Conditional cash transfers in high-income OECD countries and their effects on human capital accumulation

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GINI Discussion Paper 84
August 2013
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DP 84
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Introduction

Despite high general level of school enrolment and attendance in high-income countries a substantial gap is often seen between schooling outcomes of children from high-income and low-income families or between majority and minority ethnic groups. As a policy solution to this problem several countries have adopted so-called conditional cash transfers, which are targeted transfers incorporating a behavioural condition. As reviewed for example by Fiszbein and Schady (2009), conditional cash transfers have been increasingly popular in developing countries of Latin America, Africa and Asia, but these types of programs are also part of the welfare state of some high-income countries. In high-income countries such transfers most frequently relate to labour market transfers and conditions require active labour market behaviour of transfer recipients. In this review we are interested in human-capital related CCT programs that operate in OECD countries. The first section gives a summary of the aims, types and potential effects of conditional cash transfers. Then section two provides an overview of conditional cash transfer programs adopted in high-income OECD countries. The third section reviews results about the effects of these programs on human capital accumulation of disadvantaged children.
1. Definition, mechanisms and types of the CCT programs

Here we will be studying conditional cash transfers defined as targeted, non-contributory cash subsidies to potential recipients who meet a certain behavioural condition. We are interested in programs that formulate a condition related to human capital investment, such as school attendance, school performance or participation at health examinations.

1.1. Aims of conditional cash transfers

According to the comprehensive World Bank publication on the issue (Fiszbein and Schady 2009), CCT programs have a double aim: decreasing actual poverty by transferring cash to the poor, and decreasing future poverty by subsidizing human capital investment. CCTs fulfil their aim of immediate poverty relief by being targeted to the poor with the use of some type of targeting mechanism. The other aim of such interventions is to stimulate human capital investment among the poor, by increasing their demand for school services and/or by increasing poor students learning motivation. Thus CCTs belong to a group of interventions, which are called demand-side education financing interventions (Patrinos 2007). Other types of interventions in this group include for example school vouchers or tax allowances. Although these programs are in many ways similar they will not be reviewed here. School vouchers also stimulate demand for educational services but not in form of cash transfer, but more as an in-kind transfer. Free school meal programs will not be reviewed either for the same reason, although they alleviate poverty conditional on school attendance. Tax deductions for schooling expenses will not be taken into account, because they generally represent non-targeted, regressive transfers, which benefit the middle classes.

Actual CCT programs represent a varying mixture of the aims of decreasing immediate poverty and reducing future poverty. As described in the Fiszbein and Schady (2009), programs such as Mexico’s Oportunidades Program target a very wide group of the population and distribute important transfers, thus represent CCTs in which the aim of immediate poverty reduction is important. In other programs, for example Bangladesh Female Stipend program targeting is much more narrow, and cash payments are relatively low. These programs represent CCTs, which are less concerned by decreasing actual poverty for a large
portion of the population, but more focused on increasing demand for education in a certain segment of the society.

According to our view needs-based scholarships and grants in secondary or post-secondary education, which are widespread in developed countries, also belong to the group of CCTs. Some authors treat conditional cash transfers and scholarships as separate types of interventions. E.g. the comprehensive volume on social safety net programs (Grosh et al. 2008), while acknowledging that the boundary between CCTs and scholarships is fuzzy, treat them as distinct types of interventions. On the contrary, Hanlon et al. (2010) state that scholarships „in practice are conditional cash transfers. But instead of evoking the pejorative connotation of conditions, they recognize that secondary school student and college students are young adults old enough to take paid work and make some decisions for themselves.” (Hanlon et al. 2010, p 127). In this spirit we treat targeted (needs-based) scholarships and grants that are effectively paid out in cash as CCTs. In contrast merit-based scholarships are not considered as belonging to the category of CCTs here.

1.2. Types of CCT programs

Important design elements in CCT programs include the framing of the incentive, characteristics of the transfer (size, recipient), characteristics of behavioural conditions (definition, monitoring and sanctioning) and targeting methods. Targeting first of all means channelling subsidies to low income people by applying some targeting method such as mean-test, proxy means-test, geographical or demographic targeting (Grosh et al. 2008). Targeting low-income groups is not easy, methods differ in the degree of their accuracy and the degree of costs they impose. For example, proper means-testing can provide a reasonably accurate picture of a household’s financial situation. It however imposes significant costs on potential recipients and also on bureaucracies, which administer these transfers. Using simpler targeting methods, such as geographical targeting for example is less costly to implement but involves a higher probability of committing targeting errors (including non-poor among those eligible or excluding poor from the eligible group). On the other hand, in the case of conditional transfers targeting might also mean directing transfers to segments of the population where behavioural change in response to transfers is more likely to occur. This would involve targeting segments of the poor population where investment is inefficiently low, where low investment is related
to information or motivational problems. This targeting can be is also problematic as they might involve targeting on sensitive demographic information (e.g. ethnicity).

Incentives can be framed as gains or losses relative to a baseline case. In the first case the eligible person receives a certain amount only if the behavioural requirement is satisfied, while in the second case the eligible person receives a transfer and the payment gets suspended or reduced as a sanction in case of the non-fulfilment of the behavioural condition. An example for the first type is a scholarship, which gives low-income students a specified amount if they enrol in some form of post-compulsory schooling (e.g. the Education Maintenance Allowance in the UK), while the second type of transfers can be thought of as the Learnfare program in several US states, which applies sanctions, like reduction or suspension of welfare payment if school attendance of children living in welfare recipients household falls below a pre-specified level.

Programs also differ in size of the transfer. Size of transfers can be evaluated relative to direct and indirect costs of the schooling program, which it aims to promote but also relative to before-transfer income level of the family. Programs might also differ in the recipient of the benefit. In some case, especially in case of programs incorporating conditions relative to primary schooling, the recipients are the parents of the child in question. In other cases, most often in programs involving high school or college students the transfer is given to the student himself.

Other important design elements of conditional cash transfer programs involve definition, monitoring and sanctioning of behavioural conditions. It is possible to condition transfers on some behaviour known to be related to human capital accumulation (such as school enrolment, attendance or other behaviour, such as reading books) or some educational outcome (passing a grade, achieving a specific test score). Monitoring of fulfilment of the behavioural conditions occur with varying frequency in conditional cash transfer programs. The trade-off here is between the effect on behaviour and costs: more frequent monitoring of the condition presumably results in stronger effect on behaviour but it is also more costly. Sanctioning programs sometimes involve severe sanctions as substantial reduction of benefits or suspension of benefits for a certain period. Sometimes these programs apply softer sanctions, as an obligatory meeting with a social worker in order to identify reasons of truancy and finding possible ways of remedy.
1.3. Potential effects: how conditional transfers change behaviour?

In the following, we shall give a summary account of those mechanisms by which help the CCTs might change recipients’ behaviour. First we summarise the predictions of standard microeconomic model of demand and than add some insights of the effects of extrinsic motivation from psychology.

As an example let us think of a program which pays recipient a cash amount if their children meet a certain school attendance condition defined as the number of days of unexcused absences. In families where children already met the condition before the introduction of the transfer, the impact of CCT is similar to an unconditional cash transfer. Rising income might lead to higher school attendance, as rising income generally increases demand of families for all kinds of goods. In contrast, in households, where the child fails to meet the school attendance requirement, the CCT may have a stronger effect on the demand for schooling. In these cases parents may realise that they can become eligible for the transfer and achieve a higher level of welfare if they meet the school attendance condition. In these cases, the transfer effectively reduces the costs of further education and thus gives a stronger incentive to change behaviour (Das et al, 2005). Consequently, the impact of the CCT is stronger for these families than it would have been in the case of unconditional cash transfer, since unconditional transfers increase family income, but does not change the price conditions.

Thus transfers conditioned on particular behaviour, which can be regarded as input in the education process (enrolment, attendance, reading a book, taking a test etc.) acts as price subsidy for that particular input. As discussed before, transfers are sometimes conditioned on output rather than input of the education process. Output is most often measured as grade attainment or performance at school (test scores, grade averages). Performance at school can be conceived as being the result of student ability, effort and luck (Barrow et al. 2009). If the student puts more effort in learning activities, he/she will increase chances of high performance, but study efforts are not without costs. Students select the level of effort as to maximize the net expected benefit. A student may show low performance because the marginal benefit is low or because the cost of effort is relatively high. A transfer conditioned on a certain level of performance increases immediate financial rewards to effort, thus will
have an effort-increasing effect. Consequently students participating in such incentive program are expected to allocate more time to educationally productive activities.

Incentives can be framed as gains or losses. Traditional microeconomics would predict similar effects of gains and losses of similar magnitude. Behavioural theories have however described cases when people respond differently to gains and losses of equal sizes. “Loss aversion” describes the situation where the decline in utility associated with the loss of a certain amount is greater than the utility gain the same person experiences in case of a gain of similar magnitude (Mullainathan and Thaler, 2000). If individuals are characterized by loss aversion, we would expect more important behavioural effects from policies that frame incentives as losses.

