Evaluating the Cost-Effectiveness of Conditional Targeted Social Assistance Program in Kazakhstan

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POLICY ANALYSIS EXERCISE
Submitted in Partial Fulfilment of the Requirements for the Degree of Master of Public Policy

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Nur-Sultan, 24 April 2020

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ABSTRACT

Kazakhstan's Conditional Targeted Social Assistance (CTSA) program is a large-scale workfare program that targets poor people, who are able to work. This study evaluates the cost-effectiveness of the CTSA program in delivering 1 tenge of benefits to the poor. For this purpose, the framework for rapid appraisal of workfare programs has been modified to employ qualitative methods to estimate components of the cost-effectiveness ratio (CER). The study results suggest that under the CTSA it takes from 6.17 to 9.26 tenge to increase the current earnings of the poor program participants, which is significantly more compared to similar workfare schemes in other countries. Benefit 'leakage', low share of benefits received by the poor and problems with program design have negatively affected the cost-effectiveness ratio. Better targeting, stronger linkage to other interventions and introduction of 'graduation' mechanism might improve the performance of the CTSA program in a long run.

LIST OF ACRONYMS AND ABBREVIATIONS

B/G	Benefits to Government Outlays
CB/G	Current Benefits to Government Outlays
CCT	Conditional Cash Transfers
CEC	City Employment Center
CER	Cost-Effectiveness Ratio
CTSA	Conditional Targeted Social Assistance
EC	Employment Center
IB	Indirect Benefits
KPI	Key Performance Indicator
MLSP	Ministry of Labor and Social Protection of the Republic of Kazakhstan
MTC	Means Testing Commission
NW	Net Wage
TSA	Targeted Social Assistance
UCT	Unconditional Cash Transfers
UTSA	Unconditional Targeted Social Assistance

INTRODUCTION

Even though Kazakhstan's economy has grown dynamically over the last decade, not everyone has been able to benefit from the increasing prosperity. In fact, close to 5% of the population (reaching 12% in the southern regions) live below the so-called 'subsistence minimum', which is a legislatively defined poverty line.[1] Despite being technically eligible for income support, only a small fraction of low-income families received targeted social assistance in 2017 (MLSP, 2018). In a "Quality of Life" survey that interviewed 12,000 households in 2017, a third of all respondents reported that they could not afford a visit to a private healthcare facility, while 4% (which is consistent with the share of population living below the subsistence minimum) had not enough income to buy food (Committee of Statistics, 2017).

Since independence, Kazakhstan has undergone a painful transformation from a Soviet welfare system of privileges to a neo-liberal social protection regime, which targets the poorest groups of population (Maltseva, 2015; Marx & Nelson, 2013). Several studies demonstrated that the social assistance mechanism in place did not provide enough support to cover the basic needs of the poor in Kazakhstan (UNICEF 2015; Marx & Nelson, 2013). Moreover, the negligible size of social allowance cannot be seriously considered to improve wellbeing of people in question (Ibid).

Background

Until recently Kazakhstan's social protection system provided income support to a fraction of eligible poor households, which generated limited welfare impact. After piloting a Targeted Social Assistance (TSA) in three regions of Kazakhstan in 2016, the Ministry of Labor and Social Protection (MLSP) introduced a revised TSA scheme that conditioned social benefits to poor people on the fulfillment of a work requirement (Kursiv, 2018). This Conditional TSA (CTSA) program was intended to provide lasting income support to poor households with able-bodied family members that were able to work through a combination of 'workfare' and social transfers. In 2018 the amount of transfer under the workfare scheme was calculated as the difference between the per capita household income and official poverty line, which was legislatively defined as 50%

[1] "Share of population living below the subsistence minimum." Committee of Statistics of the Republic of Kazakhstan. Retrieved from http://stat.gov.kz/faces/wcnav_externalId/homeNumbersLivingStandart?_afrLoop=5676817083172723#%40%3F_afrLoop%3D5676817083172723%26_adf.ctrl-state%3D19bpcwr4x8_63

of an official subsistence minimum (changed to 70% in 2019).[2] As of 1 January 2019 almost 400,000 individuals received benefits under the new workfare program, with an average per capita monthly transfer equal to 4804 tenge.[3]

