equality of opportunity in argentina

- a case study of the conditional cash transfer program
  “universal allocation per child”

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Abstract

This study is an evaluation of the Conditional Cash Transfer (CCT) program Universal Allocation per Child (AUH) in Argentina as a policy to reduce inequality of opportunity among children. Creating a Human Development Index (HOI), as developed by Paes de Barros et al. in 2009, I measure the changes in level of opportunity before and after the implementation of the AUH program, and I complement the study with interviews with recipients of the program and key actors within the Government and administrative agencies in Argentina. I use household survey data from Encuesta Permanente de Hogares (EPH) for the years 2009-2012. There is no natural control group since the program was implemented nationwide to all that comply with the prerequisites at once, but using the methodology of Bustos and Villafañe (2011) I create a control group representing the eligible part of the population and compare their index to the not eligible population, and also compare the opportunities between the eligible that actually receive the transfer and the eligible that don’t in 2010 to 2012. I find the comparability between the last two groups questionable however. The study shows an improvement in opportunities over the time period studied and the change has been greater for the targeted population, but causality between the AUH program and the improvement in opportunities cannot be determined.

Key words: Conditional Cash Transfers, Universal Allocation per Child, Equality of Opportunity, Human Opportunity Index
I dedicate this thesis to my dear aunt Gladys Numhauser Navarro, without whom the qualitative part of this thesis wouldn’t have been possible, and to my parents who are always there for me and support me no matter what I do.

I want to especially thank my supervisor Åsa Hansson for her patience and support. I also would like to express my gratitude to Eugenia Morey for taking an interest in my study and helping me to get in contact with relevant people and organizations as well as relevant material. Moreover I want to thank everyone participating in the study through interviews and informal meetings.
**Acronyms**

ACF – Tax deduction per Child

AFC – Contributory Family Allowance

AUH – Universal Allocation per Child

CCT – Conditional Cash Transfer

EPH – Encuesta Permanente de Hogares (Argentinean Household Survey)

HOI – Human Opportunity Index

UNDP – United Nations Development Program
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1. Introduction

1.1 Background

The world's focus on inequality and what kind of inequality matters has shifted in the past decade to a focus on equity instead of equality, meaning equality of opportunities instead of equality in outcomes. According to extensive research, there is a general agreement (Paes de Barros et al. 2009, Todaro & Smith 2006) that equity should be a main concern for the world, including developing countries, since it affects economic growth and social stability, and unequal opportunities are considered intrinsically unfair (World Bank, 2006). The World Bank published a book in 2009 (Paes de Barros et al.) where they developed two new measures of inequality measuring inequality of opportunity in society instead of inequality of outcomes. One of the measures is the Human Opportunity Index (HOI) that measures equality of opportunities for children in a society. In my bachelor thesis (Numhauser, 2012) I found that these new measures are more relevant for the kind of inequality that concerns society and policy makers today, than traditional measures such as the Gini coefficient.

The focus on inequality from The World Bank, the UN and other important institutions for economic development in the last decade has led to an extensive implementation of conditional cash transfers (CCT's), with Latin America as their main target. The CCT's are a new form of public social protection, developed as a wider policy tool aimed at combating poverty and inequality through cash transfers that are conditional on the recipients human capital investment in their children. Even though most countries in the region have experienced a positive economic development and reached important goals combating poverty in the last decades Latin America still remains the world's most unequal continent (UNDP, 2012). The UN and The World Bank has funded and supported many of the CCT programs that are now being implemented all over the developing world (Fiszbein and Shady, 2009).

A lot of research has been made on the Conditional Cash Transfer programs in Mexico, Brazil and Chile in particular (UNDP, 2010). Most of this research is focused on the effects on poverty reduction, school attendance or immunization rates. These are all outcome variables that are affected by the CCT policies in the short run, since the
programs usually require school attendance and medical check-ups for the children in the households that receive the transfers. In my study I try to measure the effects on equality of opportunity among children instead. I do this by producing a Human Opportunity Index for children with the methodology developed by the World Bank (2009) as mentioned above and measuring the possible effects of a specific CCT-program, the “Universal Allocation per Child”, on this measure. I combine the quantitative study with a qualitative field study in Buenos Aires based on interviews, informal meetings and active observations-as-participant. The qualitative study exemplifies some of the main issues in the implementation process and the data problems in my quantitative study. It also provides more background information and puts the program in context.

The Argentinean CCT-program “Universal Allocation per Child” (AUH) that was implemented in late 2009 is the most extensive program in all of Latin America, when it comes to both coverage and percentage of GDP. It gives the parents a cash transfer for each child and the full amount of the transfer is only received upon completion of the educational and health prerequisites regarding their children. (Agis, Cañete and Panigo, 2010)

1.2 Aim of Study
The aim of this study is to research how the program “Universal Allocation per Child” (AUH) has impacted Argentina’s equality of opportunities among children.

My main research question is:

Has the equality of opportunity among children changed in Argentina since the implementation of the CCT program “Universal Allocation per Child”?

1.3 Method and Empirical Data
To answer my main question I’m doing a quantitative study based on household survey data from EPH (Encuesta Permanente de Hogares) for the years 2009-2012 to see if there’s been a change in equality of opportunities for children since the implementation of AUH. I build a Human Opportunity Index (HOI) based on the household data for the

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1 The law including the AUH in the existing "Asignaciones Familiares" was passed on Oct 29 2009, and the inscription process through ANSES was introduced on Dec 10 2009. (ANSES, 2012)
years of interest using the methodology of Paes de Barros et al. (2009). I then measure the effects of the AUH-program comparing the opportunity development between groups representing the target population and the rest of the population derived from the questions in the household data using the methodology of Bustos and Villafañe (2011).

I combine the quantitative study with a qualitative field study performed during 2 months in Buenos Aires. It’s based on semi-structured interviews with families receiving the conditional cash transfer as well as some open interviews and informal talks with key actors within the Government and administrative agencies in Argentina. This field study complement my quantitative data and give a more complete picture of the possibilities, limitations, implementation problems and experiences of the AUH program. It also adds background information and a deeper understanding of the context in which the AUH program was implemented.

The studies performed separately have many shortcomings. A quantitative study based on statistical data can give an indication of the effects of different policies and it can make the results of a study more generalized. But it doesn’t show the personal experiences of the families affected by the policy. We need to hear their stories and get a picture of their complex environment and all the things that influence their decision-making and opportunities to get a full picture. If I only made the qualitative study on the other hand it would be very difficult to say anything about the general effect of opportunities in Argentina. Based on a few people’s stories about their daily work, their efforts, opinions or perceptions, we can hardly make any general statements about how society is doing as a whole or how the policies affect society. Another problem with interviews is the fact that we can’t control whether we get honest and non-biased answers to our questions.

One way to get a more complete picture of how Argentina is doing when it comes to Equality of Opportunities and how well the CCT program addresses the issue is to combine quantitative data and qualitative studies of individual cases.

1.4 Relevance and limitations

The implementation of CCT programs in recent years has led to extensive studies of particular programs and their impacts on poverty reduction, income inequality,
educational attainment, health and women's empowerment. Research on overall effects on equity in society is harder to find.

In the initial use of The Human Opportunity Index (HOI) it is calculated for two particular time points for 19 countries as a whole, to compare the levels of equity among children between the countries. The intention of the authors was that the Index should be implemented and adapted for different sample sizes and purposes, but there's still a lack of actual implementation. As I found the HOI measurement to be adequate and relevant for today's view on fairness I find it very important to start implementing it in particular case studies such as this one. It is a useful tool to see how well policies aimed at creating more equal opportunities for children succeed in practice.

I found a study by Andrés Ham (2010) measuring the effects of CCT programs in Mexico, Honduras and Nicaragua using part of the HOI method combined with a difference-in-differences analysis based on longitudinal data and randomized sample groups. Unfortunately I don't have the same kind of data for the AUH program in Argentina, making the analysis a bit more complicated particularly when it comes to my sample-groups being comparable. I applied the method used by Bustos and Villafañe (2009) to create comparable samples, but my results make me question the comparability of the groups. For this reason I chose not to do the difference-in-differences analysis in the traditional sense, but to look at my final indexes for the aggregated samples and compare the results between groups, as explained in the methodology section.

The interviewees exemplify the realities for the recipients and they represent the groups that I compare in my quantitative study. It was difficult however to get individuals to participate, which limits the scope and generalizability of the case study. It was also problematic to get completely frank and candid answers, as some of the individuals were clearly colored by their lack of trust and suspiciousness.
2. **Theory**

2.1 **Equality of Opportunities and The Human Opportunity Index**

The Human Opportunity Index is based on Roemer’s notion of equality of opportunities. Roemer’s theory emphasizes on personal responsibility, as final outcomes are the result of both the opportunities a person encounters, and what the person makes of those opportunities. Outcome inequality represents any social outcome of interest (wealth, income, status, educational achievement etc.) and Roemer defines these outcomes as an “advantage”. He also defines two groups of determinants that give rise to the advantage: “Efforts” that depend on individual choices, such as how hard to work, where to work and live, whom to marry and how many kids to have, and “Circumstances”, such as race, gender, socioeconomic group, place of birth and innate talents and characteristics, that are factors outside the individual’s control. Circumstances lead people to face different opportunity sets. When the advantage is independent of circumstances, we would have equality of opportunity according to Roemer. (Paes de Barros et al., 2009)

If we accept this measure as a good representation of the social values and as a good way of ranking desired distributions, then an equitable development process should pursue the equalization of opportunities (as established in several studies mentioned in the introduction). This approach argues that individuals should face a “level playing field” to then be able to decide how much effort they want to put in to maximize their wellbeing. But what if effort also depends on circumstances? If we believe that we have no chance to succeed because of unequal circumstances we might not even try and put in the effort. Thus the unequal circumstances reproduce the unequal opportunities and the unequal distribution from one generation to the next. (Ham, 2010)

One component is the unequal access to the “basic opportunities” that are needed for a fair start in life. Amartya Sen (1976 cited in Paes de Barros et al. 2009 pp.2) emphasizes the importance for society to set a target of universalism to equitably supply basic opportunities for all children and holds that to reach this goal requires distributing available opportunities increasingly towards the more disadvantaged groups. As long as not all children have access to these basic opportunities and as long as the access is correlated to circumstances outside of the child, then opportunities will remain unequal in society. (Paes de Barros et al., 2009)
Policy makers should then aim at reducing the correlation between circumstances and effort to generate a fairer society by providing these basic opportunities to all children. As opportunities become more equal the wider availability is expected to create a higher level of human capital on average, which make it easier to move up in the distribution and creates a positive circle of development (Ham, 2010).