Financial incentives can also have adverse effects on behaviour. For example the psychological literature discusses the question whether financial incentives (or other types of extrinsic motivation) crowd out intrinsic motivation\(^1\). Why would such a crowding effect occur? According to the cognitivist school in psychology, when individuals like what they are doing, they experience feelings of competence and self-determination. The cognitivist claim is that when people are rewarded for performance in a certain activity, they begin to do the activity for the external reward rather than for intrinsic reasons, causing perceptions of motivation and self-determination declining, which ultimately undermines intrinsic motivation (Cameron and Banko 2001). Economic models might also be called for help to identify causal mechanisms at work. The review of Gneezy et al. (2011) points out that financial incentives might transmit information, and information which is interpreted as “bad news” by the individual (eg. “the specific goal is too difficult”) might lower intrinsic motivation. Extrinsic motivation can also reduce other motivations, which enter into decision of the agent such as following social norms or building up a certain reputation. There can be cases, when crowding out takes place in the short run, while the incentives are in place, but crowding out can also manifest itself in the long run, that is when the incentives are removed. This latter case underscores the importance of investigating whether the incentive exerts a durable effect on recipients’ behaviour or the effect fades away after removal of the incentive. In the case of a positive incentive program the consequence would be financial incentives

\(^1\) Intrinsically motivated behaviors are those in which there is no apparent reward except with the activity itself.
increasing demand for education while in place but after the incentives have been removed, demand for education would fall below the initial level.

Another possible adverse effect is that by conditioning rewards on certain indicators of educational performance, students behave in ways which help maximising their gains given the specified requirements, but do not necessarily lead to higher levels of human capital. For example, if the condition is to earn a specific number of credits in college during a semester, students might choose less demanding courses to be able to meet the requirement with less effort. A third adverse effect might be lower take up rates in case of conditional transfers. If the fulfilment of the conditions is very costly for the potential recipients of the transfer, they might decide not to claim the transfer at all (Hanlon et al. 2010). Psychological costs related to stigmatisation should also be included in the private costs associated with conditionality.

1.4. Cash transfers and low human capital investment among the poor

Conditional cash transfers are targeted towards the poor. The aim is to increase demand for educational and health-related services among the low income people and reduce the gap between human capital investment of the rich and the poor. Social sciences have identified a number of possible reasons for low human capital investment among the poor. It is possible that low schooling is the consequence of an effective income constraint. Since families typically cannot contract loans against future earnings of their children (except in case of tertiary education in some countries), low income of poor families may represent a real constraint (Becker, 1967, Becker and Tomes, 1986). In this case poor families would under-educate their children because their inability to pay for direct and indirect costs of schooling.

The social science literature also underlines that low investment in human capital might also be a consequence of lack of information, consumer impatience or low aspirations. It is possible that the parents underestimate the benefits of human capital investment, and that explains the sub-optimal schooling of the child. As schooling entails current sacrifices (investment) in the hope of future benefits, more impatient individuals (those with high discount rate) will invest less. It is also possible that the individual recognises the importance of long-term investment, but due to the lack of willpower and insufficient self-control, is unable to act in accordance with his/her long-term plans (Mullainathan and Thaler, 2000).
According to research in sociology, there is evidence that lower level of schooling experienced among poor families is also related to lower educational aspirations. According to one hypothesis parents, moderate feelings of frustration of their children by emphasising less the importance of success at school. Children adopting these values will not consider success at school important either (Mayer, 1997). Similar conclusions can be drawn based on the reference-group theory (Boudon, 2000). According to this theory, families valuate their own situation in comparison to the conditions of a reference group. As the immediate environment of the household tends to be composed of households of similar social status, these most often represent the majority in the reference group. As a consequence, lower status families have lower aspirations with regard to the school performance of their children, than the higher-status families.

The policy conclusions of the above argumentation are that if the reason for low education demand is low-income level of the poor, demand shall be promoted via unconditional cash transfers (Fiszbein and Schady, 2009). In such cases the families know exactly the adequate level of education for their children, and in the case of sufficiently large transfer, they are willing to sacrifice that much for the education of their children\(^2\). If, however, the explanation for low demand also lies in the misinformation of the parents and children\(^3\), in their low aspiration level, or their impatience for consumption, a conditional transfer is the better tool to promote demand for education. Conditional transfers will have a stronger effect since by reducing the costs of human capital investment, they make it more attractive as opposed to other types of expenditure. Of course, if low education is primarily caused by problems on the supply side of the market for education, demand incentives will not help. In this case development of the institutional system and improvement of the quantity and quality of education available for low-income strata may bring about the desired results\(^4\).

\(^2\) In this case, conditional cash transfer is a too strong incentive: as a consequence of the condition, some choose beyond-optimum education for their children.

\(^3\) The easiest way to remedy the lack of information is to launch information campaigns, and thus the use of cash transfer is not necessitated. But passive information campaigns are not always sufficient, since it is not for sure that people are aware of being in need of information.

\(^4\) Other justifications of conditional cash transfers proposed by the literature include positive external effects of education and higher social acceptance of transfers for the “deserving” poor as opposed to unconditional transfers (Fiszbein and Schady 2009).
2. **CCT programs aiming at human capital development in OECD countries**

CCT programs in high-income countries operate in a different context than the comparable programs in Latin America. In low- and middle-income countries conditional transfers are usually the main programs for helping the poor (Fiszbein and Schady 2009), while in the developed world, conditional transfers are embedded in the sophisticated network of social assistance programs that constitute a country’s safety net. In these countries a number of alternative tools are available to reach a certain policy objective and the multitude of social programs often result in complicated incentive effects. The goal of the transfers also differs typically between countries with different level of development: while in the developing countries, incentives target elementary and/or secondary school attendance, in the developed countries, the transfers are often conditional to participation in higher education. There are also major differences in the size, structure and philosophy of welfare spending even among the OECD countries. According to Esping-Andersen’s (1990) typology, welfare states can be of liberal, conservative or social democratic type, while other authors identify a fourth type as well, the Mediterranean welfare state. Welfare state types differ in the extent to which they accommodate conditional transfers. Conditional transfers are most often found in the liberal welfare states which rely relatively more strongly on targeted transfers and have a general sympathy for market-friendly solutions. Nevertheless, conditional transfers can be found in other types of welfare states as well.

This section presents existing conditional cash transfer programs related to human capital investment in OECD countries. First we describe programs conditioning reward on the use of health-care services. Health-related conditions include: regular check-ups or screening and infant health programs (primarily compulsory immunization). Programs conditioning rewards on behaviour or performance in education include programs related to pre-school, compulsory schooling and post compulsory schooling periods.

2.1. **CCT programs related to infant health**

Among high-income OECD countries, conditional transfers are more frequently found in liberal welfare states. In the United States, under the umbrella program of TANF (*Temporary Assistance for Needy Families*),
Assistance for Needy Families – a federal allowance program) several state run sub-programs include various health conditions (Mofitt 2008). TANF was created with the adoption of PRWORA (Personal Responsibility and Work Opportunity Act) in 1996, which introduced behavioural requirements to a traditional cash assistance program AFDC (Aid to Families with Dependent Children). State welfare programs contain conditions related to preventive health care of pregnant women, prenatal care and infant health in 27 member states. As compared to other CCT based programs, the important difference is that these programs incorporate negative rather than positive incentives. If health related conditions are not met, sanctions affect the whole allowance ranging from a 25-50% deduction or temporary suspension to total withdrawal of the benefit. Furthermore, immunization is a general criterion of entering elementary education.5

In the United Kingdom the Sure Start Maternity Grant is a one-off payment to individuals receiving income support (or other types of mean-tested benefits) to help towards the costs related to maternity. The benefit can be up to 500 GBP and is conditional on the parent showing a signed certificate (by doctor or midwife) that they have been given advice on maternal health.

Several other high-income countries provide incentive payments to pregnant mothers to motivate them to participate in prenatal health checkups without targeting these measures to the low-income population. In Australia, Maternity Immunization Allowance provides cash assistance for mothers who undertake the immunization of their children under the age of 5. Mothers have to complete all requirements during two vaccination periods (first is between months 18-24 and the second is between years 4-5). Birth grant in Finland and Luxemburg has required regular pre-natal screening of pregnant women since the late 1990’s. Luxemburg’s program prescribes three compulsory checkups and pays beneficiaries 580 EUR at three separate times; the Finnish birth grant provides only a single lump-sum benefit (140 EUR) to eligible women (Tárkányi 2009). Kinderbetreuungsgeld (Maternity Allowance) in Austria was launched in 2001, altering an earlier allowance type called Mutter Kind Pass Bonus. The lump-sum benefit is available to pregnant women or mothers with infants who undertake at least 10 pre- and post natal checkups (Tárkányi 2009). In the Eastern part of the continent (among OECD countries) Slovakia and Hungary have introduced measures to tie

5 http://anfdata.urban.org/wrd/WRDWelcome.cfm (2012. March)
birth grants to health-related requirements. The birth grant in Slovakia is a one-time benefit for pregnant women, with the condition of undertaking pre-natal monitoring (Kusá-Gerbery 2009). Hungary’s birth grant *Anyasági támogatás* (approximately 222 EUR) is paid directly to the mother within 180 days of child birth. At least 4 pre-natal checkups are required in order to qualify for the grant. On the other hand, these incentive payments are not means-tested, not specifically targeted to the poor. It has to be kept in mind, that these programs contribute to reducing the gap between service use of low-income and high-income families only if the poor are more responsive to the transfers than the more well-to-do.