Reduction of poverty is one of the key policy objectives for any country, including Kazakhstan. Here, the poorest households of the lowest quintile also happen to be households with multiple children (3+). Studies suggest that poverty not only affects children disproportionately but could also have life-long implications in terms of poor health, education, and low income. (Fernald et al, 2008; Hughes & Tucker, 2018). Therefore, it is important to assess large social assistance programs administered by the government like CTSA, which amounts to more than a quarter of all social assistance budget (Ministry of Finance, 2020). The purpose of this PAE is to evaluate the cost-effectiveness of the Conditional TSA in Kazakhstan, or, in other words, find out how much does it cost to transfer 1 tenge of benefits to the poor. The rationale for this evaluation being that the poor "benefit from good evaluations, which weed out defective antipoverty programs and identify good programs" (Ravallion, 2007, p.7). As the first attempt to apply a framework for rapid appraisal of workfare schemes in Kazakhstan, the results of this PAE could be beneficial for design and implementation of other state programs.

[2] "Law on Targeted Social Assistance No.246" as of 17.07.2001. Retrieved from http://adilet.zan.kz/rus/docs/Z010000246

[3] "On Social Assistance as of 1 January 2019." Ministry of Labor and Social Protection of the Republic of Kazakhstan. Retrieved from http://www.enbek.gov.kz/ru/node/358169

LITERATURE REVIEW

There is no single definition of 'workfare', a term that was introduced by the Nixon administration in the 1960s (Lødemel, & Trickey, 2001). However, most researchers agree that workfare's main features include obligation to work, focus on employment, labor market activation and connection to receipt of social assistance (Ibid). Compared to social insurance that is concerned with redistribution of income between different social groups, workfare is laden with normative values about who deserves what and why. In the last twenty to thirty years, workfare has become more prominent as a social policy tool to promote self-reliance through work to an increasing number of social assistance recipients in developed countries in the North America and Western Europe (Lødemel, & Trickey, 2001).

How does workfare work?

Workfare, sometimes known as 'welfare-to-work', has become a 'new' social protection scheme for the working poor in a growing number of countries. Workfare programs work on three levels: develop skills, create public assets, and transfer income (Beazley & Vaidya, 2015; Tang & Cheung, 2007). According to Ravallion (2019), "workfare is an example of a class of policies that apply behavioral conditions for participation" (p. 212). In other words, if in traditional welfare programs social benefits were available to recipients by virtue of being a citizen, in workfare they have become conditional on the fulfillment of obligations to society (Handler, 2004). The main objective of workfare programs in middle- and low-income countries is essentially to prevent not only present but also future poverty by trying to equip participants with skills and 'work habits' that would help them along with creating assets (roads, schools) in the poor areas (Ravallion, 2019). In low resource settings due to the budget constraints, workfare is strongly associated with the development and creation of opportunities. If traditional welfare is concerned with equality of outcomes, workfare focuses on equality of processes or opportunities (Beazley & Vaidya, 2015).

The major distinction between the workfare and welfare is that workfare is only available to those who are willing, available, and able to work. Ravallion argues that workfare is more labor intensive than welfare because it "attaches positive value to employment of poor people, independently of the gains to society as a whole from the outputs obtained from that employment" (1999, p.4). Workfare responds to the risk of welfare dependency, promotes the value of work as a means of

living, and places greater responsibility of looking for a job on the unemployed (Beazley & Vaidya, 2015).The rationale for administering a 'workfare' program in countries with high income is that unemployment is temporary and therefore benefits should also be temporary, with an assumption that employment is the main route out of poverty for those who can work (Ibid). The main argument of workfare supporters is that welfare recipients lack the motivation to leave welfare and move to the labor market and work in the plenty of jobs that are available for those willing to work (Handler, 2004; Tang & Cheung, 2007). Once the recipients choose to stick to a job, they will eventually move up the employment ladder and will stay out of poverty. However, according to Handler (2004) these assumptions do not take into account the nature of the wage jobs that are commonly available for workfare participants. Irregular working hours, unstable employment and high turnover makes it difficult to advance up the employment ladder (Ibid).

In a classical research article that compared arguments in favor of work requirement in poverty alleviation programs, Besley and Coate (1992) outlined the major two as (1) a 'screening' argument and (2) a 'deterrent' argument. The former insists that work requirements improve self-targeting of recipients when program conditions are set up in such a way that only the truly needy apply for it. There is a caveat for developing countries, as it might be difficult and expensive to employ quasi-means testing schemes or maintain extensive administrative machinery because of resource constraints. In addition, an information constraint makes it a challenge to assess citizens' 'earning opportunities' and whether people ended up in this state voluntarily to benefit from welfare (unconditional) payments (Besley & Coate, 1992, p.250). The 'deterrent' argument suggests that welfare payments "have reduced individuals' incentives to acquire the human capital necessary to avoid poverty and may even have led to irresponsible parenting decisions" (Ibid, p.250). The argument maintains that people ended up poor because of bad choices that they made earlier, and social assistance might only reinforce this behavior and choice. The concern that severing the link between work and income would erode the work ethic has featured prominently in the U.S. social policy debate (Handler, 2004). Mead (1986) among others has argued that social assistance should come not as an entitlement but as an obligation and thus workfare reduces the welfare dependency culture.