The HOI measures inequality of opportunity among children, through the access to basic services that are thought to be critical for future advancement in life. It’s created by combining a dissimilarity index (D-index, widely used in sociology) comparing different circumstance groups probabilities for access to specific opportunities, and the absolute level of the same opportunities in society, into a synthetic measure. This way the index shows progress both in overall coverage of opportunities in the country and equal distribution of those opportunities among the circumstance-groups. The limitation to children ensures that all differences in opportunity is due to circumstances, since children don’t choose where to live, or whether to attend school, or get medical check-ups and vaccines. The opportunities measured in the HOI by Paes de Barros et al. (2009) was school attendance ages 10 -14, completing sixth grade on time, access to water, electricity and sanitation, based on the data they used at the time. In the study they explain in detail the relevance of these opportunities in particular, but also the lack of available data to include other relevant indicators, particularly for health. The measure is Pareto-efficient as any increase in opportunities will increase the index, no matter how it is distributed, as long as someone is better off and no one is worse off. The D-index gives greater weight to opportunities distributed to those that are worse off however and is therefore distribution-sensitive. (Paes de Barros et al., 2009)

2.2 Conditional Cash Transfers and Expenditure Incidence

Conditional Cash Transfers (CCT’s) are social safety net programs that have become very popular and extensively implemented in developing countries over the past decade (Fiszbein and Shady, 2009). CCT’s provide cash transfers, generally to poor households, on the condition that the parents fulfill special behavioral requirements related to human capital investments in their children. The World Bank is a big sponsor for these kinds of programs and they support their implementation through loans and other types of financing around the world (World Bank, 2012). The requirements for the transfers are usually related to the health and education areas, demanding things like, periodic
medical checkups, vaccinations for children, growth monitoring, pre-natal care for mothers to be and school enrollment and a level of school attendance from the kids. In Latin America basically all countries have some sort of CCT program, and in other developing countries implementations are well in progress (Fiszbein and Shady, 2009).

The CCT programs are designed to reduce poverty and inequality and to help households break out of the vicious intergenerational poverty cycle, by promoting child health care, nutrition and schooling. The traditional public expenditure tools used to redistribute income or reduce poverty are direct cash transfers or transfers In-Kind. Childcare, and schooling can also be provided through public expenditure programs as transfers In-Kind. The CCT’s can be seen as a combination of the two. What’s the problem with the traditional tools and how does CCT address those issues?

The main objections to direct cash transfers are that they produce undesired incentives in society (or disincentives on the labor market), and that the opportunity cost is too high, meaning that the money spent on transfers would be better spent elsewhere.

A problem with transfers In-Kind is that it is very difficult to value these kind of transfers. The value received from a transfer will never be higher than the value spent, but in many cases it could be less valuable for the receivers and thus creating an efficiency loss. (Fiszbein and Shady, 2009)

Figure 1

Source: Latzko lecture (2000)
Consider a welfare recipient who receives a $200 cash transfer. As the left part in Figure 1 above shows: the budget constraint shifts outward with the $200 so the recipient can optimize his/her consumption as chosen according to the utility curves of the recipient. If instead a $200 dollar transfer in food stamps is received the budget line will only shift up with $200 on the food axis, resulting in the cut off budget line in the right part of the picture. Even if the recipient chooses to spend less then 200 on food he/she will not be able to spend more on nonfood items. If the recipients’ utility-curves are tangent to the budget line on the dotted line from C to the nonfood items axis, as point D in Figure 1, then the $200 dollars in food stamps will be less valuable for the consumer. We cannot know if an in-kind transfer is valued less than direct income unless we do empirical analysis (Rosen and Gayer, 2010). Apart from difficulties of valuing In-Kind transfers, they also tend to entail substantial administrative costs compared to cash transfers. In-Kind transfers are however still widely used, and there are several reasons why.

First reason is to correct for an externality, where for different reasons the households targeted by the transfer are not consuming the optimal amount of the good, from society’s perspective. Even if they would receive cash transfers they would not consume enough of these goods, and therefore government will choose to give the transfer in the form of merit goods instead of cash, as they don't trust that people would necessarily prioritize in the same way. Maybe poor households will prefer to spend the money on food and clothes, while society want them to prioritize the human capital investment in their children. This is sometimes called commodity egalitarianism, meaning that for equality reasons some goods should be available for everyone, such as school, medical care or a roof over your head, and the state can then decide to transfer these commodities In-Kind. It may be that families want to invest in these things but they focus on the short-term priorities instead of long-term investments. They may not see the long-term gains and therefore make the “wrong” choices. For paternalistic reasons if peoples utility curves are not representing their best interests then the restrictive budget line in the second half of Figure 1 actually pushes the consumer in the “right” direction as it forces him/her to consume more food then he/she would choose. (Rosen and Gayer, 2010)

Second, In-Kind transfers are said to help curb welfare fraud, as the good is not as valuable for a person that don’t need it, while cash always attracts ineligible people as
well. The administrative hassle also discourages people that are not in need from applying. (Rosen and Gayer, 2010)

And thirdly the transfer of particular goods instead of cash is a powerful political tool as it moves strong interest groups, producers of particular goods as well as public opinion (Rosen and Gayer, 2010).

The CCT programs address many of the same issues that In-Kind transfers do, even though they are cash transfers. The fact that it is a cash transfer guarantees that the transfer will give rise to the full value increase for the household. At the same time the families must comply with requirements that usually reflect things that the government consider necessary for all children and that they think families might not prioritize unless demanded, to receive the full amount. This characteristic of the CCT then substitutes the paternalistic and egalitarian reason for using In-Kind transfers. Even if there are free public institutions for child healthcare and schooling the targeted households may not use them “enough” for myopic reasons as mentioned above. They might focus more on the short-term and making it through the day. Children might be more useful at home taking care of younger siblings or making money for the family than in school. Lack of health among certain children will also affect the healthy ones and so it’s in everyone’s interest that all children get their vaccines. The conditionality in these programs then forces the parents to make the “right” choices, in a more cohesive way than In-Kind transfers.

The fact that the program also is aimed at specific income groups or requires specific characteristics of the households implies means-testing that makes it difficult to receive the transfer if not eligible.

The political reasons for using the CCT are also strong. The fact that the cash transfer requires compliance with certain behavior means that families don't just receive cash without reciprocity, which plays a major role for the acceptance among some groups within societies, particularly in Latin America. Taxpayers are more likely to support transfer programs for the poor if they require efforts to overcome poverty in the long run, and particularly when it comes to the welfare of children (Fiszbein and Shady, 2009). Most groups in society think that children need to go to school and get immunizations etc. as discussed in the section about equality of opportunity, and it is
hard to blame the children for being poor. The fact that the CCT’s are focused on building the human capital of children adds to their political acceptability and makes them a poverty reduction program rather than a social assistance program (Fiszbein and Shady, 2009). Some voices claim that the programs are used to buy votes and political power among the targeted groups. There is no doubt that CCT’s play a political role as well as a redistributive one.

The CCT’s are tightly related to the equality of opportunity theory above, in the sense that it not only redistributes income towards the poor, but it requires that these poor households in return provide the opportunities that every child is entitled to for their children. The programs are also often called co-responsibility cash transfer programs, reflecting the own responsibility of the recipient to create the opportunities for their children, as part of a social contract between state and beneficiaries (Fiszbein and Shady, 2009). This reflects Roemer’s view on opportunities and advantages and self-responsibility. Which opportunities these are depend on the context where the program is implemented. They all look a little different depending on the most urgent needs or priorities in that location.
3. **Argentina - Universal Allocation per Child**

The main CCT program in Argentina was implemented in the end of 2009, and it’s called “Universal Allocation per Child” (AUH). It extends the benefit that was already available for the formally employed as a contributory family allowance (AFC) or a tax deduction per child (ACF), to the unemployed without social security, the ones employed in the informal sector and those working in domestic services that earns less than the minimum wage (Bertranou and Maurizio, 2011).

The social protection in Argentina has a long tradition of being tightly connected to the households’ connections to the formal labor market. Through contributions to the labor market the households get access to family transfer programs, retirement schemes, unemployment benefits and so on. In the 90’s many reforms where made including large privatizations and cuts in government spending, which turned the focus to more targeted programs. (Bustos and Villafañe, 2011)

After the deep economic crisis in 2001, a few different programs where implemented targeting the over 2 million people who became unemployed and programs such as the Heads of Household Program and the Families Program were the first CCT’s implemented in Argentina. The scope of these programs was narrower than that of the AUH, the cash transfers where smaller and they had a clear connection to unemployment and a focus on building human capital to get the beneficiaries back into the formal labor market. (ANSES, 2013)

When AUH was implemented, the idea was to replace various non-contributory programs implemented in the previous decade, such as the ones mentioned, and create a more comprehensive social protection program therefore the AUH cannot be combined with any other social benefit program. The higher amounts offered gave incentives for targeted households to switch over to the AUH program instead. Unlike most of the CCT programs created over the Latin American continent the AUH was not intended as a temporary program, but as a permanent part of the social security system (Bertranou and Maurizio, 2011).

The implementation of the AUH is the beginning of a new era in the Argentinean social protection policy with a scope and range that is unprecedented in the country. It sets a
new standard recognizing a social right for all children to be included and enjoy a minimum standard of life and economic security. It’s a policy that ratifies the universality of these social rights toward those who before where left out of the child allowance programs even being part of the labor market. It’s a way for the government to in their continuous work on combating informality recognize the needs of those who given the current labor market in Argentina haven’t been able to leave the informal sector. (ANSES, 2012)

The AUH is one policy in a context of a wider effort from the government to achieve a fairer society and equality of opportunities for children. In 2006 secondary education became mandatory for everyone, and more investments have been made in public education. The program “Connecting Equality” was implemented in April 2010, giving every child in public secondary schools access to a personal computer and knowledge of digital communication. (ANSES, 2013)

The expenditure for the AUH program amounted to approximately 0.5% of GDP in 2010 and was financed through two sources; (1) general social security income from wage contributions and earmarked taxes; (2) the annual earnings from the Sustainability Guarantee Fund (FGS) of the public pensions system (Bertranou and Maurizio, 2012). In 2011 the AUH covered 15% of the Argentinean households, and 29% of the total minor population, giving transfers to 3.6 million children (Garganta and Gasparini, 2012).

The AUH gives the targeted households a cash transfer for each child under 18 years old, up to 5 children per household, provided they comply with the pre-requisites. The payments started with 180 Argentinean pesos per child and month but have been raised continuously as inflation erodes the transfer values, and currently it consists of 460 Argentinean pesos per month and child. (ANSES, 2013)

Families that are eligible will receive 80% of the cash transfer as monthly grants and the remaining 20% of the transfer will be paid at the end of the year when the behavioral requirements are completed (Agis, Cañete and Panigo, 2010). The requirements to be fulfilled are; (1) documentation of vaccinations and regular health controls, and (2) proof of registration and attendance to a public school for children

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2 180 pesos ≈ 30 USD, 460 pesos ≈ 79 USD (Bloomberg.com, Oct 16 2013)
3 Disabled children received 720 pesos without age limit (Garganta & Gasparini, 2012).
aged 5 to 18 (Garganta & Gasparini, 2012). The health requirements vary depending on
the age of the children, all children under 7 years old must be a part of the health care
plan “Plan Nacer” and fulfill the mandatory vaccination plan, while children over 6 have
to attend regular health controls (Bustos and Villafañe, 2011). The fulfillment has to be
shown through the “libreta nacional de seguridad social, salud y educación”, a notebook
to be filled out by the school and medical staffs at the centers the children attend. If at
the end of the year the requirements are not fulfilled the household will not only not
receive the 20% that’s been retained through the year, but they will no longer receive
the monthly cash transfers. (ANSES, 2013)

“Plan Nacer” is a free public health plan introduced in 2005 in parts of the country and
in 2007 for the whole country. It covers pregnant women and children under 6 years old
that are without a health care plan. This is part of the governments work to achieve the
UN millennium goals and to reduce infant mortality. (ANSES, 2013)

Public Schools are free in Argentina and there are public schools from primary
education to university level (Ministry of Education, 2013). The only direct costs for the
families to comply with the requirements for the AUH are the costs for school utensils,
such as books and uniforms, and transportation costs to and from schools and health
care centers. There are possible indirect costs in terms of lost income or other
opportunity costs in the cases where families would have chosen not to take the children
to school and health care. For some families the transportation costs are high, and
having older children in school means less income for the family as they could be out
working instead, in other cases it forces the parent to stay home with younger children
instead of working.

