____

4) ¿Cuantos años de escolaridad ha completado, incluyendo los años de primaria? _____ años

5) ¿Donde cursó la mayoría de sus estudios?

1. _____ Estados Unidos 2. _____ País de origen (que país: _____)
 3. _____ Otro (por favor especifica: _____)

6) ¿Cual es el máximo grado escolar que ha obtenido?

1. _____ Primaria 2. _____ Secundaria 3. _____ Preparatoria
 4. _____ Carrera técnica 5. _____ Otro, especifica _____

7) ¿Cual es actualmente su estado de empleo?

1. _____ Trabajando medio tiempo → Donde y haciendo que? _____
2. _____ Trabajando tiempo completo → Donde y haciendo que? _____
3. _____ Desempleado
4. _____ Retirado

8) Cuál es su ingreso personal anual?

- | | |
|--|--|
| 1. _____ Menos de \$10,000 al año | 2. _____ De \$10,001 a \$15,000 al año |
| 3. _____ De \$15,001 a \$20,000 al año | 4. _____ De \$20,001 a \$30,000 al año |
| 5. _____ De \$30,001 a \$40,000 al año | 6. _____ Más de \$40,000 al año |

9) ¿Cual es su ingreso familiar total (esto incluye tu ingreso mas el ingreso de quienes viven con usted)?

- | | |
|--|--|
| 1. _____ Menos de \$20,000 al año | 2. _____ De \$20,001 a \$30,000 al año |
| 3. _____ De \$30,001 a \$40,000 al año | 4. _____ De \$40,001 a \$60,000 al año |
| 5. _____ De \$60,001 a \$80,000 al año | 6. _____ Más de \$80,000 al año |

10) ¿Cuantas personas (incluyéndose) apoya financieramente? _____

11) ¿Que religión practica?

- | | | |
|-------------------|--|----------------|
| 1. _____ Católica | 2. _____ Protestante | 3. _____ Judía |
| 4. _____ Islámica | 5. _____ Otro (por favor especificar): _____ | |

Appendix B

Detailed calculations of potential personal, children and family better welfare as well as society's benefits on students' side.

<u>Willingness to pay for potential personal welfare</u>	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6	Student 7	Student 8	Student 9	Student 10	Student 11
Higher salary	17.50	0.00	13.75	0.00	0.00	1.500	0.00	0.00	0.75	0.00	3.00
Warmth from the group	0.00	0.00	0.55	7.00	0.00	1.500	0.00	0.00	2.25	1.50	0.00
Learn new skill	7.00	45.00	3.30	7.00	9.00	1.500	0.00	8.25	1.50	3.00	3.00
Social networking	0.00	0.00	2.75	0.00	0.00	0.000	1.50	5.50	1.50	0.00	3.00
Obtain references	0.00	0.00	1.10	0.00	0.00	1.500	1.50	0.00	0.75	1.50	0.00
Better health	3.50	0.00	0.83	12.25	9.00	1.500	4.50	2.75	1.50	0.00	0.00
Efficient consumer choices	0.00	0.00	5.50	0.00	0.00	1.500	0.00	2.75	0.75	0.00	0.00
Efficiency labor search	0.00	0.00	8.25	0.00	0.00	0.000	0.00	2.75	0.75	3.00	0.00
Efficient marital choices	0.00	0.00	1.65	0.00	4.50	0.000	0.00	0.00	0.75	0.00	0.00
Entertainment	0.00	0.00	1.65	0.00	2.25	0.000	0.00	2.75	0.00	0.00	0.00
Self confidence	0.00	0.00	5.50	0.00	0.00	0.000	1.50	5.50	0.75	0.00	0.00
Saving	0.00	0.00	0.28	5.25	2.25	0.000	0.00	2.75	0.30	0.00	0.00
<u>Willingness to pay for potential better welfare for family and children</u>											
Desired family size	0.00	0.00	0.28	0.00	4.50	1.500	0.00	2.75	0.75	0.00	3.00
Positive effect on your spouse's earning	0.00	0.00	0.55	0.00	0.00	1.500	1.50	0.00	0.30	3.00	0.00
Be able to advise	0.00	0.00	0.83	3.50	4.50	1.500	0.00	0.00	0.45	3.00	3.00
Better life for children	7.00	0.00	5.50	0.00	9.00	0.000	3.00	11.00	1.50	0.00	0.00
<u>Willingness to pay for Host Society's benefits</u>											
Cultural assimilation	0.00	0.00	1.65	0.00	0.00	0.000	1.50	2.75	0.30	0.00	0.00
Contribute to the tax system	0.00	0.00	1.10	0.00	0.00	1.500	0.00	5.50	0.15	0.00	0.00
Total	35.00	45.00	55.00	35.00	45.00	15.00	15.00	55.00	15.00	15.00	15.00
Total annually	420.00	540.00	660.00	420.00	540.00	180.00	180.00	660.00	180.00	180.00	180.00