Conditional Cash Transfers

Conditional cash transfers (CCT) belong to the same class of social policies as workfare and provide income support to poor households contingent on certain desirable behaviors, like sending children to schools and visiting health centers (Rawlings & Rubio, 2005; Ravallion, 2019). CCT are a new generation of anti-poverty programs that intend to boost the demand-side of the intervention in comparison to the more traditional supply-side interventions for education and health, which are often underutilized by the poor (Rawlings & Rubio, 2005). CCT strive to address several criticisms of traditional safety net programs: high overhead costs, weak poverty targeting, overlaps and paternalism and short-term orientation (Ibid). CCT signifies a transition from redistribution of income to the poor and vulnerable in the time of crisis to a longer-term investment into human capital and economic growth. In the short run, CCT smooth the consumption function and in the long run contribute to the reduction of present and future poverty through the investment into human capital of children (Ibid). Another important feature of CCT is that by giving the flexibility to households to use funds as they will, CCT avoid market distortions and secondary markets that are commonly linked to in-kind transfers (Rosen & Gayer, 2014).

As already mentioned, compared to high income countries developing countries are faced with both budget and information constraints. Therefore, both unconditional cash transfers (UCT) and workfare solve these problems because they require minimum information about the recipients (Ravallion, 2019). Targeting and means testing social benefits require considerable administrative and financial resources and well-trained personnel to minimize the targeting errors (Slater, 2011). Targeting errors happen when either poor people are omitted from the social assistance or when the non-poor are included into the program. Therefore, proponents of untargeted transfers say that the inclusiveness of UCT might help to "address the social stigma of targeting," associated with programs that benefit only the poor (Ravallion, 2019, p.210). Opponents argue that the inclusion error could be significant, which is unforgivable when resources are limited (Ibid, p. 210). Thus, self-targeting tends to work well in low-resource setting, when targeting or means-testing is not employed, and as long as the workfare wage is low enough that only those in need will take it.

The case for workfare

A workfare program can reduce poverty in two ways: either by providing paid employment to the unemployed poor households or by producing assets of value to them (Ravallion, 1999). Although,

one should not ignore the trade-off in creation of durable assets in workfare that tends to make these programs less labor intensive (compared to labor intensive agricultural works); thereby, lowering the impact on current poverty (Ravallion, 2019). Moreover, while considering workfare's ability to reduce the incidence of poverty, one must be aware of the administrative costs, welfare loss and foregone income in addition to implementation and material costs associated with this type of program (Ibid). Even if workfare participants are unemployed or underemployed for some time "they will rarely be idle, especially if poor, as their survival may then be in jeopardy" (Ibid, p.212). Thus, the forgone income associated with workfare should be taken into consideration in the calculation of the net gain from the program. For instance, the evaluation of the Indian Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)[4] workfare program revealed that workers on BREGS in the Indian state of Bihar "gave up work days of what is equivalent to 40– 45% of the total BREGS employment received" (Dutta et al, 2014, p.150).

The case against workfare

Supporters of the workfare scheme emphasize its role as a poverty alleviation tool rather than a welfare maximization one (Besley and Coate, 1992). Undoubtedly, workfare income serves to smooth the consumption function, but whether it achieves other objectives stated by the program in middle-income or low-income countries is questionable. Workfare schemes tend to be more expensive than traditional welfare programs since they need to create jobs as well as provide cash transfers. Nevertheless, for politicians it is easier to 'sell' a workfare program than a welfare scheme to the constituency because "taxpayers and/or donors are more likely to support transfers to poor people if the latter do something costly in return" (Ravallion, 2019, p. 211). However, presumably, taxpayers would be less supportive of the workfare program if the current scheme is "wasteful and there are more cost-effective ways of delivering help to poor people" (Ibid, p. 211). Impact evaluations of various workfare schemes tend to reveal that these programs fall short of their objectives, giving only temporary relief to poor people (Ravallion, 2019; Dutta et al, 2014). In addition, proponents of UCT argue against conditioning transfers on work claiming that "doing so generates a static efficiency loss from poor people working too much that might have negative

[4] The Mahatma Gandhi National Rural Employment Guarantee Act (NREGA) is the largest safety net program in the world. Retrieved from http://nrega.nic.in/netnrega/home.aspx

consequences" (Ravallion, 2019, p.212) like overworked parents, who do not spend enough time with their families and children.