Gasparini & Cruces (2010) estimated that the AUH program would have a significant
reducing impact on poverty levels and income inequality. Their estimations where made
on three different scenarios: a) supposing the whole targeted population would receive
the transfer, b) supposing all informal households, including those above the minimum
income limit would receive the transfer, and c) supposing all informal households
including those with children in private schools would receive the transfer. They
calculated that in case a) around 2.5 million children would receive the transfer at a
public cost of 5.4 million pesos. In b) 3.6 million children would be covered at a cost of
6.6 million pesos, and in case c) 5 million children would be reached at a cost of 10.8
million pesos. This would result in a reduction of 3.6 % of extreme poverty, and 2.1 % of moderate poverty in case a) and the same numbers for case c) would be 4.1% and 4.2%. The Gini coefficient would be reduced from 0.455 to 0.442 in case a), to 0.441 in case b) and to 0.435 in case c).

Numbers from the ministry of labor confirmed that the program reach about 3.5 million children, a number that has been constant since the implementation of the program. However the beneficiaries are not the same from year to year, there’s a rotation in and out of the program. (Personal meeting with Villafañe, 2013)

Agis, Cañete and Panigo (2010) perform simulation study based on the EPH data from the 2nd quarter of 2009. They evaluate how the AUH would impact the target population in terms of poverty and inequality. They use more variables than the study mentioned above and the study is a bit more extensive, and they also conclude that the transfer program reaches an important share of the Argentinean population and mainly the targeted group of least income. In the study they state that the first available data from the implementation show positive results on school inscriptions, that increased with 25%, and child inscriptions to Plan Nacer, the national medical insurance, that have increased with 40% after only one year.

Bustos and Villafañe did an impact evaluation of the AUH program for the Ministry of Labor in 2011. Unlike several previous studies, as exemplified above, this study didn’t do simulations of possible impacts, but instead used new available data in the EPH surveys that made it possible to identify the actual AUH beneficiaries after the implementation. This methodology was one of the main aims and contributions of the study. The study evaluates the impact of the transfer program on the mobility of recipients in the income structure and labor market by constructing data panels from before and after the implementation. They also provide a characterization of the recipients, and eligible but not recipients, showing for example that the typical recipients have lower level of education than the rest of the population4.

Results on the income distribution, labor market and participation rates show that the AUH recipients had a larger decline than the eligible without transfer in the lowest

4 Only 30% of the AUH recipients completed secondary education, while 60% of the whole population did. (Bustos and Villafañe, 2011)
quintiles of income 36% compared to 22%. They also have a higher mean family income per capita. The groups are distributed in a similar way however, concentrated in the lower parts of the income distribution. The study indicates that the AUH program does not give recipients disincentives from the participation on the labor market, even a slight increase can be seen compared to the eligible without transfer.

The study also shows an improvement on overall school attendance from 2009 to 2010 for all age groups, especially for 17 year olds from 81,12% to 84,29%. Looking at the AUH group (13-17 years old), only 88% attend school in 2010 while for the eligible in 2009 attendance was around 91% and for not eligible 94%. They see a larger decrease for the same group compared to the others on the labor market however.
4. **Methodology**

4.1 **Quantitative Study – Human Opportunity Index (HOI)**

To measure the changes in inequality of opportunities for children in Argentina since the implementation of the AUH I created a Human Opportunity Index (HOI) for the years 2009 to 2012 based on data from the 3rd quarter of each year from the household survey “Encuesta Permanente de Hogares” (EPH) using the methodology developed by the World Bank in 2009 (Paes de Barros et al., 2009).

I divided my samples for each year into two main groups; Eligible and Not Eligible using the methodology of Bustos and Villafañe (2011). I also divided the Eligible sample following their example into two separate groups for the years after the implementation of the AUH to try to determine if there was a difference for the children who actually received the transfer compared to those who were eligible but did not receive it. This could however not be compared to the same groups before the implementation as there’s no way for me to follow the same individuals over 4 years.

For each year and each group I created a separate HOI measuring the access to six different opportunities; (1) completing sixth grade on time, (2) school attendance age 6-12, (3) school attendance age 13-17, (4) access to water, (5) access to sanitation, (6) access to the public gas network.

4.1.1 **Issues with the data and sample groups**

The main problem with my study was the fact that the AUH program doesn’t have a control group mechanism like many other CCT programs in the region. The program is implemented all over the country and for all households that meet the criteria, which makes it difficult to find a non-treatment group for a difference-in-differences analysis. Another problem in my study is that I don’t have access to longitudinal data as the EPH rotates\(^5\) so that it is only possible to follow the same household over a maximum period of a year and a half, not over several years the way Ham (2010) did in his study of CCT’s

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\(^5\) The EPH changed it’s format in 2003 and from that moment started using the sample rotation format 2-2-2 where the same individuals enter the sample for 2 quarters, rest for 2 and comes back into the sample for 2. This format was chosen since it gives less cases of “missing” responses, as the individuals don’t get tired of answering the survey. It also gives higher accuracy in the answers. It gives higher precision when aggregating samples from different time periods at the cost of comparability between time periods. (INDEC, 2003)
in Mexico, Honduras and Nicaragua. In the EPH questionnaires there’s no specific question to identify the recipients of the AUH program, which complicates it even more. I decided to use the same methodology as Bustos and Villafañe (2011) however, using the EPH survey data combining the eligibility criteria before the implementation with groups of “actual AUH recipients” and “Eligible but not recipients” after the implementation derived from other questions in the surveys. I explain this process in detail in the next section.

If the program is implemented for everyone that meet the criteria, then who are the eligible individuals that don’t receive AUH though? According to the data of Bustos and Villafañe (2011) 8.1% of all households receive the AUH transfer while 7.6% of all households are eligible but do not receive the transfer. According to the study 30% of those children that are eligible without AUH live in households that are receiving other transfers and therefore are in fact ineligible. Another part of the group can be explained by the changes in eligibility as people move back and forth from the formal market and therefore report as eligible some periods and not eligible in other periods. They also make reference to a similar study by Calvi, Cimilo and Chitarroni (2011 cited in Bustos and Villafañe 2011 pp.182-183) that estimates that 16% of the children are not receiving the AUH transfer. According to them 20% of those children live in households receiving other transfers, out of the other 80%, 20% are attending private schools and therefore are ineligible. Another 14% of those 80 are children not living with their parents, making it difficult to know if the parents are eligible or not. They also reckon that a substantial number are lacking the proper documentation, in form of ID, or situations where separation or divorce makes it difficult to complete the documentation required.

4.1.2 Calculating the HOI
I use data from the EPH surveys using the 3rd quarter each year from 2009 to 2012. I merged the samples from the household and individual surveys to have all relevant information in one dataset. Then I define new variables as needed to be able to create my sample groups, circumstance groups and opportunity index. The last sample from before the implementation of the AUH (3rd quarter of 2009) is divided into those that are eligible for AUH and those that are not. In the following years (3rd quarter of 2010-2012) I divide my samples into three groups, as the sample that is eligible is divided into those that actually receive the AUH transfer and those who are eligible but don’t. That
way we can see if there is a difference in the change in opportunity between those who receive the transfer and those who are eligible but don’t receive it, and also compare the “Eligible” to the “Not Eligible” before and after the implementation of the AUH.

To identify the eligible individuals I had to identify the workers in the informal and formal sector respectively. To do this I used the methodology from Jimenez (2011) and her definitions of informality that are also widely used by other authors and the ILO (International Labor Organization). The details are explained in Appendix 2 – Methodological Guide. To identify which households where receiving the AUH transfer and who where not I used the same methodology as Bustos & Villafañe (2011), based on the question in the survey asking whether the subject is receiving any subsidy or transfer from government or church, and the follow up question about how much they receive in this case. Supposing that all amounts declared in this question are government transfers and then identifying the amounts that correspond to the transfer amounts from the AUH they identify the individuals who receive the subsidy. Using the same technique I created the variable AUH in my data samples and then separated the group Eligible with AUH from the rest of the Eligible in the years 2010-2012, and thus creating three sample groups for these years; “AUH”, “No AUH” and “Not Eligible”. I added variables so that the children would have all the relevant characteristics of the households.

Now that the sample groups were defined I could create my HOI for children, starting by defining the opportunities to be measured and the circumstances to use for my dissimilarity index (D-index). Since there’s no data available in the household surveys about health indicators, I can only measure opportunities related to education and housing conditions. I decided to use practically the same opportunities as used in the work by Barros et al. (2009), with an additional opportunity for education, and exchanging the electricity variable for connection to the public gas network inside the house. The 6 opportunities I used were; probability of ending 6th grade on time, gross school attendance ages 6-12, gross school attendance ages 13-17, access to water, access to sanitation and access to the public gas network inside the house for all children ages 0-17. How they are defined in terms of data is explained in more detail in Appendix 2.

The reason for the change of variable from electricity to gas is that most households in Argentina have access to electricity (although the consistency and quality of the service
varies) even if they live in slum-areas with self-constructed houses. The fact that they are connected to the city's public gas network says more about the living standard of the household, and according to Adaszko and Salvia (2010) it is one of the clearest indicators of the inequality of the distribution of resources in Argentina. The difference in the modality of access to gas actually has a regressive distributional effect, as the gas provided by the public network has been subsidized for years, unlike the gas in containers, while the lower socioeconomic groups in society mostly use the latter (Adaszko and Salvia, 2010). According to the same study only 3.5% of the socioeconomic middle tier where lacking access to the public gas network in 2009, while the same number for households in the lower socioeconomic tier was 22.9%. For households in the slum-areas or precarious settlements 72.8 percent where lacking this access in 2009. A study of the living situation in the precarious settlements claims that this number was 83.4% in 2011 (Falcón and Raffo, 2011).

I divided the school attendance opportunity into two age groups, trying to capture effects separately on primary and secondary education are mandatory in Argentina and there are free public schools available for both levels. I use the age 17 as my limit as the AUH targets children under 18, and school attendance is a requirement for receiving the transfer for all children between 6 and 17.

The children are divided into circumstance groups to create the D-index, and these are the circumstances I used in my calculations; i) gender, ii) number of years of schooling of family head, iii) per capita family income, iv) single or 2-parent household, v) number of siblings ages 0-17. To see how I defined the variables for these characteristics and opportunities based on the household survey data, see Appendix 2.