Source: own creation.

Note: 24 out of 27 students responded and turned the survey back meaning a respond rate of 88.8%. From those who responded the survey 3 students responded NO to the question: Would you be willing to pay tuition and fees? Students who responded NO are excluded from the table

Detailed calculations of potential personal, children and family better welfare as well as society's benefits on students' side continue

Student 12	Student 13	Student 14	Student 15	Student 16	Student 17	Student 18	Student 19	Student 20	Student 21	Total	Total annually
1.50	3.50	0.00	8.75	3.00	1.50	15.00	10.50	1.75	4.50	86.50	1038.00
0.00	3.50	3.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.80	237.60
3.00	0.00	3.50	1.75	0.00	1.50	0.00	1.50	1.75	0.00	101.55	1218.60
0.00	0.00	3.50	0.00	1.50	1.50	0.00	0.00	0.00	0.00	20.75	249.00
0.00	0.00	0.00	0.00	1.50	1.50	0.00	0.00	1.75	0.15	11.25	135.00
0.00	0.00	1.75	10.50	0.00	0.00	0.00	0.00	1.75	1.50	51.33	615.90
0.00	0.00	1.75	0.00	1.50	1.50	0.00	0.00	0.00	0.00	15.25	183.00
3.00	7.00	0.00	0.00	1.50	1.50	0.00	3.00	3.50	0.00	34.25	411.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50	1.20	11.60	139.20
0.00	0.00	0.00	1.75	0.75	0.00	0.00	0.00	0.00	1.40	10.55	126.60
0.00	0.00	17.50	0.00	0.75	0.00	0.00	0.00	3.50	0.40	35.40	424.80
0.00	0.00	0.00	3.50	0.75	1.50	0.00	0.00	3.50	1.50	21.58	258.90
1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.50	1.20	18.98	227.70
0.00	0.00	1.75	1.75	1.50	1.50	0.00	0.00	3.50	0.15	17.00	204.00
0.00	10.50	0.00	0.00	1.50	1.50	0.00	0.00	0.00	1.50	31.78	381.30
0.00	3.50	1.75	7.00	0.00	1.50	0.00	0.00	7.00	0.00	57.75	693.00
6.00	7.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	1.50	21.45	257.40
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.25	99.00
15.00	35.00	35.00	35.00	15.00	15.00	15.00	15.00	35.00	15.00	575.00	6900.0
180.00	420.00	420.00	420.00	180.00	180.00	180.00	180.00	420.00	180.00	6900.00	

Detailed calculations of volunteers' benefits as well as society's benefits on volunteers' side.

<u>Willingness to pay for volunteers' benefits</u>	Volunteer 1	Volunteer 2	Volunteer 3	Volunteer 4	Volunteer 5	Volunteer 6	Volunteer 7
Altruistic satisfaction	0.00	7.50	0.00	0.00	0.00	0.00	0.00
Use your skill	11.25	1.50	0.00	0.00	0.00	0.00	0.00
Get recognition	0.00	1.50	0.00	0.00	0.00	0.00	0.00
Warmth from the group	0.00	0.00	0.00	4.50	0.00	0.00	0.00
Teaching experience	11.25	3.00	0.00	0.00	0.00	0.00	0.00
Learn new skill	0.00	0.00	0.00	9.00	0.00	0.00	2.50
Social networking	0.00	1.50	0.00	4.50	0.00	0.00	1.25
Build résumé	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Guide the school	9.00	0.00	0.00	0.00	0.00	0.00	0.00
Involvement	13.50	0.00	0.00	4.50	0.00	0.00	1.25
<u>Willingness to pay from volunteers for host's society benefits</u>							
Avoid net fiscal deficit	0.00	0.00	0.00	9.00	0.00	0.00	0.00
Return to social harmony	0.00	0.00	0.00	13.50	0.00	0.00	0.00
Total per month	45.00	15.00	0.00	45.00	0.00	0.00	5.00
Total annually	540.00	180.00	0.00	540.00	0.00	0.00	60.00

Source: own creation.