For Coate and Besley (1992) the screening case for workfare seems likely to be strongest criticism in the context of developing countries. In a proposition developed by these authors "[l]ow-ability individuals should be given a transfer equal to the difference between the poverty line and their private-sector earnings but should not be required to work for this transfer" (Coate & Besley, 1992, p.252). This proposition rests on assumptions that benefits from reduced payments to non-poor participants coming from workfare (public works in particular) are not offset by the reduction in private sector earnings (Ibid). On the other hand, proponents of UCT would claim that when targeting is not achievable, UCT might be a more cost-effective way to fight poverty.

Cost-effectiveness of workfare programs

Ravallion is very explicit about the difficulties in evaluating anti-poverty programs due to the concerns of internal and external validity (2007). There is an overall bias in the development literature towards presenting mostly positive rather than negative impacts of anti-poverty programs. When it comes to external validity, it becomes evident that "[c]ontextual factors are clearly crucial to policy and program performance" (Ravallion, 2007, p.51), which means that if something worked in one context, it might not work in another. When Tang and Cheung (2007) tried to investigate the effectiveness of measures to raise recipients' motivation for work and reduce their welfare dependency in Hong Kong, they encountered several limitations. First, was disentangling the effects of participation with the larger macroeconomic context. Second, in the evaluation of anti-poverty programs, it is common to evaluate the programs' impacts on participants in treatment group relative to the outcome in the group that did not receive treatment. However, in practice rarely do governments consider a 'do-nothing' alternative against the intervention that is being evaluated. It is usually assessed relative to other alternative ways of spending government funds to tackle this same problem, such as, for instance, unconditional cash transfers (Ravallion, 2007).

To address this challenge, Ravallion developed a miniguide for a rapid appraisal of workfare programs for low income and middle-income countries. The main motivation for this guide was that government and donors were looking to enhance existing workfare schemes to enhance the

schemes' impact on poverty through evaluation of their cost-effectiveness (Ravallion, 1999). The information required to perform the cost-effectiveness analysis can be obtained from household and labor force surveys, interviews with program administrators and beneficiaries in a very short time and does not require large-scale surveys. The rule of thumb for a poverty-reducing workfare program is that it "should not be supported if the total gain to the poor as a proportion of the budget is less than the percentage of households who are poor" (Ibid, p.4). In some developed economies, well-designed unemployment insurance can be more cost-effective than workfare (Ibid).

This study contributes the literature by filling a gap through evaluating workfare programs in Kazakhstan by utilizing Ravallion's (1999) framework for rapid appraisal of workfare programs in middle income countries. Our PAE tries to find out whether the CTSA program is cost-effective. Such an evaluation of workfare against other viable alternatives is equally beneficial for policymakers and the general public and could hopefully result in better anti-poverty interventions to improve the well-being of program recipients through sustained employment.

RESEARCH METHODS

This study takes a qualitative approach to evaluate the cost-effectiveness of the CTSA in one of the major cities in the southern region of Kazakhstan. For privacy issues, we use the pseudonyms 'City X' to de-identify the city and 'Oblast Y' to de-identify the *oblast* (region). Although the data requirements suggested by Ravallion's analytical framework include household and labor force surveys, as well as project budget as pre-requisites for the estimation of the ratio of benefits to government outlays, this information is not readily available. To overcome this limitation, this study employs qualitative methods to extend the analytical framework offered by Ravallion (1999) to estimate the amount of tenge spent by the government of Kazakhstan to transfer 1 tenge to a recipient of the CTSA.

Analytical framework

The cost-effectiveness ratio (CER), or "the share of government outlays to the poor" (Ravallion, 1999), can be broken down into the following components:

$$\frac{B}{G} = \frac{(G+C)}{G} \times \frac{(W+L)}{(G+C)} \times \frac{W}{(W+L)} \times \frac{NW}{W} \times \left(1 + \frac{IB}{NW}\right)$$

1 2 3 4 5

Therefore, the components are as following:

(1) *Budget leverage* - total spending on the workfare program, including private co-financing (if applicable).

(2) *Labor intensity* - the share of all wages paid.