Before calculating my dissimilarity indexes (D-index) I excluded all adults (18 years and older) from my samples and kept only children in my sample groups. The D-index was calculated for each sample by summing the access probability gaps, which are the absolute differences between group-specific access rates (p_i) and the overall average access rate (\bar{p}), and then weighting them according to the population shares of each circumstance group. \beta_i represents the proportion of children in each circumstance group and the D-index is calculated as:

\[ D = \frac{1}{2p} \sum_{i=1}^{m} \beta_i |p_i - \bar{p}| \]  

(Barros, Molina and Saavedra, 2008 p. 22)
To make these calculations I used STATA and logistic regressions to calculate the probabilities for each group according to the method explained in Barros, Molina and Saavedra (2008). My procedures are explained in detail in Appendix 2. The value on the D-index will be 0 when there’s perfect equality of opportunity and 1 (100 %) when there’s total inequality, which can be interpreted as the number of opportunities that need to be reassigned from the better-off groups to worse-off groups in order to achieve equal opportunity for all (Paes de Barros et al., 2009).

The overall measure of opportunity (O) combines the overall average access rate of opportunities with the D-index in one single indicator, like this:

\[ O = \frac{r}{N} = \frac{H}{N}(1 - D) = \bar{p}(1 - D) \]

(Paes de Barros et al., 2009, p.72)

where \( O \leq \bar{p} \leq 1 \) and \( O \leq D \leq 1 \). \( \bar{p} \) is the average access rate, \( H \) is the total number of opportunities available, \( N \) is the number of opportunities needed to ensure access for all, \( r \) is available opportunities allocated according to the principle of equal opportunity, and \( D \) is inequality of opportunities. This gives an Opportunity Index with values from 0 to 100 (in percentage terms), where 100, means that there is full coverage of opportunities and they are equally distributed. (Paes de Barros et al., 2009)

Once the opportunity (O) was calculated for my six opportunities the average of these indicators where summed up in a single Human Opportunity Index (HOI) for each of my sample-groups as well as for my whole sample of children for each year. The results of these calculations are shown in Appendix 1 – Tables. Table 3 in the Appendix show the difference between 2009 and the years after the implementation of AUH for the Eligible and Not Eligible samples, and then there’s a column showing the difference in differences between these two groups to see if the Eligible for the program have had a better development in opportunities than the Not Eligible. I could not do a regression for this as the HOI is an aggregated indicator and different circumstances affecting the individuals are already considered in the index. Table 4.1 and 4.2 show the differences between the AUH sample and the Eligible but No AUH to see if there’s a difference in how these groups affect the total sample of Eligible children. Can we see a larger increase in opportunities for the AUH recipients than for the rest of the Eligible? In Table
4.2 differences are measured for each sample in relation to the total Eligible sample in 2009 and then the differences between the groups differences are calculated.

4.2 Qualitative Study in Buenos Aires
For the qualitative part of my study I spent 2 months in Buenos Aires, Argentina gathering information about the AUH program, interviewing recipients of the AUH transfer as well as meeting key persons working for the Ministry of Labor, the UN ECLAC office in Buenos Aires, the National Social Security Administration (ANSES), and the political youth organization “La Cámpora”. I also participated in informal meetings and activities as an active observer-as participant.

I chose to do semi-structured interviews with the AUH recipients as the open framework allowed me to collect the information that I needed with some flexibility and room for the interviewees to highlight what they felt was more important. At the same time there was a clear focus in the interviews and specific topics related to the AUH program where addressed following an interview guide prepared before hand to ensure the same structure for all my interviewees.

The questions were organized into different themes; (i) characteristics of the recipient household and living situation, (ii) use of the cash transfer for the family, (iii) the conditionality of the program, and (iv) implementation/administration of the program.

Speaking the language definitely helped me getting the interviewees trust, even though that was sometimes very difficult, and nuances and intentions were not lost as can be the case when using an interpreter.

I took notes at all my interviews. Unfortunately I was only able to record one of my interviews due to the settings and circumstances. All interviews where transcribed to my computer shortly after the interview.

4.2.1 Issues with data collection and implementation of interviews
My intention was to randomly select 10 or 15 AUH recipients from the ANSES register of program participants to have a representative sample of interviewees. This was however impossible to achieve. After weeks of emails, phone-calls and visits to different offices I realized that they wouldn’t help me to get my interviewees. In this process I also contacted several academics that had made previous studies to see how they had executed their work without any success. I was in contact with school personnel, a
doctor and also with the political youth organization “La Cámpora” who work actively to help the population in precarious settlements in accessing public administration and services. I also contacted several NGOs working in precarious settlements but none of them had the possibility to help me. From talking to all these people in different capacities I understood that there’s a general mistrust in society, and a fear of loosing the transfer if saying the wrong things to the wrong people. Some statements made during the actual interviews also confirmed this tendency to me, even though I introduced myself to the interviewees as a student from Sweden examining the AUH program as a policy for equalizing opportunities for children. I explained the context of the study so that they would understand that I was working independently without connections to the government or any political party. I had to keep this mistrust in mind when interviewing and analyzing the answers, as it may have affected some answers and the willingness to speak openly and honestly about the program. I also had to be careful not to lead the individuals to answer in a certain way and sometimes I had to reformulate questions or return to certain questions later during the interview to make sure I got answers reflecting their own opinions.

In the end I managed to interview 8 recipients approached through different sources and areas. It may not be a representable sample but they do exemplify some of the typical recipients and some of the typical implementation issues. One of my interviewees was a house-made approached through “La Cámpora”, two were single young mothers approached through their educational establishment, the rest of my interviewees where approached directly in the neighborhood super-market of a precarious settlement on a Sunday afternoon, with support from the cashier.

The first interview was arranged in advance and I met the interviewee at a café and recorded the interview as well as took notes.

At the super-market in the slum-area ”Villa 21-24” I managed to get five women to participate in my study. I spent 5-6 hours in the area and asked between 40-50 people to participate. Some of the individuals asked couldn’t participate, as they did not receive the AUH transfer. The interviews where performed standing in the street with no possibility to record.
The two young mothers agreed to meet me at a café close to their school where we could talk calmly without disturbances.

In my quest for interviewees I had informal talks with ANSES staff and workers for “La Cámpora”. I also spent a day observing la Cámporas work and the work of “Integradores” or “Integrators”, an integration program of ANSES to reach the vulnerable population in need of social assistance. I had a meeting with the UN Economic Commission for Latin America in Buenos Aires and they put me in contact with researchers at the ministry of labor who played an important role in shaping the AUH program and also made evaluations after the implementation, including one of the studies that I used for my methodology.
5. Empirical Results

5.1 Results of Quantitative Analysis
Table 1 show that there has been an increase in all opportunities separately and in the total Human Opportunity Index for all children in the population in the time period studied, with the exception of water that had a slight decline in 2010 but bounced back to increase in 2011 and 2012. The increase could be due to an increase in total opportunities, an increase in equality or both. We can see that the increase is larger for every year with a notably larger increase between 2011 and 2012. The major question is if it’s a time trend in general or if the increase could be related to the AUH program.

Table 1 Human Opportunity Index (HOI) All Children

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 6 on time</td>
<td>31.37</td>
<td>32.42</td>
<td>34.03</td>
<td>36.08</td>
</tr>
<tr>
<td>Attendance 6-12</td>
<td>98.93</td>
<td>99.06</td>
<td>99.31</td>
<td>99.34</td>
</tr>
<tr>
<td>Attendance 13-17</td>
<td>88.67</td>
<td>89.49</td>
<td>90.16</td>
<td>90.84</td>
</tr>
<tr>
<td>Water</td>
<td>86.53</td>
<td>85.95</td>
<td>87.36</td>
<td>90.55</td>
</tr>
<tr>
<td>Sanitation</td>
<td>74.19</td>
<td>75.43</td>
<td>76.78</td>
<td>80.16</td>
</tr>
<tr>
<td>Gas</td>
<td>41.45</td>
<td>42.13</td>
<td>43.35</td>
<td>44.80</td>
</tr>
<tr>
<td>All Opportunities</td>
<td>70.19</td>
<td>70.75</td>
<td>71.83</td>
<td>73.63</td>
</tr>
</tbody>
</table>

School attendance for children age 6-12 had a remarkable 99% on the index already in 2009, and therefore the increase can not be large, but even this opportunity has a slight increase every year. The low scores on finishing grade 6 on time, is what brings the index down the most, even more than the access to public gas network that is an established marker of inequality. Is this a sign of unequal quality in education?

Looking at Table 2.2 in Appendix 1 we can see that in 2009 the group Not Eligible had higher scores in all opportunities compared to the Eligible. This shows that the program targets the group of children with lower opportunities in all categories.

Table 2 shows the resulting difference in differences between the Eligible and Not Eligible with 2009 as the baseline. The full table can be seen in Appendix 1.
Table 2 Difference in differences Eligible and Not Eligible

<table>
<thead>
<tr>
<th>Year</th>
<th>2009-2010</th>
<th>2009-2011</th>
<th>2009-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunities</td>
<td>D-i-D</td>
<td>D-i-D</td>
<td>D-i-D</td>
</tr>
<tr>
<td>Grade 6 on time</td>
<td>1.21</td>
<td>2.35</td>
<td>0.73</td>
</tr>
<tr>
<td>Attendance 6-12</td>
<td>-0.03</td>
<td>-0.1</td>
<td>0.02</td>
</tr>
<tr>
<td>Attendance 13-17</td>
<td>-0.01</td>
<td>0.85</td>
<td>0.53</td>
</tr>
<tr>
<td>Water</td>
<td>-0.53</td>
<td>0.45</td>
<td>0.11</td>
</tr>
<tr>
<td>Sanitation</td>
<td>0.49</td>
<td>0.88</td>
<td>0.73</td>
</tr>
<tr>
<td>Gas</td>
<td>-0.2</td>
<td>0.67</td>
<td>0.42</td>
</tr>
<tr>
<td>Total HOI</td>
<td>+0.15</td>
<td>+0.85</td>
<td>+0.42</td>
</tr>
</tbody>
</table>

If we look at the total HOI, the group Eligible has had a larger increase in opportunities than the Not Eligible. In 2010 the advantage of 0.15 units over the Not Eligible was entirely due to the increases in the opportunities grade six on time and sanitation. In all the others, the not Eligible had a slightly bigger increase.

In 2011 we can see a more substantial advantage for the eligible in all opportunities except for primary education, which was already pretty high. A remarkable difference in differences can be seen on finishing 6th grade on time. In 2012 the Eligible have had a larger increase than the not in all opportunities. Overall we can see that the Eligible have had a larger increase in opportunities than the Not Eligible during the time period and the distance in opportunities between the two sample groups is smaller in 2012 than in 2009. The question remains however if this is due to the AUH or just a general increase in opportunities for the target population due to other events.

If we compare the groups with AUH and without AUH during the years 2010-2012 we see that the group without AUH has higher total HOI every year (see Table 4.1 in Appendix 1). This suggests that the group without AUH is better off when it comes to opportunities even without the transfer.