### 2.2. CCT programs related to pre-school

Kindergarten allowances and other pre-school incentives are relatively rare among the OECD countries. As we have seen, it is often the case that conditional transfers support families with pregnant women and infants as the first step towards establishing the physical health of both mothers and babies. The next level of human capital development consists of supporting school enrolment and participation of children, to help them acquire skills and abilities necessary for life. Early childhood development is between the health-related and the school-related interventions. This program covers kindergartens and crèches, helping the accessibility and affordability of these day-care services.

*Schooltoelage* in Belgium covers kindergarten-age children and provides 86 EUR for poor families who are eligible for school allowance. If the program requirements are not met, the household is sanctioned as described in the next section (Cantillon-Lancker 2011). *Óvodáztatási támogatás* (kindergarten allowance) in Hungary motivates low-income parents to send their children to kindergarten before the compulsory age of 5. The program employs a means test and an additional requirement for eligibility is that parent’s education is below completed secondary school. At the time of first enrolment, families receive a 20,000 HUF (ca. 79 EUR) lump-sum benefit and another 10,000 HUF (ca. 35 EUR) in the beginning of each additional semester in case the child attends regularly. According to the legal regulation, kindergarten attendance might be qualified regular, if the child stays in the kindergarten at least for six hours on the business days of the kindergarten, and if the number of the certified

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and uncertified days of absence together does not exceed twenty-five percent of the kindergarten days of education per working day.

2.3. CCT programs related to compulsory schooling

Schooling-related criteria are the most common requirements of conditional cash transfer programs. Some of these programs also include conditions related to school attendance of children in compulsory schooling. In case of compulsory schooling many conditional transfers apply negative incentives, which means that transfer amounts are reduced or cancelled if recipients do not comply with the requirements.

In the US, 32 member states use behavioural conditions in the local TANF programs related to compulsory schooling. All of them comprise sanctions in the allowance in order to prevent non-attendance and early drop-out. The most common requirements (to avoid sanctions) are regular school attendance (80-95% of teaching hours depending on the state authorities) and enrolment. The majority of programs require a minimum standard of school achievement as well, using education quality indicators (test scores, mandatory final exams under 18 years of age etc.). Many programs (Florida, Nebraska, Indiana, Wisconsin etc.) encourage parents’ active participation in the school activity of their children by motivating them to attend parent-teacher meetings or individual counselling, make development plans etc. In case the requirements are violated, parents must face long-term sanctions. Expected cooperation with a case worker is the least severe “penalty” for managing temporary problems; the next level is the partial suspension of benefits; in the most serious cases the total amount is suspended and the family is removed indefinitely from the benefit (Urban Institute 2011).

In some countries of the EU, conditional transfers target school-age young people’s participation in high school. School allowance (Schooltoelage) in Belgium supports school participation and continuation of minors under 18 years of age. The enrolment and attendance expectations from primary and secondary school-age children take into account the financial situation of their families. The allowance is designed to prevent school dropout and non-attendance. If the child fails to attend school more than 30 half-days in two consecutive years or 15 consecutive days, parents must repay the whole allowance. The fiscal discipline is
accompanied by supportive efforts (social worker, pupil support centres) as well (Cantillon-Lancker 2011).

Education-based conditional transfers appear also in the eastern part of the continent. Slovakia introduced *Child benefit* in 2009 providing 17 USD/month of allowance for poor households with primary and secondary school-age minors. The allowance encompasses strong school participation criteria, which require cooperation from both children and parents (Kusá-Gerbery 2009). Before joining the EU, in 2002 the Bulgarian government had implemented conditions in their child benefit program⁸. Between 1993 and 2006, Romania had already moved to annul the conditionality of its universal family benefit program, which used to sanction school absences with reduced and suspended benefits (Tárkányi 2009). In contrast, Hungary introduced conditionality into its most important family support program *Családi pótlék* (family benefit) in 2010 as part of a larger social policy reform pack. Under the program, allowance can be removed from families who fail to care for the education of their children. After 10 hours of school absence, local municipality warns the family to ensure the school attendance of children. After 50 hours of absence, the child is taken under the protection of local authorities. A further sanction is that half of the program benefits start to be provided in-kind under the close supervision of a caseworker⁹.

There are also positive incentive programs in some countries in case of those in compulsory schooling. Australia employs various CCT programs to offer financial help for school-age children who enrol and attend elementary and/or secondary schools. *Education Maintenance Allowance* (EMA) is a traditional state-run scholarship-type program, which aims at school participation of vulnerable groups (disabled people, low income families etc.) who receive other social benefits and allowances. The assistance is available to parents directly through local schools. The amount of benefits differs from 230 to 460 AUD a year, depending on the school level of the child.¹⁰ The most important scholarship program that facilitates social cohesion and participation of indigenous young people is *Aboriginal Study Assistance Scheme* (ABSTUDY). It encompasses a basic benefit (*living allowance*) and three needs-based complementary allowance units (*school term allowance*, *school fee allowance*

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and incidental allowance) which cover and compensate the cost of accommodation, tuition fee and living costs. Primal target groups of the program include secondary and high school students, because their school disadvantages are the most significant, but elementary school pupils can apply as well. The means-tested benefit is available only in indigenous reserves – to aboriginal children of compulsory school age and their parents (Dearden 1996).

2.4. CCT programs related to post-compulsory schooling

Post compulsory schooling-related assistance and scholarship programs with behavioural conditions are widespread in the developed world. High unemployment rates, undesired early pregnancies and disproportionately high secondary school and college dropout rates among young people from low income households urged governmental social policies to facilitate the participation of vulnerable groups in secondary and tertiary education.

Austudy in Australia is a scholarship program which helps people over 25 years of age (especially young parents) to stay in the education system or return to school (full time secondary education courses, undergraduate courses, associate diplomas, apprenticeship). Some requirements must be completed to receive the scholarship: for example at least 75% participation of teaching hours and a minimum credit level is necessary in tertiary education. Students (above 25) from poor households are eligible for a scholarship of 389–1026 AUD – the amount depending on marital status, income and the number of children in the applicant’s own household.11 Another important scholarship program in Australia is ABSTUDY, a financial incentive to indigenous people above 14 years of age (the content of the program is detailed in the previous section). This program is important because the attendance of aboriginal students in higher education is still very low.12 Youth Allowance – a relatively new initiative in Australian youth policy – provides income support for poor children (16-24 of age) whose household income is under a pre-determined level and who undertake at least 75% participation of teaching hours. The program allows young people to work without withdrawing the allowance.13

The TANF program in the US covers several state-run programs with post-compulsory school requirements. This program came out of decision markers’ recognition of the low secondary school retention rates among the vulnerable groups (ethnic minorities, low income households, residents of disadvantaged regions etc.). Effective interventions have been developed nationwide since the introduction of the Personal Responsibility and Work Opportunity Act of 1996. For example Cal Learn Vision in Los Angeles helps young parents to graduate from high school. Beneficiaries can get 100 USD four times a year for successful school participation and exam results. There is an additional lump-sum award of 500 USD for passing the final exam (Kerman 2002). The Learning, Earning and Parenting Program of Ohio facilitates young parents and their families with counselling and case management to finish secondary school. Participation is mandatory for all TANF beneficiary young parents 18 to 25 of age (Long 1996).

Education Maintenance Allowance (EMA) is scholarship program in the UK which fosters school retention of 16-19 years old young people. In order to obtain the allowance, beneficiaries must cooperate with authorities and attend special school facilitation and work preparation trainings. Furthermore, they must take part in counselling for parents. After two years of operation, EMA was changed to a new, more rigorous program called 16-19 Bursary as part of a governmental austerity measure that affected social provisions. The newly established post-compulsory school scholarship primarily targets the most vulnerable social groups such as people with disabilities, young parents, care leavers and care givers. The Bursary is comprised of two elements: firstly, a base support for the primal target group (1200 GBP per month) and second, a complementary means-tested support which is available for other low-income applicants as well. Authorization and disbursement are facilitated by local schools which can introduce additional conditions relating to educational outcomes or school uniform.

Some of the OECD countries provide important financial support to students in tertiary education. According to the OECD (OECD 2011), countries with well-developed student support systems are the Nordic countries (Norway, Sweden, Finland, Iceland and Denmark)

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14 The program has been closed to new applicants on 1 January 2011.
15 http://www.direct.gov.uk/en/EducationAndLearning/14To19/MoneyToLearn/16to19bursary/DG_066955 (2012. March)
and the Anglo-Saxon countries (USA, UK, Australia, Canada, New Zealand) together with the Netherlands. On the other hand countries of continental Europe, Ireland, Mexico, Japan and Korea provide less generous student support. Of course countries also differ in the magnitude of tuition fees applied: Anglo-Saxon countries and also Japan and Korea apply high tuition fees, while in continental Europe, and especially in the Nordic countries tuition fees are typically lower. Student support can take many forms. It includes scholarships/grants, student loans, family allowances that are dependent on student status, public subsidies in kind (e.g. for housing or transport) or tax reductions. As described before not all types of student support fit into our definition of conditional cash transfers. Transfers in kind will not be studied. Student loans, merit-based grants and tax reductions that are not targeted towards the poor do not belong to the group transfers under study either. We will be most interested in the effect of needs-based grants and performance-related grants which are somehow targeted to the lower parts of the wealth or ability distribution.