Note: 12 out of 15 volunteers responded and turned the survey back, meaning a response rate of 80%. From those who responded to the survey five volunteers responded NO to the question: Would you donate money to the school? Two of them stated that they did not have money. One stated that they were unsure. Another student stated that his donation would depend upon their income and budget. One stated: NO at the present time, however, would be open to the possibility in the future. However, from these five volunteers three of them chose a percentage to allocate among some of the benefit of their preference, thus revealing which benefit mattered to them.

Detailed calculations of volunteers' benefits as well as society's benefits on volunteers' side. Continuation

Volunteer 8	Volunteer 9	Volunteer 10	Volunteer 11	Volunteer 12	Total	Total annually
0.00	0.75	0.00	0.00	1.25	9.50	114.00
0.00	0.50	0.00	0.00	0.00	13.25	159.00
0.00	0.25	0.00	0.00	0.00	1.75	21.00
0.00	0.50	0.00	0.00	1.25	6.25	75.00
0.00	0.75	0.00	0.00	0.00	15.00	180.00
0.00	0.50	0.00	0.00	1.25	13.25	159.00
0.00	0.25	0.00	0.00	1.25	8.75	105.00
0.00	0.25	0.00	0.00	0.00	0.25	3.00
0.00	0.00	0.00	0.00	0.00	9.00	108.00
0.00	0.25	0.00	0.00	0.00	19.50	234.00
25.00	0.50	0.00	0.00	0.00	34.50	414.00
0.00	0.50	0.00	0.00	0.00	14.00	168.00
25.00	5.00	0.00	0.00	5.00	145.00	1740.00
300.00	60.00	0.00	0.00	60.00	1740.00	

Detailed costs calculations

<i>Concept or item</i>	<i>Location</i>	<i>Number</i>	<i>Price gathered in / reported by</i>	<i>Calculation of annual expenditure</i>
<i>SALARY FOR PAID STAFF</i>				
<i>The CEO, two tutor, a computer technician, and a babysitter</i>		4	School's accounting records / CECSRA's accounting officer	CEO (375*12) + tutor (80*3)+ computer upkeep (50*12)) + tutor (70*10) + Babysitter (400 for the summer) = \$6,440.00
<i>SUPLIES</i>				
<i>Desks</i>	classroom 1 and 2	1	Price of similar desks in Best Buy	100 * 2 = \$200.00
<i>Chairs</i>	computer lab, adult's classroom, and classroom 1 and 2	6, 20 and 25 respectively	Accounting officer of OLP Outreach Program (6 and 20) and accounting officer of OLP Church (25)	Computer chairs (6*125)+ cushion seated chairs (20+100)+ folding chairs (25*20.35)=\$3,258.75
<i>Tables</i>	White tables in classrooms 1 and 2. Brown tables in the adult's classroom	10 and 9 respectively	Accounting officer of OLP Church	(44.68 * 10) + (9 * 70.21) = \$1,078.69
<i>Computers</i>	Computer lab	6 computer each one brought a printer	Accounting officer of OLP Church	6*8333=\$5,000.00 approximately
<i>Printers</i>				
<i>TV</i>	Adult's classroom	1	Price of similar TV in O-Target	\$140.00 approximately
<i>DVD</i>	Adult's classroom	1	Price of similar DVD in O-Target	\$65.00 approximately
<i>Educational books and videos</i>	classroom 1 and 2	Unknown	Unknown	Unknown
<i>White dry-erase boards</i>	Adult's classroom and classrooms 1 and 2	2, 1 and 1 respectively. 4 in total	Price of similar white dry-erase boards in Office Max	4*35=\$140.00
<i>Copy machine</i>	Adult's classroom	1	Accounting officer of OLP Church	10,000
<i>Kitchen appliances</i>	Adult's classroom	3	Price of similar Kitchen appliances in O-Target	coffee machine 9.5 + microwave 45 + compact refrigerator 95 = \$149.50
<i>Bookshelves</i>	Adult's classroom	1	CECSRA's accounting officer	\$100.00
<i>File cabinet</i>	Adult's classroom	1	Accounting officer of OLP Outreach Program	\$300.00
<i>FACILITY</i>				
<i>4 classrooms</i>				
<i>Power (light)</i>	Adult's classroom and classrooms 1 and 2			
<i>Internet payment</i>	Adult's classroom	4	OLP School	350*4(number of classrooms)*2 (days a week)*4(weeks)*12(months)=\$134,400.00 This amount includes the rest of the facility's costs
<i>water</i>	Adult's classroom and classrooms 1 and 2			
<i>Heating</i>	Adult's classroom and classrooms 1 and 2			
<i>Maintenance</i>	Adult's classroom and classrooms 1 and 2			
<i>VOLUNTEER TIME</i>		10	Independent Sector	11 (volunteers)* 17.145 (salary)*4 (weeks)*12 (months)=\$9052.56