In Table 4.2 we see the differences in difference between AUH and No AUH in relation to the total population that was Eligible in 2009 a summary of this can be seen below in Table 3. Total opportunities have increased more for the group that does not receive the transfer every year. Part of this could be because they had higher opportunities than the AUH recipients from the start as we compare the changes in relation to the mean of the
two groups in 2009. Looking at the first column we see that the AUH sample had an increase in relation to the Eligible mean opportunities 2009 when it comes to school opportunities and a decrease in housing opportunities. The D-i-d shows that the AUH had a larger increase than the No AUH in the attendance variables in 2010. In 2011 the No AUH had had larger increases in all opportunities, while in 2012 the AUH regained the lead in attendance for 13-17 year olds and completing 6th grade on time. Looking at the absolute levels of opportunity in table 2.2 we see that the AUH has lower opportunity index in all categories compared to the other groups, except for attendance age 13-17. Here the AUH sample has even higher opportunities than the Not Eligible sample.

Table 3 Difference in differences AUH and No AUH in relation to Eligible in 2009.

<table>
<thead>
<tr>
<th>Year</th>
<th>2009-2010</th>
<th>2009-2011</th>
<th>2009-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunities</td>
<td>D-i-D</td>
<td>D-i-D</td>
<td>D-i-D</td>
</tr>
<tr>
<td>Grade 6 on time</td>
<td>-0.8</td>
<td>-0.09</td>
<td>0.46</td>
</tr>
<tr>
<td>Attendance 6-12</td>
<td>0.11</td>
<td>-0.25</td>
<td>-0.36</td>
</tr>
<tr>
<td>Attendance 13-17</td>
<td>0.48</td>
<td>-1.53</td>
<td>0.51</td>
</tr>
<tr>
<td>Water</td>
<td>-3.32</td>
<td>-3.6</td>
<td>-2.42</td>
</tr>
<tr>
<td>Sanitation</td>
<td>-3.59</td>
<td>-3.86</td>
<td>-2.8</td>
</tr>
<tr>
<td>Gas</td>
<td>-0.93</td>
<td>-4.3</td>
<td>-5.12</td>
</tr>
<tr>
<td>Total HOI</td>
<td>-1.79</td>
<td>-2.27</td>
<td>-2.02</td>
</tr>
</tbody>
</table>

Finally if we look at the sizes of the sample groups we can see that the Eligible group has been reduced and the not eligible has increased during the three years. This shift comes entirely from the AUH group, since the Eligible without AUH increased in 2011 and kept the same size in 2012.

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Obs</td>
<td>15478</td>
<td>15061</td>
<td>14735</td>
<td>13787</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>69 % (10736)</td>
<td>73% (11025)</td>
<td>74% (10863)</td>
<td>76% (10515)</td>
</tr>
<tr>
<td>Eligible AUH</td>
<td>31 % (4742)</td>
<td>11% (1637)</td>
<td>8% (1153)</td>
<td>6% (809)</td>
</tr>
<tr>
<td>Eligible No AUH</td>
<td>16% (2399)</td>
<td>18% (2719)</td>
<td>18% (2463)</td>
<td></td>
</tr>
</tbody>
</table>
5.2 Results from Interviews and Informal Meetings

5.2.1 AUH Recipients

I organized my answers from the interviews into the four themes mentioned in the methodology section, and my findings are summarized below:

(i) Characteristics of the households

The individuals interviewed were from different areas in Buenos Aires. One woman was a house-made working in the informal market paid by the hour, a very typical situation for the AUH recipients according to the Bustos and Villafañe (2011) study. She had emigrated from Paraguay with her youngest daughter that was 14 years old. They lived in an apartment in a lower socio-economic neighborhood with her mother. They had access to gas, sanitation and water, and the woman had completed secondary education but always worked in the informal market.

Some of the interviewees in “Villa 21-24” where young and others were older, some were Argentinean others where emigrated from Paraguay. They all lived in two-parent households, and all had access to water, sanitation and gas only from bottle in their homes, so no access to public gas network. All parents had completed primary education, a few had secondary as well and some had incomplete secondary education. The men worked in the informal sector as chefs, truck-drivers, metalworkers and such. A couple of the women were pregnant or home with small children and had never worked in the formal sector, a couple of others were unemployed from previous work in the formal sector cleaning and farming. 3 of the women had 2 children, one had 5 and one had 1. Some only got the transfer for some of the children, as all of them didn’t attend school due to sickness, or they had different fathers so only one child was eligible. Some of them had previously had other social transfers but for different reasons not anymore. One family had gotten cut from the previous program because a social worker claimed their home didn’t exist.

The two young mothers from were enrolled in a high school program for young mothers that didn’t complete secondary in time. They were both part of a different social program’s now that included them having to finish secondary education and participate in other preparatory courses to help them into the labor market. Both of them had previously been receiving the AUH for short periods of time.
One of them lives in “Bajo Flores” with a son of 2,5 and her mother. They live on the border of the slum-area with access to water, sanitation and gas from the public network. For a period of time she had a job in the formal economy as a secretary and she hoped to be able to come back to a similar job after completing secondary education. She had received the AUH for two months but then switched to the program for unemployed youth that helped her better.

The other girl was from “Pompeya” and lived on her own with a son of 2 years. The dad had received the AUH for a month but spent all the money on him self. He had then disappeared and was still receiving the transfer, making it impossible for Anna to be a part of the AUH program.

(ii) Use of the cash transfer
All of the interviewees say they spend the money on the child. Mostly on school supplies and clothes or shoes. For small children it was spent on diapers and clothes. Some of the recipients in the “Villa 21-24” say they spend it on school-transportation, as it is unsafe for the child to go on the regular bus. One woman says she uses it to by milk for her infant and she wouldn’t know what she would do without the transfer. She was working before as a house-made but now she was home with the baby. Most of my interviewees claimed the transfer didn’t really make a difference. It’s not enough money for the children. You still have to work to make ends meet. The woman that lived in a better area said it made a big difference as now she could by new schoolbooks instead of used ones for her child. It increased the learning process a lot, as in the used books all the answers were already marked. She could also spend some on orthodontic treatment for her child and by some snacks and cereals that the child liked and couldn’t be afford before.

(iii) Conditionality of the program and Opportunities
All of my interviewees thought that the conditions placed by the AUH program were good and some said it’s the least they could ask for. They all agreed that it put extra pressure on the parents to make the children go to school and medical check ups. All my interviewees say that they already complied with the conditions before entering the program, so in their case it didn’t really make a difference, but they said they knew others where this was not the case.
A few of the women agreed that education is key to getting a good job in the future, and that it is important to be responsible and timely and to work hard. Some said that secondary education is necessary to enter the formal market and more controls should be implemented to make sure everyone completed secondary school before being hired. That way it would be the same for everyone and more fair.

All of the interviewees claimed that the most important thing to succeed in life is work and education. They thought more could be done from the government in terms of creating jobs for everyone and making sure everyone had a job and a home. That would make opportunities more equal.

One woman said there should be more control from the government so that everyone was working on the books or off the books, then the opportunities would be more fair, instead of having a formal and informal labor market.

(iv) Implementation/administration of the program

The information about the program is considered good and correct. Some heard about it from “Integrators” who came to their homes and asked if they were receiving the transfer and then helped them to fill out all the paperwork. Others saw about it on TV and others heard it by word of mouth. Most thought it was smooth and easy to do the paper work, others found it a bit complicated and lost a few months of receiving the transfer due to missing documentation. The complicated cases were all single-parent households and it could be related to having to proof the identity of the father and him not being part of the formal labor market.

All said that the quality and accessibility of services was good. They all said nothing had changed since the implementation of the program however. It was the same as always. The individuals that came from Paraguay came to Argentina in part because of the free education and health care and the quality of service.

One mother said, “the only bad thing is that you loose a day of work and school to go to the doctor, as the waiting time is very long. They should have more doctors to make it more efficient.”
5.2.2 ANSES Integrators

My day with ANSES “Integrators” in the “Bajo Flores” area gave me a good insight to how they interact with the target population and some of the main problems in the implementation of the AUH program.

The “Integrators” project is a governmental project that’s been in place for some time as a part of the governments’ policies for social integration of vulnerable groups in society into the social security system. For six months in 2013 another program “Programa Ahi” was put in place gathering representatives from different ministries and administrative institutions in one place, and the “Integrators” where also included in this program. The inter-ministerial group rotates in different “vulnerable population areas” different days of the week to bring the social services and information to the target population instead of them having to find the separate institutions. After the six months the “Integrators” from ANSES will continue their presence as before however, as they are a separate program that’s more long-term. A part from giving information to the individuals in these areas and answering questions, the Integrators also help them make the applications right there and then and validate or complete missing documentation like identity cards or such. They also walk around and knock on doors in the slum-areas to reach the population that doesn’t dare to approach the authorities. They make them fill out a survey and point them towards social benefit programs that suit them. This work is an important step to register large parts of the population that have been undocumented before. They now get ID’s and access to the social security system and the surveys are the base for a new statistical database that ANSES is constructing for future research and evaluation.

Talking to the staff clarified some questions about the eligibility criteria. For example the original limitation that children had to be enrolled in public schools to receive the AUH have been modified so that private schools are evaluated in each particular case. Private schools with public funding or grants that have many children from the target population qualify for the transfer as well.

Some of the biggest issues in the practical implementation of the AUH are:

- A conflict between receiving the AUH and a social transfer implemented by the city of Buenos Aires (the governments’ opposition is in charge of the city).
  There’s a delay when individuals want to transfer from one program to the other
that takes three months and leave the recipients without any benefits for that period in-between.

- There's a problem in some of the municipalities of the capital, where functionaries in health and educational institutions don’t want to fill out the necessary AUH notebooks, since they are against the government. This is a big problem for the recipients who need the signatures to get the full transfer. The functionaries claim that the AUH program has increased the administrative workload without giving extra compensation.

- Many single mothers have problem with the fathers working in the formal economy. Some fathers keep receiving the transfers without paying the mother or children, and the mother can’t prove that they are not in contact. Others cannot prove the whereabouts of the father at all and therefore can’t show that he is not part of the formal economy, and so they can’t enter the program.

5.2.3 Ministry of Labor

Soledad Villafañe from the ministry of labor gave me valuable reports and previous research on the AUH program. This led me to the methodology used for the comparison-groups in my quantitative study. She also gave me valuable background information on the social security system in Argentina, and on the considerations made when designing the AUH transfer program. The implementation of the AUH was a big step towards using transfers instead of work to lift people out of poverty.

In terms of incentives the AUH program was designed so that it would coincide with the contributory systems already in place for the formal workers. That way there are no incentives for the recipients to stay in the informal economy, as they would receive the same amounts when transferring to a formal job position and at the same time get other benefits, such as retirement discounts.

The main challenges in the implementation according to Soledad are the misinformation that's widely spread by the media and opposition, and lack of information or reach to the target groups. 10% of the children that are eligible to receive the transfer don’t get it due to lack of information, mostly in Buenos Aires. The main information failures are related to immigrants not knowing they are eligible after three years of residency, problems with separated parents and the fact that the transfer is received per household, problems with documentation and lack of identity cards.
On the question of conditionality for the AUH recipients, Soledad mentioned a new study in process by the ministry of labor showing clear differences on the school attendance and number of doctor visits between the AUH recipients and other groups. It shows that 86% of the AUH recipients went to the doctor last year while the number is 80% for the workers in the formal economy, 59% for other program recipients and 72% for the not covered but eligible for AUH. For school attendance age 14 to 17 the AUH recipients have 92%, workers in the formal economy 94%, other program recipients 72% and not covered but eligible for AUH 68%.