(3) *Targeting performance* - the proportion of the wages/benefits paid to the poor workers.

(4) *Net wage gain* - the share of the gross wage/benefits after subtracting all costs of participation, including forgone income.

(5) *Indirect benefits* - public goods that benefit the poor, i.e. assets in poor neighborhoods.

It is important to note that while most indirect benefits are accumulated in the future, sometimes it is more useful to estimate only 'current benefits' over a specific period, which makes indirect

benefits non-significant. Since this PAE focuses on evaluating the CTSA program's cost-effectiveness over a 12-18 months period, only 'current benefits' or CB are used in the analysis.

Data

This study focuses on a new format of a workfare program (CTSA) in City X, even though similar programs have been administered throughout Kazakhstan since 2018. The methods used to collect data consist of: (1) semi-structured interviews with the management of City Employment Center (CEC); (2) semi-structured interviews with a program manager and consultants; and (3) short interviews with program participants - to estimate the individual components of the CER (see Appendix II). Due to the difficulty of identifying program beneficiaries and receiving their consent for interviews, this study used convenience sampling to interview program participants. First respondents were approached at the City Employment Center (CEC); however, due to initial low response rates, those respondents, who agreed to be interviewed, were asked for assistance in identifying other CTSA recipients. The interview "referral" process continued until the sample size requirement was satisfied. It should be mentioned that using convenience sampling for this study has posed a considerable risk of sampling bias and problems related to representativeness of the sample.

Data were collected in short field trips over the period of four months from October 2019 to January 2020. During the first field trip four employees (including a former employee) of the CEC and 7 CTSA recipients were interviewed. During the second round of interviews, the head of the CEC and the remaining 18 CTSA recipients were interviewed in person or by the phone. Of the total 25 participants in the CTSA program, 92% of them were female. This gender ratio is close to the actual 95% to 5% female to male ratio mentioned by the Head of the CEC during an interview (see Appendix II). The typical CTSA recipient is an unemployed Kazakh-speaking woman aged 38 or older, who has more than 4 children and in 70% of cases has no university level education. On average, participants have been enrolled in the CTSA program for 8.8 months, the longest period being 18 months and the shortest 1 month. Among the 25 interviewed participants, 3 were rejected by the Employment Center due to various reasons, while 5 (including 1 previously rejected) have been receiving a new type of TSA starting with 1 January 2020. Upon receipt of a permission all interviews were audio recorded for later transcribing.

Analysis

Collected interviews were transcribed verbatim from Kazakh into Russian. Data necessary for the estimation of the B/G ratio components such as net wage gain, labor intensity, targeting performance and current benefits were collected from the interviews with the CTSA participants and transformed into a "matrix for ordering data" (Bryman, 2016, p.579), which has been used to estimate averages and ratios. Later on, the interviews were carefully reviewed to identify the themes and patterns consistent with the analytical framework. The thematic analysis of the interviews with the management of the CEC and CTSA participants was done using NVivo to ensure a systematic approach to qualitative data analysis. Nineteen labels or 'nodes' were developed during the interview coding process, which in turn were hierarchically organized around the following themes (or 'trees'): CTSA mechanism, CTSA effectiveness, employment, and targeting performance (see Appendix IV).

FINDINGS

The goal of this PAE was to evaluate the cost-effectiveness of the Conditional Targeted Social Assistance in Kazakhstan. This section will first present an analysis of secondary data obtained from open sources. Then, individual components of the CER would be estimated from the primary data collected and then used in calculation of the CER. Lastly, a thematic analysis of interviews with program participants and program administrators would outline themes and issues identified. The survey instruments, tables and NVivo reports are available in Appendix II-IV.

Secondary data analysis: Kazakhstan

The CTSA national and local budgets help to put the CTSA program expenditure in perspective. The consolidated report of the Ministry of Finance stated that the government of Kazakhstan allocated roughly 3 trillion tenge for social spending in 2019, which after subtracting pensions left around 821 billion tenge for all types of social assistance and allowances (Ministry of Finance, 2020). The TSA made 27.5% of all social assistance expenditure in the country (Ibid).