Source: own creation.

Detailed calculation of transfer payment matrix for CECSRA

Donors (-) \ Receivers (+)	Students children and family of CECSRA		Society as a whole
ASU students and local community	Volunteer time \$8229.6 (-)	Volunteer time \$8229.6 (+)	0
OLP's Church Members	Chairs (508.75) + tables (1078.69) + Computers (5000) + copy machine (10000) + Kitchen appliances (145) + bookshelves (100) = \$16832.44 (-)	Chairs (508.75) + tables (1078.69) + Computers (5000) + copy machine (10000) + Kitchen appliances (145) + bookshelves (100) = \$16832.44 (+)	0
Parents who have children in OLP school	Desks (200) + TV (140) + DVD (65) + white dry-eraser board (140) + facilities (134400) = \$134,945 (-)	Desks (200) + TV (140) + DVD (65) + white dry-eraser board (140) + facilities (134400) = \$134,945 (+)	0
ASU Center for Immigration Studies	Volunteer time \$822.96 (-)	Volunteer time \$822.96 (+)	0
OLP's Outreach Program	Chairs (2750) + file cabinet (300) = \$3050 (+)	Chairs (2750) + file cabinet (300) = \$3050 (-)	0
Mexican Government	XXX(-)	XXX(+)	0
Society as a whole	\$163880 (-)	\$163880 (+)	0

Source: Own creation

Note: It must be remember that the ASU Center for Immigration Studies, the OLP's Outreach Program, and the Mexican Government are in some tables grouped and labeled as "all donors".

Appendix C

Date: Fri, 04 Apr 2008 12:09:31 -0400
From: ["Donna Wendt" <dwendt@augustatech.edu>](mailto:dwendt@augustatech.edu) **Block Address**
Subject: **Augusta Technical College Career Services Follow Up**
To: juarezp@aug.edu
Cc: ["Shanan Glenn" <sglenn@augustatech.edu>](mailto:sglenn@augustatech.edu)

Mr. Juarez-Perez:

Thank you for stopping by the Augusta Tech Career Services office and for your interest in the Salary Document! My name is Donna Wendt, Career Services and Recruiting Specialist. My colleague, Shanan Glenn, gave me your message.

The Salary Document is a summary of salary information compiled by my predecessor in this office, using information from GCIS (Georgia Career Information System), the Department of Labor, and from information obtained from our graduates. The document was produced in late 2006.

You can obtain general salary information from GCIS by visiting <http://www.gcic.peachnet.edu>. Augusta State's Career Services Office may utilize its own Username and Password, but if you'd like, you may use the Augusta Tech Username (augustatc) and Password (gcis641). The Department of Labor Bureau of Labor Statistics salary statistics may be obtained at <http://www.bls.gov/bls/blswage.htm>.

If additional information is needed, please feel free to contact me. Good luck in progressing with your thesis/capstone project!