According to the comprehensive report on tertiary education (Santiago et al. 2008) 17 of the 23 countries covered (which include non-OECD countries such as Croatia, China and Russia as well) provide means-tested grants to students in tertiary education. According to the more recent Euridyce report on financing higher education in the EU (Euridyce 2011) a small group of countries provide grants only on the basis of financial need. This group consists of Belgium (French Community), Ireland, Netherlands, Finland, the United Kingdom and Liechtenstein. The largest share of countries combine the two criteria, providing some grants on the basis of financial need and others on the basis of academic performance. Countries where no needs-based grants exist are Estonia, Greece, Iceland and Turkey. Means-tested grants are also common in the United States, most important of which is the Pell grant, which is a federal needs-based scholarship for low-income individuals with high-school diploma, who have not yet earned a bachelor’s degree.

The programs have some form of enrolment requirement, as attendance of an accredited program, being a full-time student, or attending a public institution. In some countries

16 Several countries, such as Canada, Germany, Netherlands or Poland provide means-tested loans (Marcucci and Johnstone 2010). Student loans generally help families to overcome liquidity constraints, but if no grant element is present they do not provide additional incentives for undertaking tertiary studies. To the extent that means-tested loans incorporate a substantial transfer element, they could be included in our treatment of conditional cash transfers.
eligibility also requires not having obtained a tertiary degree previously. In some of these cases a needs based grant is combined with some merit-based element as either the amount of the grant or its prolongation throughout the study program may depend on successful academic performance (Santiago et al. 2008). Eligibility rules of means-tested grants typically also include citizenship/residency requirements and an age limit, which in some countries establish a minimum age, while in others a maximum age. In some countries the amount of the grant depends on various factors, such as the extent of financial need, living independently, being married, having children, disability, field of study or academic performance. Generally there is a maximum duration to which students can benefit of means-tested grants.

Another form of conditional cash transfer for post-secondary education is the extension of eligibility for family cash benefits to children in full-time education who are over the upper age limit of standard eligibility. In countries where family cash benefit is means tested this extension of eligibility to overage children in education is effectively a conditional cash transfer, where the condition is enrolment in post-compulsory schooling. OECD countries with income-tested family cash benefit with age extension include Australia, Czech Republic, Malta, Poland, Portugal and Slovenia (OECD 2011b).
3. Effects of CCT programs in developed countries

In this section we review results of impact evaluations of CCT programs aiming to promote human capital investment. The CCT programs shall be evaluated based on their impact on decisions concerning human capital investments (enrolment, absenteeism from school, schooling outcomes, participation at health examinations). First, we briefly overview methodological questions inherent in the measurement of program impacts. Then results of impact evaluations will be surveyed in case of health-related and education-related (pre-school, compulsory education, post-compulsory schooling) programs.

3.1. Evaluation of effects of conditional transfers in developed countries

In the following, we shall overview the results of those programs, which were investigated by methodologically well-founded impact studies. Measuring the impacts of a social policy program involves the comparison of results achieved by the participants of the program compared to the result they would have achieved had they not participated. The inherent difficulty in impact assessment is that this latter quantity cannot be observed in reality. According to the evaluation literature, the impacts of the programs can be examined most clearly in randomised experiments. In such cases, the participants of the program are selected randomly from the members of the adequate target group (randomisation), while the non-selected individuals represent the control group. In principle, randomisation guarantees, that the composition of the treated group is the same as that of the control group, according to all observable and non-observable characteristics. In such cases, outcomes observed among control group members show what members of treated group would have achieved without participating in the program. The impacts of the program can be estimated by comparing the outcomes of the treated group and the control group.

In cases when no randomised examination is performed, the measurement of the program effect is more difficult. A comparison of schooling decisions (or outcomes) between those benefiting from the transfer and those not receiving a transfer is likely to give biased results. The reason is, that transfers are offered to students on the basis of characteristics that independently affect the schooling decision and it is highly unlikely that the researcher is able
to control for all relevant factors (Deming and Dynarski 2009). One possibility is to look for exogenous variation in transfers, which are not related to individual characteristics. In some cases discrete shifts in policy can be observed, which affect one group of individuals but not others. Such cases are called natural or quasi-experiments. In the following we will review experimental and quasi-experimental evidence regarding the effects of conditional cash transfer programs.

Here we review results in developed countries. It does not mean, however, that no lessons can be learnt from the experiences of the programs implemented in the developing countries. A number of summary reports were prepared on the results of CCT programs launched in the developing countries (Parker et al. 2008, Lomelí 2009, Fiszbein and Schady 2009). In the majority of the cases, systematic impact studies verified that the programs have significantly increased the school enrolment ratios of children, but the size of the measured impacts differed to a large extent in the different programs\textsuperscript{17}. The results of the impact studies show a more varied picture with regard to educational outcomes such as degree attainment, test scores, and later earnings\textsuperscript{18}. However, as of today, the impact studies of the programs succeeded to measure mostly the short-term impacts, and we have to wait with the measurement of long-term impacts, since the majority of the programs have a relatively short history.

At the same time, the context of transfers or social assistance is different in the developing and developed countries. In the developed welfare systems of high-income countries, a number of alternative tools are available to achieve a certain social policy objective. For example, participation in public education is mandatory and free in the developed countries, and several alternative solutions are available to improve school performance. In the welfare

\textsuperscript{17} Based on the summary of the World Bank, the most efficient programs were the JFPP and CESSP launched in Cambodia, promoting the secondary school education of 7 – 9 graders. The JFPP program targeting girls only increased the ratio of those who continued their studies by 31% points, while the CESSP program targeting both girls and boys achieved 21% points increase. In Nicaragua, the Red de Proteccion Social program increased the schooling probability of the 7 – 13 year old children by 13% points. Thanks to the Bono de Desarollo Humano program launched in Ecuador, the ratio of age 6 – 17 children attending school increased by 10% points, while the Mexican Oportunidades program resulted in 9% points increase concerning the further education of the six graders.

\textsuperscript{18} There are several explanations to the weaker impacts of the CCT programs on the school achievements (test scores) of children. It is possible that the schools are not capable to offer pedagogical programs adapted to poorer and less talented than the others. On the other hand, even if the test results are not improved, higher educational level may increase the earnings of the children, promotes the development of a number of non-cognitive talents, and results in delayed marriage and later child birth.
systems, the individuals may use a wide variety of assistance and allowances, which result in complicated behavioural impacts. In the developing countries a small amount of transfer might work as an efficient incentive, because the households are so poor that even a small transfer may cause a significant increase in income.

3.2. Results of impact studies

Here we review results of impact evaluations of 34 CCT programmes in developed countries. Most of these programmes were pilot programs or experiments, only a few of them are evaluations of scaled-up national programs. The majority of the reviewed impact evaluations (31 out 34 programmes) used randomised experiment design to measure the effects of the treatment. The exceptions are the few scaled up programmes that we have reviewed: the Kindergarten Allowance (Hungary), Education Maintenance Allowance (UK) and the Advanced Placement Incentive Program (Texas, US). Table 1 summarises the main attributes of the programmes and experiments reviewed. More details of program design and a summary of the estimated impacts can be found in the Appendix tables. In the following we summarise the results of impact studies in every major category of program design (see Table A1 and A2 of the Appendix).

3.2.1. Programs with negative incentives conditioned on behaviour

The first group of programs/experiments condition transfers on some form of behaviour related to human capital accumulation and apply negative incentives, thus non-compliance with requirements is sanctioned with a reduction in transfers distributed to the group of eligible individuals/families.

In the case of programs with a health related conditions results of impact studies are mixed. The Primary Prevention Initiative (PPI) program for example shows no difference in mean number of visits and vaccination rates between program and control groups (Minkovitz et al. 1999). In this program welfare recipients were subject to a 25$ monthly penalty if they failed to show up at preventive health care services including vaccinations within the specified time. On the other hand, sanctions significantly improved immunization rates in the case of the Preschool Immunization Project in Georgia. This program required that parents demonstrate proof of up-to-date immunization status semi-annually for children 6 or younger. The impact
evaluation shows that in each of the four years after randomisation, children in the program group were significantly more likely to be current on at least four of their vaccinations (Grogger and Karoly 2005).

One rich source of information of the impact of transfers conditioned on school attendance in compulsory schooling are experiments on modifications of the AFDC program in the United States. Probably the most well known program of this type is the Learnfare program in the state of Wisconsin initiated in 1989. If the monitored student had more than two unexcused, full-day absences in a month, the family’s AFDC check was reduced. The noncompliant member of the AFDC family was ignored in calculating the grant amount, which resulted in a reduction of the welfare transfer by an amount about $100 on average. A study carefully reanalysing data from Learnfare (Wisconsin) impact evaluation reports significant results: enrolment increased by 0.132 months by semester (3.7% of control group mean) and school attendance increased by 3.4 points (4.5% of control group mean) as a result of the treatment (Dee 2009). Significant results were also obtained in the impact study of the Ohio Children of Opportunity (Learnfare) program\textsuperscript{19}, where sanctions improved attendance in the short run at both sites of the evaluation, and one site also recorded improvements in the long run (Greenberg 2003).\textsuperscript{20} On the other hand, similar programs that sanctioned families for non-fulfilment of school attendance requirement with reduction or suspension of welfare benefits, like Primary Prevention Initiative (PPI, Maryland) or Better Chance (ABC, Delaware) had no effect on school enrolment or attendance (Campbell and Wright 2005).