Since the implementation of the AUH more than nine universities opened in the popular sectors, and there are now more than 2000 public schools in the country. The national vaccination plan for children has been expanded from 8 mandatory vaccinations in 2003 to 16 in 2012. “Plan Nacer” the mandatory health program for AUH recipients has increased it's members from 197 000 in 2003 to 1,8 million in 2012 according to Villafañe.
6. Analysis

The results of the quantitative analysis show an overall increase in Human Opportunities for children since the implementation of the AUH program. The results also show a larger increase for the target population in society than for the group that is not eligible for the transfer over the time period studied. It is difficult however to draw any conclusions about whether this can be attributed to the AUH transfer. The “No AUH” sample has had a larger increase in the total opportunity index every year compared to the treatment group and in most opportunities separately as well. It is hard to determine however how much of this difference is due to higher opportunities for the non-treatment group already from the start, meaning that the two groups might not be comparable after all. How can this difference between the eligible that receive the transfer and the ones who don’t be explained?

Are my sample groups representative? According to Bustos and Villafañe (2011) the two groups are about the same size with the AUH group slightly larger, in my samples however the groups No AUH are larger than the AUH recipient groups. In 2010 the AUH group is 10,9%, and the No AUH is 15,9% of the total population of children in my sample, in 2011 AUH is 7,8 % and No AUH is 18,4%, and in 2012 the AUH is 5,8% and No AUH 17,8% of all children. A main difference between the samples in Bustos and Villafañes study and mine is the fact that they look at households receiving the transfer and compare to all households, and I look at children only. It means that every child in my AUH households appears as one observation in the AUH sample, and I only compare it to the total number of children not households. Many households in the population don’t have any children. The study cited by Bustos and Villafañe say that about 16 % of all children are not receiving the transfer and that number is however really close to my 15,9 % in 2010. The study mentioned before by Garganta and Gasparini (2012) say that 29% of the total minor population was receiving AUH in 2011, and this is quite far from my 7,8%. Bustos and Villafañe have a similar problem as they only capture 57% of the AUH households in their study compared to the official number of recipients according to ANSES. They also refer to another study where they only captured 56% of recipient households using the EPH survey. That could explain my small AUH groups as well. They explain that this could be in part due to differences between urban and rural areas and
in part due to people entering and leaving the transfer program. Another explanation that I thought of is the fact that the amount of the transfer has changed every year and maybe the families don’t report the right amount in the surveys. This could explain why I don’t capture all of the recipients with the method used and also why my samples get smaller every year.

The households going in and out of formal working situations and the ones who are not quite aware of the amount they receive are probably the ones that are a little bit better of among the AUH recipients, so this could bias the results for the group. As they are the ones excluded it could explain why my AUH group have lower mean opportunities than the eligible without AUH where all are captured.

Assuming that the differences in sample size don’t affect the results, then what else could explain the differences? Between 20-30% of the No AUH are receiving other transfers according to the studies mentioned above. As in the case of one of my interviewees, this might then be a better option for the family and may actually have a higher impact on opportunities for the household then the AUH transfer would. In the case of the young mother I interviewed the program she was in instead, gave her education in the evening with staff taking care of the child while she was in school. At the same time she had a rent subsidy and health care plan through her mom. Cases like these may raise the opportunity level for the No AUH group compared to the AUH.

Another 25% according to the studies cited are not really eligible as the children go to private schools. If the families really needed the AUH transfer they would probably move the children to a public school, so that 25% is probably also better off than the AUH recipients in general. 17,5% of the No AUH children are living with other than their parents, which is hard to determine how it would effect the results. And according to the studies mentioned, interviews with recipients, and talks to Integrators and Soledad Villafañe a substantial number of the No AUH are lacking proper documentation. This category has a large part of single households with legal problems due to separation. One could assume that these households are going through difficulties already and could reasonably be on the lower end of the opportunity distribution, but there is no documentation of that fact.

Looking at the total sizes of the sample groups I found that the Eligible group had been
reduced due to a reduction in the AUH group and that the not Eligible had increased during the three years. This could be a sign of a shift of the AUH recipients into the formal economy. The study of Bustos and Villafañe found a slight increase of the AUH group in the labor market already after one year. She said in the meeting however, that the 3.5 million beneficiaries had been more or less constant since the implementation. It is impossible to draw any conclusions from my results in this matter, but if there were an actual decrease of the AUH population and increase of the Not Eligible it would be a sign that the informality was declining.

Looking again at the results we saw a clear difference in the differences between the educational opportunities and housing opportunities for the AUH sample in 2010 compared to the Eligible in 2009. The difference was negative in all housing variables, probably because they had a lower level on these already in 2009 compared to the eligible No AUH. In the educational opportunities however the differences where positive in 2010, and in 2012 the opportunity index for attendance age 13-17 was higher for the AUH children than for all other children. This could imply an effect by the condition on keeping children in school to receive the transfer. In primary education attendance is already very high, but in secondary education the incentives from the program could be higher, since children at this age could very well be of more use at home taking care of younger siblings or working and helping out with the family income. The AUH program could’ve changed these opportunity costs and made it possible to think more long term for the AUH households. All the families that I talked to were very aware of the importance of secondary education to be able to enter the formal economy and to equalize opportunities. They may stress the importance of secondary education more than households in better circumstances. The AUH program could be a factor that made it possible to stay in school for these children.

The low level in the index overall on completing 6th grade on time is surprising and makes me question the accuracy of the variable. Maybe I would have had better results if I only looked at children aged 11-13 as there has been a change in the number if years for primary and secondary education. Even so it indicates a discrepancy in the opportunities to quality education. Attending school does not equal learning or passing grades. Availability of schools for everyone does not mean that they are all equally good.

In 2010 the difference in differences between Eligible and Not Eligible was entirely due
to the increases in this opportunity and sanitation however, and for the AUH sample the completing 6th grade on time and attendance age 13-17 where the only two opportunities where they had an advantage over the No AUH in 2012.

This could be related to the AUH transfer program and the possible improvement of conditions for the children in this sample. As explained by the interviewees with children of school age, the transfer is spent on schoolbooks, clothes and transportation. One of the women explained how much difference it made to have new books instead of used books. For some children it may make the difference of having books or not. Safe transportation and better clothes can effect the health of the child and lead to less absence due to sickness and also lead to better attention while in class. When children have less to worry about at home and don't have to be concerned about what they wear or making excuses for not having the books, they can focus more on the learning. This would lead to better results and higher probability of ending 6th grade on time. The higher probability for this category could therefore be indirect effects of the transfer, even though the AUH program does not have a requirement related to grades or passing the course. Again there's no clear trend or possibility to determine that this is the case.

Overall it is difficult to draw any conclusions about the AUH effect on opportunities. We can see an increase in general and particularly for the target population however. This could also be a result of the increased social spending over all from the government6, as the AUH is only one policy in a general investment towards more equal opportunities. The policies from the government are a combination of In-Kind or merit goods, and conditional cash transfers. They provide free public schools for all levels of education and free public health care. The AUH is a policy to give social security for the informal workers with children and to increase the equality of opportunity for those children as a universal right. The conditionalities force the parents to prioritize education and health care for the children even if they have other concerns. It does not assure that the children actually learn in school and at home or that they have equal health situations at home though.

As other studies show there is an immediate impact of the program on incomes and poverty as well as on school attendance and inscriptions to health care. Equality in

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6 The Government has increased social spending from 10,3% of GDP in 2002 to 14,2% in 2011 according to Weisbrot, Ray, Montecino and Kozameh (2011).
probabilities of opportunity may take longer to achieve. The HOI measures indicators of education and housing conditions. The educational opportunities seem to do better than the housing opportunities according to my tables, even if the tendency is not strong. Unfortunately I couldn’t measure the opportunities in health in a similar way.

The AUH program clearly addresses health and educational priorities, but there are no conditions related to housing or nutrition. As the interviews show, the parents seem to think that the AUH transfer is meant for the kids since there are conditionalities for the children and the transfers are paid per child. They don’t feel entitled to use the money for the household in general and therefore nothing much happens with the housing situation. Maybe in the long run there can be an effect as the households have more money to spare and possibly save for investments in the housing, but these effects may take much longer to be seen. The fact that the educational opportunities have larger improvements than the housing opportunities could be related to the fact that the program does not put any conditionalities on housing conditions.

If housing conditions are considered important for childrens opportunities in life, maybe the transfer programs need to be adjusted to also have a short-term effect on those opportunities. As one of the interviewees mentioned having a proper house or roof over your head could be made a merit good, just like education and health care. Living in the slum-areas and precarious settlements brings a lot of stigma and problems to the children, not only in terms of living standard, such as having access to sanitation and gas from the public network, but also when it comes to security, robbery, delinquency and drugs that prevail in these areas. In many “villas” the police and other officials and public services such as garbage trucks do not enter, so the families live close to and on landfills. All these conditions affect the health and learning capabilities of the children. The living situation and environment could also have a big impact in the childrens aspirations and thereby opportunities.

The requirements of the CCT could be made more quality oriented by requiring certain grades for instance as mentioned above. It would seem unfair however if these requirements didn’t apply equally to children of workers in the formal economy. Other things that could effect the equality of opportunities would be mandatory study groups for the recipients, as many have parents with lower level of education and maybe can’t get the support that they need for homework from home. If housing was provided to all
by the government just like school and health care then they could demand that the recipients lived in a proper house to receive the transfer. At this point, with millions of people living in precarious settlements, that would be just as bad as requiring the parents to work in the formal economy though.

The government seems to be aware of the problems with informality both on the labor market and on the housing arena. They are also addressing these issues according to their websites and the talk I had with Villafañe at the ministry of labor. The education and health has been a priority for a longer period of time and therefore they have reached further in equalizing opportunities in these areas. It is difficult to put conditionalities on a transfer regarding things that cannot be provided for. The CCT programs seem to be more suitable in combination with public provision of the required services. When that combination is in place the CCTs could be seen as a suitable tool to provide extra incentives and accelerate the equalization of opportunities.
7. Conclusions

My main research question was if the equality of opportunity among children had changed since the implementation of AUH in Argentina. My HOI index show that this is the case. I cannot draw any strong conclusion about the causal effect of the AUH program, as my groups don’t seem to be completely comparable and I can’t know how the opportunities of the AUH and the No AUH groups were distributed within the eligible population before the implementation. There seem to be some indication that AUH group has had slightly better results in the educational opportunities. This could be a sign that the educational requirements together with better economic conditions for the recipients could have an effect.

As there are no clear results in terms of the effect of the AUH program I cannot find an indication of a general suitability of CCT programs to combat inequality of opportunities. I do believe that the combination of CCT’s and public provision of services and goods related to the opportunities in question could have a positive effect. It requires substantial public spending and the efficiency would have to be examined. Maybe a truly universal provision of the child transfer would be more cost-efficient in this case.

Argentina is doing remarkably well according to my HOI when it comes to primary education, and pretty well in secondary education and access to water in the house. We can see that there’s more to be done in terms of the sanitation and access to the public gas network. These are two opportunities that have effects also on the health of children and it could also affect their learning capabilities. The low score on completing 6th grade on time could be in part due to methodological shortcomings but regardless of that there could be more done in terms of equality of opportunities when it comes to the quality and attainment of education. The fact that the increase in my opportunity index is notably higher in the last year could suggest that there are long-term effects of the AUH program starting to show. Maybe in a few years it will be possible to do a better evaluation.