Sincerely,

Donna

Donna Wendt, Career Services & Recruiting Specialist

Augusta Technical College

3200 Augusta Tech Drive

Augusta GA 30906

Ph: 706-771-4017

Fx: 706-771-4034

<http://www.augustatech.edu>

Date: Mon, 14 Apr 2008 17:44:05 -0400
From: "[Donna Wendt](mailto:dwendt@augustatech.edu)" <dwendt@augustatech.edu> [Block Address](#)
Subject: **RE: Augusta Technical College Career Services Follow Up**
To: "[Javier Juarez Perez](mailto:jjuarezp@aug.edu)" <jjuarezp@aug.edu>

Javier:

Thank you for your response and for providing further information on your capstone project!

The information compiled in the Augusta Tech salary document comes from a combination of re sources - GCIS (<http://www.gcic.peachnet.edu>), from Department of Labor salary information, and from surveys we collect from our graduating students.

The information in the document was compiled in September 2006. At some point in the near fut ure, we will begin the process of updating the document; however, at this time, that is the most re cent information we have. I typically investigate current inquiries case-by-case and refer prospective students to GCIS or to the Department of Labor websites; We can also access update d information that graduates supply us when they complete their graduation paperwork as it is av ailable.

I hope this is of help!

Sincerely,
Donna

Donna Wendt, Career Services & Recruiting Specialist
Augusta Technical College
3200 Augusta Tech Drive
Augusta GA 30906
Ph: 706-771-4017
Fx: 706-771-4034
<http://www.augustatech.edu>

-----Original Message-----

From: Javier Juarez Perez [<mailto:jjuarezp@aug.edu>]
Sent: Sunday, April 06, 2008 1:15 PM
To: Donna Wendt
Subject: Re: Augusta Technical College Career Services Follow Up

Dear Donna Wendt I hope this e-mail finds you doing well.

Thanks a lot for you e-mail, you and your colleague Shanan Glenn are very kind. As I mentioned to her, I am performing a "Social Cost-Benefit Analysis (SCBA) for the Centro Educativo Savannah River Area (CECSRA) Nonprofit Organization". And in doing so, I need to mention possible future salary for those who take the GED test in order to apply to the Augusta

Technical College (because many of our students have expressed that intention).

One day, one of our students arrived to class with the salary information from your office and she shared it with the rest of the group in order to encourage them, I was surprised seeing the kind of research they do by themselves. So after taking a look at the information, I realized that I could use it for my project and that is the reason for why I visited your office. I just need to know a little bit more about it to make the appropriate quotation. Let me attach to this e-mail the first pages of my capstone so that you can have a better idea of what this project is about.

Once again, thanks a lot for your help

Have a great master week

Sincerely

Javier

Appendix D
Detailed present value calculations

Present value of Hispanics' Potential higher Salary

Discount factor	Higher salary	Result
0.9479	499500	473459.72
0.8985	499500	448776.98
0.8516	499500	425381.03
0.8072	499500	403204.76
0.7651	499500	382184.61
0.7252	499500	362260.29
0.6874	499500	343374.69
0.6516	499500	325473.64
0.6176	499500	308505.82
0.5854	499500	292422.57
0.5549	499500	277177.80
0.5260	499500	262727.77
0.4986	499500	249031.06
0.4726	499500	236048.40
0.4479	499500	223742.56
Total		5013771.68

Potential better personal welfare

Discount factor	Personal welfare	Result
0.9479	3999.6	3791.09
0.8985	3999.6	3593.45
0.8516	3999.6	3406.11
0.8072	3999.6	3228.54
0.7651	3999.6	3060.23
0.7252	3999.6	2900.69
0.6874	3999.6	2749.47
0.6516	3999.6	2606.13
0.6176	3999.6	2470.27
0.5854	3999.6	2341.49
0.5549	3999.6	2219.42
0.5260	3999.6	2103.72
0.4986	3999.6	1994.04
0.4726	3999.6	1890.09
0.4479	3999.6	1791.55
Total		40146.31

Potential better welfare for family and children

Discount factor	Welfare for family and children	Result
0.9479	1506	1427.49
0.8985	1506	1353.07
0.8516	1506	1282.53
0.8072	1506	1215.67
0.7651	1506	1152.29
0.7252	1506	1092.22
0.6874	1506	1035.28
0.6516	1506	981.31
0.6176	1506	930.15
0.5854	1506	881.66
0.5549	1506	835.70
0.5260	1506	792.13
0.4986	1506	750.83
0.4726	1506	711.69
0.4479	1506	674.59
Total		15116.60