Non-experimental studies of the impact of similar requirements inherent in TANF in the United States (see program details in section 2) also found mixed results. Offner (2005) and Koball (2007) use difference-in-differences methods to study the effect of welfare reform on minor parents. As TANF schooling requirements pertain to minor mothers only, there is a possibility of comparison to nonparent teens in order to evaluate the effects of the program. These studies conclude that school dropout decreased more strongly among minor mothers

\textsuperscript{19} Sanction: reduction of payment by the student’s benefit if they had two unexcused absences during a month at least on two occasions during the school year.

\textsuperscript{20} Australia is also conducting a trial “Learnfare”-type program, the School Enrolment and Attendance through Welfare Reform Measure (SEAM) is a program that operates in two pilot regions and 44 schools in the Northern Territories of Australia. The program is built on general social security benefits and allowances, and incorporates monetary deductions if school attendance and enrolment requirements are violated. No randomised evaluation has been performed.
than in the comparison group after the introduction of TANF. On the other hand Hao and Cherlin (2004) and Dave et al (2008) do not find significant difference between school dropout of pre-reform and post-reform cohort of girls between 14 and 16 years of age on NLSY 1997.

3.2.2. Programs with positive incentives conditioned on behaviour

Other programs applied positive incentives while still conditioning transfers on schooling related behaviour. The Opportunity New York City program targeted low-income families with at least one dependent child in grades four, six or nine. The program offered rewards for a wide range of health and education-related behaviour and educational outcomes (see later). For elementary and middle school students, attendance on at least 95% of school days earned the family 25$ per month, while high-school students were rewarded by 50$ per month payment. The randomised impact analysis showed no effect of the program on attendance rates of 4th and 7th graders (Riccio et al. 2010). On the other hand, positive effects on attendance where found in among 9th graders, where results showed that the percentage of those attending at least 95% of school days was 5 points more frequent in the program group than the control group.

Positive effect of financial incentive for enrolment and attendance after the age of 16 were also shown in the evaluation of the Education Maintenance Allowance (see program details in section 2) introduced in Great Britain, which rewards students from low-income families who remain in full-time education after the compulsory schooling age. The assessment of Dearden et al. (2009) analyses effects of the pilot program implemented in 1999 in a non-experimental setting. Based on multivariate statistical analysis, the program increased the probability of staying in education after age 16 by 4.5 percentage points and the share of those who studied for two additional years increased by 6.7 percentage points.

Positive effects were detected also in some programs that rewarded other types of behaviour related to human capital accumulation. The Education Laboratory of Harvard

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21 There were nine urban zones in the evaluation where the program was introduced. These zones were usually characterised by relatively high deprivation rates, low rate of further education, and poor results at the end of the school year. The authors of the evaluation selected nine educational districts as control groups, which were similar to the experimental districts in their observable characteristics.
University carried out a set of experiments, in which Earning by Learning, (Dallas) or Capital Gains (Washington DC) experiments intended to influence behaviour instead of schooling outcomes. Grade 2 students in Dallas received 2 USD for each book read, while students in grade 6, 7 and 8 in Washington received financial awards for low absenteeism, doing homework, class activity, and good behaviour (average student earned 40$ every two weeks). Evaluation of program impacts shows that these programs rewarding behaviour were more successful than experiments giving incentives for schooling outcomes. For example paying students to read books resulted in a significant and large increase in reading comprehension (Fryer 2011).

Means-tested scholarships in tertiary education also belong to this group of programs since they are conditioned on enrolment in a tertiary degree program. Quasi-experimental studies found mixed results of the Pell Grant, which is the largest needs-based federal grant program in the United States (Deming and Dynarski, 2009). One study shows no effect of the introduction of the federal Pell Grant on enrolment of low-income high school graduates (Kane 1995). Seftor and Turner (2002) on the other hand show that change in Pell grant eligibility rules made „non-traditional” students more likely to attend college. Dynarski (2003) examined the effect of the elimination of the Social Security student benefit program, which paid college costs of children of deceased or disabled beneficiaries and found that college attendance of the affected group dropped substantially. A randomised evaluation of the effects of needs-based grant on persistence in college was carried out by Goldrick-Rab et al. (2011). The Wisconsin Scholars Grant paid to Pell-grant eligible students 1750 USD per semester up to ten semesters, with the requirement that they register for 12 credits per semester. The grant increased the percentage of those earnings 60 credits (in 4 semesters).

3.3.3. Programs conditioned on performance

Some of the programs reviewed here condition cash transfers on performance at school rather than some behaviour related to human capital accumulation. Most of these programs are positive incentive programs thus the transfer is paid after the specified outcome has been reached by the participant. Results of such programs also proved to be mixed according the impact studies reviewed. For example no effect of performance related transfers have been found in two experiments conducted by the Harvard Education Laboratory as reported in the study of Fryer (2011). In New York Spark program, grade 4 students were rewarded 5$ for
completing tests (10 during the year) and 25$ for a perfect score on the test, while rewards were doubled for 7 graders. In The Paper Project (Chicago), rewards were conditioned on grades in the five most important school subjects among the 9 graders (rewards decreased gradually from 50$ for an A to 0$ for a D).

Results on effects of transfers linked to schooling outcomes were also mixed in the Opportunity New York City program. The program offered several rewards were for satisfactory school performance. Proficiency level score (or improvement) on annual math and English Language tests were rewarded by 300$-350$. Accumulating 11 course credits per year earned 600$ for the student. Students could earn 600$ each time passing a Regents exam (up to 5 exams) and graduating from high school was rewarded with a 400$ bonus. According to the evaluation results, percentage of those earning at least 11 credits was 8 points higher in the program group, while percentage of those passing at least two Regents exams was 6 points higher, but overall there proved to be no effect of the program on test scores of 4th and 7th graders. (Riccio et al. 2010).

In other experiments positive incentives on outcomes proved to have a positive effect on student achievement. Bettinger (2012) presents an analysis of an experiment carried out in the city of Coshocton, Ohio, which is a disadvantaged, poor community. In each year half of all students in grades three through six became eligible for the financial incentive which could be up to 100$ for the successful completion of standardized testing. The randomised impact evaluation of the experiment shows that mathematics scores improved by 0.15 standard deviations, but the estimated effect in other subjects (reading, social science, science) were small and imprecisely estimated.

Another experiment where positive incentives for performance at school had a significant, positive impact was The Monthly Grade Stipend experiment, in which high school pupils from low income families could earn monthly payment if they maintained A’s and B’s in major subjects. Students in 9th grade received 50$ if they had the required marks, while 10th graders received 55$ and 11th graders 60$ (Spencer et al. 2005). A year after randomisation students in the program group were 10 percentage points more likely to meet the performance requirement (61% in the program group vs 51% in the control group), but graduation rates were similar for the two groups.
Some programs offer rewards for obtaining a high school diploma. For example, Angrist and Lavy (2009) evaluate the effectiveness of financial incentives that reward secondary education matriculation in Israel in experimental setting. Students in low-performing secondary schools were eligible for smaller payments if successfully passing from year 11 to year 12, for taking component tests of the secondary education matriculation exam and to a payment of 1150$ at maximum on the condition of passing the exam. They find that the intervention led to an increase in matriculation rates among girls, albeit effect sizes were quite small.

Some experiments in tertiary education also try to combine motivating effects of merit aid with targeting. The Opening Doors experiment investigates the effects of performance-based grants targeted to low-income students (Scrivener and Coghlan 2011). The first such program has been implemented in Louisiana, where low income parents were given up to 1000USD for each of two semesters if they enrolled in a tertiary program at least half time and maintained a C or better average. In Louisiana the program has positive effects, program group students were 5.3% points more likely to register during the first semester and 11 points more likely to earn 2.0 GPA than control students. After promising results from the Louisiana experiment, MDRC extended the performance-based scholarship demonstration to community colleges in Ohio (3 sites), in New York (2 sites), New Mexico (1 site) (Richburg-Hayes et al. 2011). By the second term of the demonstration average credits earned were higher in the program group in case of all three demonstrations.

Other experiments however show less promising results. Angrist, Oreopoulos, Williams (2010) analysed the effects of Opportunity Knocks experiment at a large Canadian commuter university. In this experiment first and second-year students could earn 100$ for each class where they had a grade equal or above 70, and additional 20$ for each additional percentage point above this threshold. Participants were also contacted by trained peer advisors, who provided advice on study strategies and time management etc. Results showed that the program did not translate into substantially higher GPAs for the students.

3.3.4. Heterogeneity and persistence of program effects

Effects of conditional cash transfers are not always homogeneous across the targeted population. Several studies show differential effects by gender of the student. Girls seem to be
more responsive than boys to financial incentives conditioned on high school or college performance in the experiments in Israel (Angrist and Lavy 2009) and in Canada’s STAR program (Angrist et al. 2010). Also in the Quantum Opportunity experiment, which employs incentives on both behaviour and outcomes shows larger effect in case of girls. In quasi-experimental analysis Dynarski (2008) estimates larger effects of tuition aid on college completion for women in the United States. Rodriguez-Planas (2010) mentions the possibility that young women may have more self-discipline, may be more likely to delay gratification, or may have lower discount rates than young men as an explanation. There is also some evidence on differential effects by age. In the Levitt et al. (2011) study older students were more responsive to financial incentives, than to non-financial ones, while the monetary nature of rewards didn’t have an effect on behaviour for younger students.