The mayor challenges in Argentina today that affect the inequality of opportunities seem to be the large informal sector on the labor market and the number of households living in precarious settlements.
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Available at:
### Table 1.1

**Regression Coefficients for Finishing 6th grade on time**

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<thead>
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<th>Year</th>
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<th>2010</th>
<th>2011</th>
<th>2012</th>
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### Table 1.2

**Regression Coefficients for School attendance age 6 to 12**

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**Regression Coefficients for School attendance age 13 to 17**

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### Table 1.4

**Regression Coefficients for Water**

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Table 1.5

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<tr>
<td></td>
<td>-1.769***</td>
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<td>.684***</td>
<td>.650***</td>
<td>.155***</td>
<td>.719***</td>
</tr>
<tr>
<td>Family Income per cap</td>
<td>-.107***</td>
<td>-.031</td>
<td>-.046</td>
<td>-.128</td>
<td>-.125**</td>
<td>-.001</td>
<td>-.084</td>
<td>-.131***</td>
</tr>
<tr>
<td>Number of Siblings</td>
<td>-.176***</td>
<td>-.027</td>
<td>-.277***</td>
<td>.052</td>
<td>.000</td>
<td>-.426***</td>
<td>-.277***</td>
<td>-.084</td>
</tr>
<tr>
<td>Presence Parents</td>
<td>.332***</td>
<td>-.145**</td>
<td>-.383***</td>
<td>-.204**</td>
<td>-.078</td>
<td>-.638***</td>
<td>-.400***</td>
<td>-.034</td>
</tr>
</tbody>
</table>

Table 1.6

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
<td>2010</td>
<td>2011</td>
<td>2012</td>
</tr>
<tr>
<td>Male</td>
<td>.044</td>
<td>.006</td>
<td>.266**</td>
<td>-.077</td>
</tr>
<tr>
<td>Education</td>
<td>.639***</td>
<td>.339***</td>
<td>.465***</td>
<td>.759***</td>
</tr>
<tr>
<td>Head of House</td>
<td>.183***</td>
<td>.1301**</td>
<td>.098</td>
<td>.023</td>
</tr>
<tr>
<td>Family Income per cap</td>
<td>-.217***</td>
<td>.023</td>
<td>-.165**</td>
<td>-.203***</td>
</tr>
<tr>
<td>Number of Siblings</td>
<td>.332***</td>
<td>-.145**</td>
<td>-.383***</td>
<td>-.204**</td>
</tr>
</tbody>
</table>
Table 2.1 Human Opportunity Index (HOI) All Children

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 6 on time</td>
<td>31.37</td>
<td>32.42</td>
<td>34.03</td>
<td>36.08</td>
</tr>
<tr>
<td>Attendance 6-12</td>
<td>98.93</td>
<td>99.06</td>
<td>99.31</td>
<td>99.34</td>
</tr>
<tr>
<td>Attendance 13-17</td>
<td>88.67</td>
<td>89.49</td>
<td>90.16</td>
<td>90.84</td>
</tr>
<tr>
<td>Water</td>
<td>86.53</td>
<td>85.95</td>
<td>87.36</td>
<td>90.55</td>
</tr>
<tr>
<td>Sanitation</td>
<td>74.19</td>
<td>75.43</td>
<td>76.78</td>
<td>80.16</td>
</tr>
<tr>
<td>Gas</td>
<td>41.45</td>
<td>42.13</td>
<td>43.35</td>
<td>44.80</td>
</tr>
<tr>
<td>All Opportunities</td>
<td>70.19</td>
<td>70.75</td>
<td>71.83</td>
<td>73.63</td>
</tr>
</tbody>
</table>

Table 2.2 Human Opportunity Index (HOI) by Sample Group

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Groups</td>
<td>Eligible AUH</td>
<td>Not Eligible AUH</td>
<td>Eligible No AUH</td>
<td>Not Eligible No AUH</td>
</tr>
<tr>
<td>Grade 6</td>
<td>29.60</td>
<td>31.99</td>
<td>30.90</td>
<td>31.70</td>
</tr>
<tr>
<td>Att 6-12</td>
<td>98.76</td>
<td>98.91</td>
<td>98.90</td>
<td>98.79</td>
</tr>
<tr>
<td>Att 13-17</td>
<td>88.04</td>
<td>88.61</td>
<td>89.27</td>
<td>88.49</td>
</tr>
<tr>
<td>Water</td>
<td>84.91</td>
<td>86.51</td>
<td>81.93</td>
<td>85.25</td>
</tr>
<tr>
<td>Sanitation</td>
<td>72.17</td>
<td>74.50</td>
<td>71.50</td>
<td>75.09</td>
</tr>
<tr>
<td>Gas</td>
<td>39.49</td>
<td>41.65</td>
<td>37.45</td>
<td>41.38</td>
</tr>
<tr>
<td>TOTAL HOI</td>
<td>68.83</td>
<td>70.36</td>
<td>68.33</td>
<td>70.12</td>
</tr>
</tbody>
</table>

Continuation of Table 2.2

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Groups</td>
<td>Eligible AUH</td>
<td>Not Eligible AUH</td>
<td>Total Eligible AUH</td>
</tr>
<tr>
<td>Grade 6</td>
<td>33.27</td>
<td>35.20</td>
<td>34.72</td>
</tr>
<tr>
<td>Att 6-12</td>
<td>98.90</td>
<td>99.26</td>
<td>99.18</td>
</tr>
<tr>
<td>Att 13-17</td>
<td>91.08</td>
<td>90.57</td>
<td>90.69</td>
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<tr>
<td>Water</td>
<td>87.21</td>
<td>89.63</td>
<td>89.04</td>
</tr>
<tr>
<td>Sanitation</td>
<td>76.39</td>
<td>79.23</td>
<td>78.53</td>
</tr>
<tr>
<td>Gas</td>
<td>39.30</td>
<td>44.42</td>
<td>43.15</td>
</tr>
<tr>
<td>TOTAL HOI</td>
<td>71.03</td>
<td>73.05</td>
<td>72.55</td>
</tr>
</tbody>
</table>
Table 3. Difference in differences between Eligible and Not Eligible compared to year 2009 (before implementation of AUH).

<table>
<thead>
<tr>
<th>Year</th>
<th>D-i-D Difference</th>
<th>2009-2012</th>
<th>2009-2011</th>
<th>2009-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eligible</td>
<td>Not Eligible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009-2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.73</td>
<td>0.02</td>
<td>0.11</td>
</tr>
<tr>
<td>2009-2011</td>
<td></td>
<td>4.39</td>
<td>4.0</td>
<td>2.12</td>
</tr>
<tr>
<td>2009-2010</td>
<td></td>
<td>2.35</td>
<td>-0.1</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.16</td>
<td>0.38</td>
<td>2.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.21</td>
<td>-0.03</td>
<td>0.85</td>
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<td></td>
<td></td>
<td>0.57</td>
<td>0.1</td>
<td>0.78</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.78</td>
<td>0.07</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Opportunities

Grade 6 on time

Attendance 6-12

Attendance 13-17

Water

Sanitation

Gas

TOTAL HOI
Table 4.1 Opportunities for AUH and No AUH

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AUH</td>
<td>No AUH</td>
<td>AUH</td>
</tr>
<tr>
<td>Grade 6 on time</td>
<td>30.90</td>
<td>31.70</td>
<td>33.70</td>
</tr>
<tr>
<td>Attendance 6-12</td>
<td>98.90</td>
<td>98.79</td>
<td>98.87</td>
</tr>
<tr>
<td>Attendance 13-17</td>
<td>89.27</td>
<td>88.49</td>
<td>89.21</td>
</tr>
<tr>
<td>Water</td>
<td>81.93</td>
<td>85.25</td>
<td>83.48</td>
</tr>
<tr>
<td>Sanitation</td>
<td>71.50</td>
<td>75.09</td>
<td>72.53</td>
</tr>
<tr>
<td>Gas</td>
<td>37.45</td>
<td>41.38</td>
<td>38.85</td>
</tr>
<tr>
<td>TOTAL HOI</td>
<td>68.33</td>
<td>70.12</td>
<td>69.44</td>
</tr>
</tbody>
</table>
Table 4.2 Difference in differences between AUH and No AUH compared to Eligible 2009.

<table>
<thead>
<tr>
<th>Year</th>
<th>Opportunities</th>
<th>Grade 6 on time</th>
<th>Attendance 6-12</th>
<th>Attendance 13-17</th>
<th>Water</th>
<th>Sanitation</th>
<th>Gas</th>
<th>TOTAL HOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-2010</td>
<td>Difference AUH</td>
<td>1.3</td>
<td>0.14</td>
<td>1.23</td>
<td>-2.98</td>
<td>-0.67</td>
<td>-2.04</td>
<td>-0.5</td>
</tr>
<tr>
<td></td>
<td>Difference No AUH</td>
<td>0.03</td>
<td>0.063</td>
<td>0.48</td>
<td>-3.32</td>
<td>-3.59</td>
<td>-3.93</td>
<td>-1.79</td>
</tr>
<tr>
<td></td>
<td>Difference D-i-D</td>
<td>0.11</td>
<td>0.017</td>
<td>0.75</td>
<td>0.34</td>
<td>0.89</td>
<td>0.61</td>
<td>1.29</td>
</tr>
<tr>
<td>2009-2011</td>
<td>Difference AUH</td>
<td>2.1</td>
<td>0.11</td>
<td>2.7</td>
<td>2.17</td>
<td>0.36</td>
<td>1.89</td>
<td>2.88</td>
</tr>
<tr>
<td></td>
<td>Difference No AUH</td>
<td>4.1</td>
<td>0.063</td>
<td>11.7</td>
<td>-1.43</td>
<td>-3.6</td>
<td>-3.86</td>
<td>-2.27</td>
</tr>
<tr>
<td></td>
<td>Difference D-i-D</td>
<td>-0.8</td>
<td>-0.25</td>
<td>-1.53</td>
<td>-3.6</td>
<td>-3.86</td>
<td>-4.3</td>
<td>-2.02</td>
</tr>
<tr>
<td>2009-2012</td>
<td>Difference AUH</td>
<td>3.21</td>
<td>0.36</td>
<td>2.53</td>
<td>4.72</td>
<td>4.22</td>
<td>4.93</td>
<td>4.22</td>
</tr>
<tr>
<td></td>
<td>Difference No AUH</td>
<td>3.67</td>
<td>0.14</td>
<td>3.04</td>
<td>2.3</td>
<td>4.22</td>
<td>4.42</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>Difference D-i-D</td>
<td>0.46</td>
<td>-0.36</td>
<td>0.51</td>
<td>-2.42</td>
<td>-2.8</td>
<td>-5.12</td>
<td>1.29</td>
</tr>
</tbody>
</table>
ii. Appendix 2 – Methodological Guide

In this appendix I will explain in more detail how I defined my sample groups and the variables that I had to create to build my index. First I will however say a few words about the data used.