Volunteer's benefits

Discount factor	Benefits	Result
0.9479	1158	1097.63
0.8985	1158	1040.41
0.8516	1158	986.17
0.8072	1158	934.76
0.7651	1158	886.03
0.7252	1158	839.83
0.6874	1158	796.05
0.6516	1158	754.55
0.6176	1158	715.21
0.5854	1158	677.93
0.5549	1158	642.59
0.5260	1158	609.09
0.4986	1158	577.33
0.4726	1158	547.24
0.4479	1158	518.71
Total		11623.52

Host society's benefits

Discount factor	society's benefits	Result
0.9479	938.4	889.48
0.8985	938.4	843.11
0.8516	938.4	799.15
0.8072	938.4	757.49
0.7651	938.4	718.00
0.7252	938.4	680.57
0.6874	938.4	645.09
0.6516	938.4	611.46
0.6176	938.4	579.58
0.5854	938.4	549.37
0.5549	938.4	520.73
0.5260	938.4	493.58
0.4986	938.4	467.85
0.4726	938.4	443.46
0.4479	938.4	420.34
Total		9419.27

Salary for paid staff

Discount factor	Salary	Result
0.9479	6440	6104.27
0.8985	6440	5786.03
0.8516	6440	5484.39
0.8072	6440	5198.48
0.7651	6440	4927.47
0.7252	6440	4670.58
0.6874	6440	4427.09
0.6516	6440	4196.30
0.6176	6440	3977.53
0.5854	6440	3770.17
0.5549	6440	3573.62
0.5260	6440	3387.32
0.4986	6440	3210.73
0.4726	6440	3043.35
0.4479	6440	2884.69
Total		64642.02

Supplies

Discount factor	Supplies	Result
0.9479	1361.83	1290.83
0.8985	1361.83	1223.54
0.8516	1361.83	1159.75
0.8072	1361.83	1099.29
0.7651	1361.83	1041.98
0.7252	1361.83	987.66
0.6874	1361.83	936.17
0.6516	1361.83	887.37
0.6176	1361.83	841.11
0.5854	1361.83	797.26
0.5549	1361.83	755.69
0.5260	1361.83	716.30
0.4986	1361.83	678.95
0.4726	1361.83	643.56
0.4479	1361.83	610.01
Total		13669.47

Facility costs

Discount factor	Facility	Result
0.9479	\$134,400	\$127,393.36
0.8985	\$134,400	\$120,752.00
0.8516	\$134,400	\$114,456.88
0.8072	\$134,400	\$108,489.93
0.7651	\$134,400	\$102,834.06
0.7252	\$134,400	\$97,473.04
0.6874	\$134,400	\$92,391.51
0.6516	\$134,400	\$87,574.89
0.6176	\$134,400	\$83,009.37
0.5854	\$134,400	\$78,681.87
0.5549	\$134,400	\$74,579.97
0.5260	\$134,400	\$70,691.92
0.4986	\$134,400	\$67,006.56
0.4726	\$134,400	\$63,513.32
0.4479	\$134,400	\$60,202.20
Total		\$1,349,050.88

Volunteer time

Discount factor	Volunteer time	Result
0.9479	9052.56	8580.63
0.8985	9052.56	8133.29
0.8516	9052.56	7709.28
0.8072	9052.56	7307.38
0.7651	9052.56	6926.42
0.7252	9052.56	6565.33
0.6874	9052.56	6223.06
0.6516	9052.56	5898.64
0.6176	9052.56	5591.13
0.5854	9052.56	5299.65
0.5549	9052.56	5023.36
0.5260	9052.56	4761.48
0.4986	9052.56	4513.25
0.4726	9052.56	4277.96
0.4479	9052.56	4054.94
Total		90865.80

Present value of ASU student and local Community transfer payment

Discount factor	ASU and community	Result
0.9479	8229.6	7800.57
0.8985	8229.6	7393.90
0.8516	8229.6	7008.44
0.8072	8229.6	6643.07
0.7651	8229.6	6296.75
0.7252	8229.6	5968.48
0.6874	8229.6	5657.33
0.6516	8229.6	5362.40
0.6176	8229.6	5082.84
0.5854	8229.6	4817.86
0.5549	8229.6	4566.69
0.5260	8229.6	4328.62
0.4986	8229.6	4102.95
0.4726	8229.6	3889.06
0.4479	8229.6	3686.31
Total		82605.28