In some cases effects were heterogeneous by social status. In the case of the EMA program the effect of the transfer was found to be larger among students who came from families with low assets (who live in rented housing). Several studies show heterogeneous effects according to level of ability, but the direction of the effect varies between programs. In case of the Learnfare program in Wisconsin, in the Wisconsin Scholars Grant and the EMA program in the UK, the effect of the financial incentive was higher among low ability students. In the case of the NYC Opportunity program on the other hand effects were higher among students with high ability. Similar results were shown in the Leuven et al. (2010) study, where effects of incentives were positive among the high ability group but proved to be negative in case of low ability students. Interestingly, in this case opposite effects for different subgroups produced a zero effect on average. Bettinger (2012) reports that in the Coschocton, Ohio experiment the effect of financial incentives on math scores was U shaped, positive impact was found among students both at the bottom and the top quarter of the ability distribution, while effects in the middle of the distribution were insignificant. An important question is whether financial incentives are capable of generating a persistent change in behaviour or effects are short-term and fade away when the incentive is removed. According to standard economic models and behavioural psychology, financial incentives can have long-term effects that persist after the removal of the incentive, especially if they create

Positive effects at the bottom of the distribution did not seem to push students over the proficient threshold, while positive effects at the top of the distribution did help students move from scoring proficient to scoring advanced or accelerated on mathematics test.
a studying habit, if they reduce distaste for learning, or if they increase human capital and thus reduce costs of learning (Rodriguez-Planas 2010).

Results are mixed also on the persistence of the effects of financial incentives. In the Quantum Opportunity experiment large positive short-term effects on high school graduation rates and college attendance rates proved to be short-lived. Five years after the end of the program, QOP had no statistically significant educational or employment impacts on its enrollees. Control group members eventually caught up with the treated group in terms of high school completion and post-secondary enrolment (Rodriguez-Planas 2010). Bettinger (2012) also reports that positive effects on math test scores in the Coshocton, Ohio experiment did not persist into the next year. In contrast, several other studies find persisting effects of conditional transfers. The study by Dee (2011) on the Wisconsin Learnfare experiment conjectures results of previous analysis of the same data, which conclude, that effects of Learnfare where short-term, if any. Dee (2011) argues that there is no evidence that longer-term effects are significantly lower than short-term effects. Persistent effects were also shown in case of the Advance Placement Incentive Program in Texas, which included cash incentives for students for each passing score obtained at an Advanced Placement exam. Students treated in the program had higher college attendance rates, higher college grade point averages and were less likely to drop out from college (Jackson, 2010).

Among unintended effects of conditional transfers studies most often analyse crowding out of intrinsic motivation by financial incentives. Studies apply two approaches to make inferences about crowding out. A negative effect of the financial incentive on some educational outcome is often regarded as a sign of crowding out and also direct survey questions are used to measure this phenomenon. Crowding out can manifest itself in the short run, thus while the incentive is still in place and in the long-run, when the incentive is removed. An empirical implication of crowding out in the long run, would be to see a negative effect of the treatment when the incentive is removed. For example Bettinger (2012) concludes that there is no sign of crowding out in the Cosholoton, Ohio experiment since the long-term effect - despite being lower than the short-term effect - is nonnegative (zero). Bettinger (2012) and Fryer (2011) do not find any sign of crowding out on the basis of survey questions either. On the other hand in the Amsterdam University experiment Leuven et al. (2010) found evidence consistent with external rewards crowding out intrinsic motivation for the least able students. While program effects remain positive among the high ability students
after the removal of the incentive, in case of low ability students the study finds negative effect. This is interpreted as a sign of loss of internal motivation as a result of poor performance and negative feedback during the experiment. There is some evidence showing other unintended effects of financial incentives. In case of merit-based scholarships in tertiary education there is evidence that students take less difficult courses if incentives are tied to credits earned (Demming and Dynarski 2009).

3.3. Discussion

The previous section showed that impact studies have found mixed results in every broad category of CCT programs considered. Positive effects and null effects of conditional cash transfer programs were found both among programs conditioning on behaviour and performance and both among programs applying a positive or negative incentives. These results suggest that other program-design details (such as targeting, transfer size, monitoring of condition, sanctioning) and also implementation quality are also important in determining impacts. Some experiments allow to gain more insight in how different design options affect program impacts, by randomly assigning study participants to groups treated with different treatments and a control group with no transfer.

One crucial question in case of CCT programs is whether program effects are really results of the condition (incentive) applied or similar effect could be obtained by an unconditional transfer of the same amount. There has been no experimental testing of this crucial question in developed country context so far. Even in case of low and middle-income countries only few recent impact studies examine the effect of CCT against UCT (see Baird et al., 201023 or Akresh et al. 2012). In case of high-income countries the closest to this ideal are probably experiments that have been conducted about the effect of different modifications to the AFDC in the United States. In these experiments families in the treatment group were subject to the new rules (conditions related to child school attendance for example), while control group families received transfers according to the “old” AFDC rules. The majority of the impact

23 Result of this study shows that participants in the CCT group were enrolled in school, on an average, for 0.54 trimesters longer than the members of the control group (significant). The effect measured in the CCT groups is twice as high as in the UCT group.
studies evaluate the effect of conditional transfers against no treatment, and do not allow to quantify the effect of the conditionality itself.

Other experiments vary some design parameter, for example the amount or the timing of transfer. A rich study in this respect is the paper by Levitt et al. (2011), who analysed experiments in three low-performing school districts around Chicago, where participants were elementary school students (2nd-8th grade) and high-school sophomores. Incentives for improvements on baseline scores were announced immediately before the regularly scheduled sessions of standardized tests. Several types of incentives were tested (low financial, high financial, non-financial), which were either framed as gains or losses and were distributed either immediately after the test either delayed (by a month). Results of randomised impact evaluation show that incentives had an effect on test scores but there was substantial variation in effects according to the design and student characteristics. Incentives framed as losses had a consistently large effect, while gains had large effect in two districts, but no effect in the 3rd. Financial and non-financial incentives had the same effect for younger students, but older students were more responsive to financial incentives. Delayed incentives, which were paid a month later had no effect on student test scores.

Other experiments allow to compare the effect of financial incentives and social services. In the US several negative incentive programmes combined sanctions with social services, case management, and positive financial incentives. Such programmes include Cal-Learn (California), Learning, Earning and Parenting (LEAP, Ohio), San Diego County’s School Attendance or the Teenage Parent Demonstration Project (TPDP) in New Jersey and Chicago. The evaluation of the Cal-Learn program offers the possibility to investigate whether financial incentives or the effects of social services (case management) were more important in changing recipients’ behaviour. In this study young people entitled for social provisions were randomly assigned into four groups: a group receiving full provision (case management services and the financial awards and sanctions), a group receiving only case management services, a group benefiting only from financial awards and sanctions, while the fourth group was control (Mauldon 2000). Among those who received full provisions the ratio of secondary school graduates was 7 points higher than in the non-treated group (31% compared to 24% in the control group). Financial incentives and case management, investigated separately had similar impact on graduation, though the impact was significant only in the case of the financial incentives (3.7 points), while in the case of case management it was not
significant (3.2 points). In summary we can conclude that the two components of the transfer contributed almost equally to the overall impacts of the program. Since the complex impacts of the transfer were more or less equal with the sum total of the two program components, we can also conclude that no significant synergic impact (inter-action) can be detected.

Some scholarship programs in tertiary education also combine financial incentives with services, such as mentoring, counselling, supplemental instruction etc. The study by Angrist, Lang and Oreopoulos (2009) allows to compare the effects of these two kind of treatments. They studied the effect of financial incentives and academic services at a large Canadian university (STAR program). One treatment group was offered academic services (mentoring, supplemental instruction), a second group was offered an opportunity to win a merit scholarship. A third group of students were offered both the scholarship and academic services, while the fourth group was control. The amount of the scholarship varied according to high school grade but lowest quartile students could earn 5000 USD (a year’s tuition) if had a B average. Students receiving scholarship alone earned grades about 1.8 percentage points higher than students in the control group, while those with combined treatment earned grades 2.7 points higher than controls (both significant effects). These estimates suggest that the combination of services and scholarships had a larger impact than money alone. By the end of the first year, the immediate effect of scholarship on grade average had faded, while the effect of the combined treatment remained large and significant and persisted into the second year as well. Thus, the combined treatment appears to have generated a robust improvement in performance that extended beyond the one-year period when the fellowships were awarded. Reviewing literature on the effects of college aid programs Demming and Dynarski (2009) assert that the effect of aid seems to be greater than that of services and that aid has a larger impact when combined with services.
4. Conclusion

Conditional cash transfers are targeted financial transfers that aim at reducing poverty and motivate human capital investment of disadvantaged families. They have been adopted in many Latin American and Asian countries and are also part of the welfare system of several high-income countries. In this paper we reviewed conditional transfer programs operating in high-income OECD countries and also results of impact evaluations of such programs.

We have seen that impact studies found mixed results for all major types of programs. Positive impacts and null effects were found in every broad program design category (positive or negative incentive, conditioning on behaviour or outcome). These results suggest that other program-design details (such as targeting, transfer size, monitoring of condition, sanctioning) and implementation quality are also important in determining impacts. Some experiments do allow to compare design options but more research is needed in this area in the form of experiments where impacts of differently designed treatments can be tested in uniform framework. More research is also needed on the very effect of conditionality, separate from other program elements.