As mentioned in the text I use data from the Argentinean Household Surveys EPH from 2009-2012. I merged the variables of interest from the datasets for the household and individual surveys for the 3rd trimester of each year in STATA. The survey is performed on a national level, covering 70% of the urban population in Argentina. The survey consists of interviews strictly based on three questionnaires covering household, home and individual data. The subjects in the survey rotate so that each household/individual is interviewed 4 times over a period of 18 months. The database is used for official statistics such as poverty lines and unemployment rates. All previous studies that I’ve found and also international comparative studies of the region use the EPH survey as their database, and let the result represent the total population, so I assume the data is representing the whole population.

I created the variable "Menor" including all individuals under 18 years old. Then I created the variable “Informal” using the methodology from Jimenez (2011), based on the survey question about occupational category that divides the individuals into 4 categories; (i) employer, (ii) self-employed, (iii) worker/employee, (iv) family-worker without remuneration. Together with other questions in the survey I could determine who were formal or informal with the following classification. All employers are considered formal workers. Self-employed that are non-professional and working at a non-public establishment with less than 6 people are considered informal workers, while the rest of the self-employed are considered formal. Workers/employees without retirement contributions are considered informal, the rest are formal. All family-workers without remuneration are considered informal. Using these definitions I created the variable informal.

I used the same criteria as Bustos & Villafañe (2011) to create the variable “eligible”. The individuals that are part of the formal economy or that receive pensions or unemployment payments are not eligible for the AUH as they already receive child support through the contributory systems. Anyone in the sample receiving pensions or unemployment benefits was thus set to not eligible. Employers earning more than the minimum wages were set to not eligible. Self-employed earning more than the minimum wages were set to not eligible. Workers/employees that are not informal were set to not eligible. Workers/employees that are informal and gain more than the minimum wage are not eligible. The rest are eligible supposing they have children under 18 years old. All children under 15 years old were set to not eligible as well as I assume that individuals under 15 years old don’t have children.

The next step was to create the variable “AUH” using the question in the survey asking whether the subject is receiving any subsidy or transfer from government or church, and the amounts declared in the follow-up question as explained in Bustos and Villafañe.

---

8 Any worker without a complete third degree/universal education is considered non-professional.
I set any individual who had declared any amount that corresponded to the AUH transfer amounts as AUH receivers. Every year the amounts paid through the AUH transfer program are raised to compensate for inflation. Therefore I had to adjust the amounts\(^9\) to calculate the AUH variable. The maximum income limits\(^10\) to be a part of the program were also adjusted accordingly.

For example for 2009 the amount per child was 180 pesos, or 144 pesos per month as only 80% is paid on a monthly basis. For 2 children the amounts are 360 and 288 respectively and so on up to 5 children, which gives the amounts 900 pesos or 720 pesos. As people are assumed to round up or down in the case of uneven numbers such as 432, all amounts rounded up or down are also included as corresponding amounts according to the methodology used by Bustos and Villafeñe (2011). Also both the full amount and the 80% are considered as valid AUH amounts as the question is not specific about which amount to include. The same is done for the following years with the new amounts of the transfer. When the amounts are identified all individuals that are not eligible are set to not AUH to clean up the variable if necessary (for 2010 only 3 individuals where set to AUH using the method explained even if not eligible and where thus cleared from the group using the last input).

Once I defined the variables necessary to create my separate sample groups I began creating variables to define my circumstance groups based on; i) gender, ii) number of years of schooling of family head, iii) per capita family income, iv) single or 2-parent household, v) number of siblings ages 0-17.

i. There was already a gender variable but I created a dummy-variable for gender to use in my regressions.

ii. I created a variable for number of years of schooling of family head and divided the answers into 4 levels of education; (1) less than complete primary education, (2) less than complete secondary education, but at least completed primary education, (3) complete secondary education and/or not completed university/tertiary education, and (4) completed superior/university education.

iii. I created a variable for per capita family income (ipcf) and divided the sample into 3 categories; (1) low, (2) middle, (3) high. In 2009 all ipcf under 300 fell into category 1, all between 300 and 899 where in category 2 and all incomes from 900 and over where put in category 3. With this division 28% of the households with children ended up in category 1, 44% of the sample in category 2, and 28% of the sample in category 3.\(^11\)

iv. I created a dummy-variable for number of parents, setting it to 0 for 1

---


\(^10\) The minimum wage was 1400 in sep 2009, 1740 in sep 2010, 2300 in sep 2011, and 2670 in sep 2012 (estudioeic, 2013)

\(^11\) The amounts where adjusted for inflation the following years and the new limits used where; 2010: (1) 0-399, (2) 400-1099, (3) 1100-15450 (highest declared value), 2011: (1) 0-529, (2) 530-1449, (3) 1450-18000, 2012: (1) 0-709, (2) 710-1824, (3) 1825-22500. I moved the income limits following the division of the population mentioned above, so each income group had the same size every year. I think now that it would have been better to move the limits with an equal amount instead following the inflation rate. The problem was that I couldn’t find a reliable source of the inflation rates.
parent and 1 for 2 parents. As it is the responsible adult that can receive the transfer and not necessarily the parent, I count the head of the household and the spouse as parents, regardless of relation to the children, following the methodology of Bustos & Villafañe (2011). As sometimes the grandparents live in the household too and these in some cases are put as head of household, I dropped all observations where the children in the household where listed as nieces or nephews of the head of household.

v. I created a variable for number of siblings by counting the children in each household and subtracting the subject if under 18 years old. I then divided the sample of children into 4 categories: (1) no siblings, (2) 1 sibling, (3) 2 or 3 siblings, and (4) if more than 3 siblings.

Once I had these variables I created the necessary variables to measure the 6 opportunities; (a) probability of ending 6th grade on time, (b) gross school attendance ages 6-12, (c) gross school attendance ages 13-17, (d) access to water, (e) access to sanitation, and (f) access to gas inside the house for all children ages 0-17.

a. I created a dummy-variable called “gr6”, including all children aged 11 to 15 and set to 1 if; i) aged 11-12 and declaring last year of education as grade 6, or ii) age 12-13 and last year of education being 7, or iii) age 13-14 and last year 8th grade, or iv) age 13-14 and last year declared 1 or more and highest level of education being secondary school, or v) age 14-15 and last year declared being 2 or more and highest level of education being secondary school. The reasons for the many definitions are changes in the educational system. Some children completed 9 years of primary school before moving on to secondary and they could now be in 2 or third year of secondary, while the new system is only 8 years of primary and then 4 years of secondary school. Depending on when the birthday is it could also change the answer of last year of education declared, which is why I include two ages in each level. In 2009 this results in 1662 children that completed 6th grade in time out of 3867 children aged 11-15.

b. I created a variable for all children ages 6 to 12. Then I created a variable for attendance age 6 to 12 for those who where age 6 to 12 and answered that they are currently assisting an educational establishment.

c. I created another variable including all children ages 13 to 17, and one for attendance age 13 to 17 the same way as explained above.

d. The variable for water was created and set to 1 if the child had access to water inside the house from the public pipeline.

e. I created a variable for Sanitation that was set to 1 if the child had access to a toilet inside the house that was connected to the public sewage system or to a septic tank. (Around 3 children each year turned out to have access to toilet only outside of the property, and around 850 had access outside of the house but inside of the property.)

f. I created a variable “gas” that was set to 1 if the household had access to gas inside of the house from the public network. In 2009 50.76% (7894/15553) had access to the public network, while 47.59% had gas from a cylinder and 1.45% used kerosene or kohl.
Some of the variable above where pretty straightforward as you either have access to it or not. I did think about how to define access even for things like water, sanitation and gas however. For instance in the original index they define access as having it on the property, while I chose to narrow it somewhat and demand access inside the house. The reason for my decisions was the fact that Argentina has a population that is 80% urban and therefore it is more relevant to know if they have it inside the house. I did struggle more with the grade 6 variable, as I had no methodology to follow for this definition. In retrospect I think it might have been better to limit the age group even more and only look at age 11 to 13 for instance, then I could have avoided some hassle with the different grade levels in secondary education.

When all variables where defined I continued to calculate my D-index. I did one calculation for the whole sample of children each year, one for the not eligible sample, one for the eligible with AUH and one for the eligible without AUH. (In 2009 there was only one group of eligible, as the AUH was not implemented yet).

I began by calculating the probabilities for each circumstance-group according to the method explained in Barros, Molina and Saavedra (2008), using the STATA function “logit” to make the logistic regressions. Unlike them I chose to use linear specifications for all my regressions that were not dummies, where I used non-parametric specifications. All functions end up being linear in the parameters, so that \( h_k(x_i) = x_k\beta_k \), where \( x_k \) denotes a vector of variables representing the \( k \)-dimension of circumstances. The regressions give an estimation of the parameters \( \beta_k \) that we can denote \( B_k \) for each opportunity, and the resulting coefficients are presented in Appendix 1 in tables 1.1 – 1.6.

With the coefficients \( B_k \) I then calculated the predicted probability for each individual, \( i \), in the sample of accessing each opportunity according to:

\[
\hat{P}_i = \frac{\exp(B_0 + \sum_{k=1}^{m} [x_{ik}B_k])}{1 + \exp(B_0 + \sum_{k=1}^{m} [x_{ik}B_k])} \quad \text{(Barros, Molina and Saavedra, 2008 p. 21)}
\]

then the average access rate ( \( \bar{p} \) ) was calculated as the mean of all individual probabilities. When the individual access rates where calculated I had to do the same for each circumstance-group, giving everyone with the same circumstance characteristics the same probability, calculated as the mean of the individual probabilities within each group. For this I created a variable “Circumstance Group” that created a group for each existing combination of circumstances in the sample\(^{12}\). Then I calculated the absolute distance for each groups probabilities ( \( p_i \) ) from the mean of the entire population ( \( \bar{p} \) ) using STATA. Once this was done I created the D-index by summing the probabilities according to the population shares (weight) of each group using Excel according to the equation:

\[
D = \frac{1}{2p} \sum_{i=1}^{m} \beta_i | p_i - \bar{p} | \quad \text{(Barros, Molina and Saavedra, 2008 p. 22)}
\]

where \( \beta_i \) now represents the proportion of children in each group. The values on the D-index are between 0 and 1, where 0 represents perfect equality of opportunity and 1 total inequality.

\(^{12}\) In 2009 there where 176 circumstance groups, in 2010 there where 179, in 2011 there where 175 and in 2012, 176.
Finally the overall measure of opportunity (O) was calculated combining the overall average access rate of opportunities with the D-index as:

\[ O = \frac{r}{N} = \frac{H}{N} (1 - D) = \bar{p}(1 - D) \]  

(Paes de Barros et al., 2009, p.72)

where \( O \leq \bar{p} \leq 1 \) and \( O \leq D \leq 1 \). \( \bar{p} \) is the average access rate, \( H \) is the total number of opportunities available, \( N \) is the number of opportunities needed to ensure access for all, \( r \) is available opportunities allocated according to the principle of equal opportunity, and \( D \) is inequality of opportunities. This gives an Opportunity Index with values from 0 to 100 (in percentage terms), where 100, means that there is full coverage of opportunities and they are equally distributed. Once the opportunity index (O) was calculated for my six opportunities the average of these indicators where summed up in a single Human Opportunity Index. The values of these can be found in Appendix 1: Table 2 for each opportunity separately as well as the total HOI for each year and sample group. All the steps above where repeated for each of my sample groups and each year.