Present value of OLP's Church Members and Parents who have a children in OLP school transfer payment

Discount factor	Members and parents	Result
0.9479	151777.44	143864.87
0.8985	151777.44	136364.81
0.8516	151777.44	129255.74
0.8072	151777.44	122517.29
0.7651	151777.44	116130.13
0.7252	151777.44	110075.96
0.6874	151777.44	104337.40
0.6516	151777.44	98898.01
0.6176	151777.44	93742.19
0.5854	151777.44	88855.15
0.5549	151777.44	84222.90
0.5260	151777.44	79832.13
0.4986	151777.44	75670.26
0.4726	151777.44	71725.37
0.4479	151777.44	67986.13
Total		1523478.34

Present value of all donors transfer payment

Discount factor	All donors	Result
0.9479	3872.96	3671.05
0.8985	3872.96	3479.67
0.8516	3872.96	3298.27
0.8072	3872.96	3126.32
0.7651	3872.96	2963.33
0.7252	3872.96	2808.85
0.6874	3872.96	2662.42
0.6516	3872.96	2523.62
0.6176	3872.96	2392.05
0.5854	3872.96	2267.35
0.5549	3872.96	2149.15
0.5260	3872.96	2037.11
0.4986	3872.96	1930.91
0.4726	3872.96	1830.24
0.4479	3872.96	1734.83
Total		38875.15

Appendix E (SCBA with 4.5% and 6.5% of SRTP)

Social Cost Benefit Analysis Matrix Framework for Centro Educativo Savannah River area						
	CESRA students	Children and Family	All Donors	Volunteer (ASU students and local community) and paid Staff	OLP's Church Members and Parents who have a children in OLP school	Society
<u>PV of Benefit</u>						
CECSRAs' student potential higher salary	5364403.09					5364403.09
Potential better personal welfare	\$42,953.89					\$42,953.89
Potential better welfare for family and children		\$42,953.89				\$42,953.89
Volunteers' benefits				\$12,436.39		\$12,436.39
Host Society						\$10,077.99
<u>PV of cost</u>						
Salary for paid staff			\$69,162.67			\$69,162.67
Supplies					\$14,625.43	\$14,625.43
Facility costs					\$1,443,394.95	\$1,443,394.95
Volunteer time				\$97,220.38		\$97,220.38
<u>PV of transfer payments</u>						
Centro Educativo Central Savannah River Area	\$1,759,996.75		\$41,593.83	\$88,382.17	\$1,630,020.76	\$0.00
<u>PV of Secondary effects</u>						
Potential Increase of the CECSRAs' student labor force						5364403.09
PV of Benefits - Costs	\$7,167,353.73	\$15,116.60	\$110,756.51	\$173,166.15	\$3,088,041.13	\$3,820,584.53

Social Cost Benefit Analysis Matrix Framework for Centro Educativo Savannah River area						
	CESRA students	Children and Family	All Donors	Volunteer (ASU students and local community) and paid Staff	OLP's Church Members and Parents who have a children in OLP school	Society
<u>PV of Benefit</u>						
CECSRAs' student potential higher salary	\$4,696,633.09					\$4,696,633.09
Potential better personal welfare	\$37,606.91					\$37,606.91
Potential better welfare for family and children		\$14,160.42				\$14,160.42
Volunteers' benefits				\$10,888.29		\$10,888.29
Host Society						\$8,823.46
<u>PV of cost</u>						
Salary for paid staff			\$60,553.19			\$60,553.19
Supplies					\$12,804.83	\$12,804.83
Facility costs					\$1,263,718.69	\$1,263,718.69
Volunteer time				\$85,118.22		\$85,118.22
<u>PV of transfer payments</u>						
Centro Educativo Central Savannah River Area	\$1,540,909.37		\$36,416.16	\$77,380.20	\$1,427,113.01	\$0.00
<u>PV of Secondary effects</u>						
Potential Increase of the CECSRAs' student labor force						\$4,696,633.09
PV of Benefits - Costs	\$6,275,149.38	\$15,116.60	\$96,969.35	\$151,610.14	\$2,703,636.53	\$3,346,873.43