Another question is whether the estimated program impacts are large enough to justify public policy employing financial incentives. According to the critics of these cash transfer programs, the size of the average impacts is modest (Slavin, 2009) and more significant impacts could have been generated from the same budget with different interventions, for example, by improving the level of preparedness of the teachers and the equipment of the schools, or by making schooling free, subsidising the purchase of school supplies and transport.

It has to be added, that in this review the main interest was in behavioural effects of conditional cash transfers and not the general desirability of such programs. Even if these programs had the intended effects they might be judged undesirable from a fairness perspective. Negative incentive (Learnfare-type) conditional cash transfer programs were especially criticised for their selectively paternalistic nature, their intent to sanction “bad” behaviour only in case of poor households (Cantillon and Van Lanker 2011).
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Ray Marshall Center for the Study of Human Resources at The University of Texas at Austin November 2002


Table 1. A rough categorization of experiments and programs reviewed

<table>
<thead>
<tr>
<th>Conditioning on behaviour (eg. enrollment, attendance, homework etc.)</th>
<th>Conditioning on performance (eg. grades, credits, test scores, graduation)</th>
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<td><strong>Health</strong></td>
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<td>Negative incentive</td>
<td>Positive incentive</td>
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<td>Opportunity NYC</td>
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<tr>
<td>Learnfare (Wisconsin)</td>
<td>Opportunity NYC</td>
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<td>Learnfare (Ohio)</td>
<td>LEAP* (UK)</td>
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<td>ACT (Texas)</td>
<td>Cal-Learn* (Ohio)</td>
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<td>ABC (Delaware)</td>
<td>Quantum Opportunity*</td>
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<tr>
<td>SADP (San Diego)</td>
<td>Opportunity NYC</td>
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<tr>
<td>Cal-Learn* (California)</td>
<td>Cal-Learn* (California)</td>
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<tr>
<td>LEAP* (Ohio)</td>
<td>Quantum Opportunity*</td>
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<tr>
<td>TPDP* (New Jersey, Chicago)</td>
<td>Opportunity NYC</td>
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<td></td>
<td>Cal-Learn* (California)</td>
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<td>EMA (UK)</td>
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<td>The Paper Project (Chicago)</td>
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<td>Achievement Awards (IL)</td>
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<td>Monthly Grade Stipend (US)</td>
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<td></td>
<td>Quantum Opportunity*</td>
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<td>TELS (Tennessee)</td>
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<td><strong>Tertiary schooling</strong></td>
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<td></td>
<td>Ohio College Opportunity Grant</td>
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<td>Wisconsin Scholars Grant</td>
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<td>Opening Doors Louisiana*</td>
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<td>Opening Doors Ohio</td>
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<td>Opening Doors NYC</td>
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<td>Opening Doors New Mexico*</td>
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<td>STAR* (CAN)</td>
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<td>Opportunity Knocks* (CAN)</td>
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<td>Foundations for Success* (CAN)</td>
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<td></td>
<td>Univ of Amsterdam (NLD)</td>
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</tbody>
</table>

Note: programs marked with asterisk include an important service element, not only financial incentives.
## Table A1. Summary of randomised evaluation studies reviewed

<table>
<thead>
<tr>
<th>Intervention and study</th>
<th>Treatment</th>
<th>Targeting</th>
<th>Financial award/penalty with condition</th>
<th>C</th>
<th>Effect</th>
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<tbody>
<tr>
<td><strong>Health</strong></td>
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<tr>
<td>Opportunity NYC</td>
<td>Financial incentive</td>
<td>-families with children, -incomes below 130% of the federal poverty level</td>
<td><strong>Reward:</strong> -20$/month for keeping HI coverage -50$ if children remain covered -$200 for annual checkups, evaluation of children under 30 months old -$100 for preventive dental-care, follow-up visit</td>
<td>B-H</td>
<td>No effect on % visiting doctor overall +4 points in % of visiting doctor -3 points decrease in % of those having period without HI coverage. +10 points in % having at least two dental visits</td>
</tr>
<tr>
<td>(Riccio et al. 2010)</td>
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<tr>
<td>Primary Prevention Initiative</td>
<td>Financial incentive</td>
<td>-AFDC recipients</td>
<td><strong>Penalty:</strong> 25$ monthly penalty if preventive health care services including vaccinations are missed within the specified time</td>
<td>B-H</td>
<td>No difference in mean number of visits and vaccination rates between program and control groups</td>
</tr>
<tr>
<td>(Minkovitz et al. 1999)</td>
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<tr>
<td>Preschool Immunization Project Georgia</td>
<td>Financial incentive</td>
<td>-AFDC recipients</td>
<td><strong>Penalty:</strong> up-to-date immunization status semi-annually for children 6 or younger</td>
<td>B-H</td>
<td>Children in the program group were significantly more likely to be current on at least for of their vaccinations</td>
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<tr>
<td><strong>Primary, secondary schooling.</strong></td>
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<tr>
<td>Wisconsin Learnfare (Dee 2011)</td>
<td>Several changes to AFDC, including school attendance</td>
<td>AFDC eligible teens (13-19 y, parents or living with parents, no HS diploma</td>
<td><strong>Penalty:</strong> $60-190 in case of two unexcused full-day absences/month</td>
<td>B-E</td>
<td>+0.132 (+3.7%) in months enrolled</td>
</tr>
<tr>
<td>Ohio, Learnfare (Greenberg and Shroder 2003)</td>
<td>Financial sanction</td>
<td>School age children of families on public assistance</td>
<td><strong>Penalty:</strong> deduction of student’s benefit if they had at least 2 unexcused absences per month at least on the occasion during the school year</td>
<td>A</td>
<td>+0.07 school day per month of attendance at larger, urban site, +0.17 school day at smaller rural site</td>
</tr>
<tr>
<td>Cal-Learn (Mauldon 2000)</td>
<td>3 treatment groups: 1) Full: services + incentives 2) services only 3) incentive only</td>
<td>Pregnant or custodial teen parents, not graduated</td>
<td><strong>Bonus and Penalty</strong> -100$ bonus to the family welfare check for satisfactory progress -100$ for unsatisfactory progress or dropout 500$ bonus for the teenager in case of graduation</td>
<td>B-E</td>
<td>Positive effect on graduation (GED):Full CL: +7 points (115%), Financial incentive only: +3.7 points (61%) Services only: +3.2 points (52%), non signif. Negative effect on dropout: Full CL: –9.8 point s (19%) Financial only:–7.6, Services only –5.8, non signif.</td>
</tr>
<tr>
<td>Achieving Change for Texas (Schexnayder 2002)</td>
<td>3 groups: 1)Time limit only 2)Expanded eligibility+ Personal responsibility 3)1+2</td>
<td>Recipients of TANF</td>
<td><strong>Penalties:</strong> ranging from $25 to $75 per month, or up to $125 for two-parent families.</td>
<td>B-A</td>
<td>No effect on school attendance and immunization rates</td>
</tr>
<tr>
<td>Learning,</td>
<td>Financial incentive*</td>
<td>Teen parents</td>
<td><strong>Reward and Penalty:</strong></td>
<td>A</td>
<td>First-year:</td>
</tr>
<tr>
<td>Study</td>
<td>Incentive Details</td>
<td>Reward Details</td>
<td>Impact</td>
<td>Notes</td>
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</tr>
<tr>
<td>Earning and Parenting (Bos and Fellerath 1997)</td>
<td>Social services (case management)</td>
<td>62$ per enrolment and 62$/month for regular attendance (no more than 2 unexcused absences and 4 total absences per month) - 62$ from welfare checks if not attending regularly</td>
<td>C</td>
<td>+0.6 months enrolled in high school in 3 years after randomization: +4.6 points ever completed grade 11 Effect on graduation is mixed (only for those attending HS at randomization)</td>
<td></td>
</tr>
<tr>
<td>School Attent. Demonstrati on P. (Jones et al. 2002)</td>
<td>Financial incentive + social services (case management if needed: service broker, advocate, attendance monitor)</td>
<td>Penalty: Teen deleted from parent's assistance grant if attendance fell below 80% for two consecutive months and did not attend orientation meeting.</td>
<td>B - E</td>
<td>-% of those complying with attendance requirement increased by 3-9% No effect on graduation rate</td>
<td></td>
</tr>
<tr>
<td>Teenage Parent Demonstrati on Project (Maynard 1993)</td>
<td>Financial incentive and services (intensive case management)</td>
<td>Penalty: Reduction of AFDC grant generally $160 in New Jersey and $166 in Chicago if the client persistently failed to participate in required activities.</td>
<td>B - E</td>
<td>+12 points (12%) in school enrolment but it did not improve average reading or math skills. Only one of the three TPD programs increased the high school graduation rate.</td>
<td></td>
</tr>
<tr>
<td>A Better Chance Delaware (Fein et al. 2001)</td>
<td>Work incentives + parentin g requirements + family cap</td>
<td>Penalty for 15% or fewer unexcused absences or local districts set own standards.</td>
<td>B - A</td>
<td>Weak effect of sanctions on changing behavior in education.</td>
<td></td>
</tr>
<tr>
<td>Opportunity New York City (Riccio et al. 2010)</td>
<td>Financial incentive</td>
<td>Reward: 25$ a month if attended min. 95% of school days (50$ in high-school) - 300$-350$ for proficiency level score on annual math, English test - 600$ for 11 credits per year and for passing Regents exam - 400$ bonus at graduation.</td>
<td>B - E</td>
<td>No effect on attendance rates for 4th and 7th graders +5 points attending 95% for 9th graders no effect of the program on test scores of 4th and 7th graders.</td>
<td></td>
</tr>
<tr>
<td>Earning By Learning Dallas, (Fryer, 2011)</td>
<td>Financial incentive every 2nd and 4th grader</td>
<td>Reward: $2 for each completed Accelerated Reader (AR) quiz with at least 80 percent of questions answered correctly.</td>
<td>B</td>
<td>-Zero effect on state Math and reading test score -effect on number of books read could not be observed.</td>
<td></td>
</tr>
<tr>
<td>Spark, New York (Fryer, 2011)</td>
<td>Financial incentive to 4th and 7th grade students</td>
<td>Reward: $25/assessment max. in 4th grade $50/assessment max in 7th grade $5 (4th grade) $10 (7th grade) for taking an assessment.</td>
<td>P</td>
<td>Small, nonsignificant effect on Math and Reading state assessment scores -significant negative effect on incentivized tests (eg. −0.115σ (0.047) in math for 7th graders)</td>
<td></td>
</tr>
<tr>
<td>The Paper Project Chicago (Fryer, 2011)</td>
<td>Financial incentive target 9th graders in HSs with the lowest graduation rates</td>
<td>Reward: $50 for each A, $35 for each B, $20 for each C, and $0 for each D in English, maths, science, social science, and gym. In case of an F temporarily “lost” all earnings up to 100$ for the successful completion of standardized testing.</td>
<td>P</td>
<td>Small, nonsignificant effect on Math and Reading state assessment scores - modest impact on grades: 0.093σ (0.057) in GPA and 1.979 (1.169) credits earned.</td>
<td></td>
</tr>
<tr>
<td>Coshocton, Ohio, (Bettinger, 2010)</td>
<td>Financial incentive all students in grades three through six became</td>
<td>Reward: up to 100$ for the successful completion of standardized testing.</td>
<td>P</td>
<td>+0.13 standard deviations in maths scores , effect in other subjects small and imprecisely estimated</td>
<td></td>
</tr>
<tr>
<td>Levitt et al. (2011)</td>
<td>Financial and non-financial incentives elementary school students</td>
<td>Rewards: low financial (10$), high financial (20$), non-financial incentives for improvements on baseline scores.</td>
<td>P</td>
<td>-Incentives framed as losses had large effect, while gains had large effect in two districts, but no effect in the 3rd.</td>
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</tr>
</tbody>
</table>
Appendix Table A2. Summary of randomised evaluation studies reviewed in postsecondary education

<table>
<thead>
<tr>
<th>Intervention and study</th>
<th>Treatment</th>
<th>Targeting</th>
<th>Financial award/penalty with condition</th>
<th>Cond.</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wisconsin Scholars Grant Goldrick-Rab et al. (2011)</td>
<td>Financial aid (needs-based grant)</td>
<td>Residents of Wisconsin, enrolled in public university, receiving Pell-grant, having unmet need</td>
<td>1750 USD per semester up to ten semesters, with the requirement that they register for 12 credits per semester</td>
<td>B-A P</td>
<td>+6.3 points (28%) in the percentage of those earning 60 credits (in 4 semesters).</td>
</tr>
<tr>
<td>Opening Doors Louisiana Barrow et al 2012</td>
<td>Financial aid, improved counseling and monitoring</td>
<td>- 18 to 34 years old; parent of at least one dependent child &lt;19y; - family income below 200% of the federal poverty line. - earned HS diploma, GED or a passing score on a college entrance examination.</td>
<td>up to 1000USD for each of two semesters if they enrolled at least half time and maintained a C or better average (supplement to Pell grant or other grants)</td>
<td>B-A P</td>
<td>+1.1-1.2 credits during first and second semester +3.7 credits over the first 2 years +11 points (+23%) having 2.0 GPA in first semester</td>
</tr>
<tr>
<td>Opening Doors Ohio</td>
<td>Financial aid, Age 18+, zero expected family contribution (EFC),</td>
<td></td>
<td>1800USD in each of two semesters if completed 12 or</td>
<td>B-A</td>
<td>+2.0 credits earned during first year (+14%)</td>
</tr>
<tr>
<td><strong>Cha and Patel 2010</strong></td>
<td>Financial aid</td>
<td>Pell-grant eligible students aged 22–35 years old who participated in developmental education</td>
<td>1300USD per semester (in three increments) for two semesters if they completed at least 6 credits with a C or better in each course</td>
<td>P</td>
<td>B-A-P</td>
</tr>
<tr>
<td><strong>Opening Doors New York Richburg-Hayes et al. 2011</strong></td>
<td>Financial aid and services</td>
<td>low income (pell-grant eligible) freshmen between the ages of 16–26 years.</td>
<td>1000USD per semester up to four terms if students earned at least 12 credits with average of C and at least 15 credits in subsequent terms</td>
<td>B-A-P</td>
<td>-no effect on first semester credits earned +0.6 credits earned in second semester</td>
</tr>
<tr>
<td><strong>Foundations for Success MacDonald et al. (2009)</strong></td>
<td>Financial aid and services</td>
<td>Students enrolled full-time, at-risk of not completing the program, beginning college in Ontario, Canada, 2007–2008</td>
<td>$750 each of three semesters for 1) obtaining 2.0 GPA or higher, 2) eligible to continue in a full program, and 3) completing at least 12 hours of tutorial, case management, or career workshops</td>
<td>B-A-P</td>
<td>-effect on first semester gpa not signif. +0.12 second semester gpa</td>
</tr>
<tr>
<td><strong>STAR program Angrist, Lang and Oreopoulos (2009)</strong></td>
<td>academic services+ merit scholarship or both.</td>
<td>All first year students in 2005 except those with high school GPA in the upper quartile</td>
<td>The amount varied by high school grade but lowest quartile students could earn 5000 USD (a year’s tuition) if had a B average.</td>
<td>B-A-P</td>
<td>-scholarship only: +1.8 points higher grades -combined treatment: +2.7 points higher grades -effect of scholarship faded by the end of the 1st year, effect of combined treatment remained large and significant</td>
</tr>
<tr>
<td><strong>Opportunity Knocks Angrist, Oreopoulos, Williams (2010)</strong></td>
<td>Financial incentive and services</td>
<td>Eligible students are those who had requested financial aid, and who had enrolled for at least 1.5 credits for the upcoming fall term.</td>
<td>100$ for each class where they had a grade equal or above 70, and additional 20$ for each additional percentage point above this threshold</td>
<td>B-A-P</td>
<td>-Treated 2nd year students earned 13% more —no change in GPAs. —no impact on outcomes one year later</td>
</tr>
<tr>
<td><strong>Leuven et al. (2010)</strong></td>
<td>Financial incentive</td>
<td>First year economics and business students at the University of Amsterdam in 2001–2002</td>
<td>-large reward group: €681 if collected 60 credit points in one year -small reward group: €227 for earning 30 credits.</td>
<td>B-A-P</td>
<td>Average effect small and not significant.</td>
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Information on the GINI project

Aims

The core objective of GINI is to deliver important new answers to questions of great interest to European societies: What are the social, cultural and political impacts that increasing inequalities in income, wealth and education may have? For the answers, GINI combines an interdisciplinary analysis that draws on economics, sociology, political science and health studies, with improved methodologies, uniform measurement, wide country coverage, a clear policy dimension and broad dissemination.

Methodologically, GINI aims to:

- exploit differences between and within 29 countries in inequality levels and trends for understanding the impacts and teasing out implications for policy and institutions,
- elaborate on the effects of both individual distributional positions and aggregate inequalities, and
- allow for feedback from impacts to inequality in a two-way causality approach.

The project operates in a framework of policy-oriented debate and international comparisons across all EU countries (except Cyprus and Malta), the USA, Japan, Canada and Australia.

Inequality Impacts and Analysis

Social impacts of inequality include educational access and achievement, individual employment opportunities and labour market behaviour, household joblessness, living standards and deprivation, family and household formation/breakdown, housing and intergenerational social mobility, individual health and life expectancy, and social cohesion versus polarisation. Underlying long-term trends, the economic cycle and the current financial and economic crisis will be incorporated. Politico-cultural impacts investigated are: Do increasing income/educational inequalities widen cultural and political ‘distances’, alienating people from politics, globalisation and European integration? Do they affect individuals’ participation and general social trust? Is acceptance of inequality and policies of redistribution affected by inequality itself? What effects do political systems (coalitions/winner-takes-all) have? Finally, it focuses on costs and benefits of policies limiting income inequality and its efficiency for mitigating other inequalities (health, housing, education and opportunity), and addresses the question what contributions policy making itself may have made to the growth of inequalities.

Support and Activities

The project receives EU research support to the amount of Euro 2.7 million. The work will result in four main reports and a final report, some 70 discussion papers and 29 country reports. The start of the project is 1 February 2010 for a three-year period. Detailed information can be found on the website.

www.gini-research.org