According to the MLSP, the total number of people enrolled in the CTSA program across the country on 1 December 2019 reached 1,916,100 people with an average monthly payment of 11,957 tenge per person (see Table 1) (MLSP, 2019). Making up approximately 10% of the entire population, the number of TSA program participants is more than a double the official 4.6% of people living below the subsistence minimum.[5] For both the CTSA and UTSA, the MLSP allocated 204.5 billion tenge, where 186.1 billion tenge come from the republican budget and 18.4 billion tenge from local budgets (Forbes, 2019; Ministry of Finance, 2020). The December 2019 data indicate that the actual TSA program expenditure was over 210 billion tenge as the number of participants exceeded the baseline estimate (MLSP, 2019). During September 2019 out of 523,400 able-bodied citizens receiving CTSA, 110,200 people qualified for active labor market measures, while roughly 39% of them got employed (Forbes, 2019).

[5] A share of population with income below the subsistence minimum. *Taldau* IAC. Retrieved from https://taldau.stat.gov.kz/ru/NewIndex/GetIndex/704498

Table 1. Targeted Social Assistance in Kazakhstan (2019).

Recipients of TSA	Targeted Social Assistance		Average monthly payment, tenge	Able-bodies recipients of TSA
	Allocated budget, tenge	Actual Expenditure, tenge		
1,916,100	204.5 billion	210.4 billion	11,957	523,400

Source: Ministry of Labor and Social Protection of Population of Kazakhstan (2019), Ministry of Finance (2020)

1.1. Secondary data analysis: Oblast Y

Out of the total number of recipients, 39,000 households in Oblast Y enrolled in the CTSA program (Forbes, 2019). The *oblast akimat* reported that in 2019 the CTSA program engaged a total of 173,015 people in *Oblast Y*, while providing employment to 38,514 or 22.26% of program participants (Open Budget, 2020b). Participants in the CTSA program make up almost 89% of all TSA program participants in the *oblast* (see Table 3). The introduction of Conditional TSA mechanism first in 2018 and with substantive increase in the size of benefits on 1 April 2019 increased the number of program beneficiaries many-fold. The size of benefits and program participants tripled between 2018 and 2019 (see Table 2) as a result of larger benefits for children.

Table 2. Targeted Social Assistance in Oblast Y in 2017-2019.

Year	**2017**	**2018**	**2019**
Recipients of TSA	1,035	59,192	184,318
Monthly average, tenge	4,132	3,029	12,926

Source: Standards of Living, 3rd quarter 2019, Committee of Statistics of Kazakhstan.

Calculating cost-effectiveness

The appraisal method suggested by Ravallion (1999) actively uses secondary data that can be collected from Kazakhstan's Statistics Committee (including *Taldau* analytical system), Open Budget Portal, Ministry of Finance and MLSP, as well as from interviews with program administrators and participants (see Appendix II). Before estimating the CER, two assumptions must be made:

1. There is a link between unemployment and the risk of poverty.

2. The administrators of workfare programs attach "positive value to employing poor people, independent of the gains to society as a whole from the outputs obtained" (Ravallion, 1999, p.33).

The study focuses on the CTSA program administered in *Oblast Y* in a 12-18 months period between 2018 and 2019.

1.2. Budget leverage (B) and co-financing (C)

Table 3 combines the total CTSA program budget expenditure at the local and republican level in *Oblast Y*. There has been no indication of private co-financing. Therefore, the value of C, which stands for 'private co-financing' is set to zero.

Table 3. Budget expenditure for TSA in Oblast Y, 2019

Budget expenditure	**Actual expenditure, tenge**	**Recipients of TSA, person**			
		Actual	**Planned**	**CTSA**	**UTSA**
Transfers from the republic budget to local budget	16,451,742,600	155,290	122,110	173,015	20,953
Transfers from the National Fund	4,899,990,000	38,678	38,678		
Total	**21,351,732,600**	**193,968**	160,788	89%	11%

Source: Ministry of Finance (2020); Open Budget (2020b)

1.3. Income of program participants (W)

Unlike the large workfare programs like *Maharashtra* in India or *Trabajar* in Argentina (Adato & Haddad, 2001), the CTSA in Kazakhstan is means-tested. This measure ensures that the program only covers the population with income below 70% of the subsistence minimum (legislatively defined poverty line) per member of household, preventing the non-poor benefitting from the program. In 2019, the 70% of subsistence minimum was equal to 20,789 tenge at the republican level.[6] Literature on workfare programs suggests that the wage rate and benefits offered by the government are set at the level that does not prevent program participants from applying for a better paying job whenever one becomes available (Ravallion, 1999; Adato & Haddad, 2001; Dutta et al, 2014). The minimum wage in Kazakhstan in 2019 was 42,500 tenge, which is below the

[6] 'Paragraph' database (n.d.). Minimum salary, subsistence minimum in 2019. Retrieved from https://online.zakon.kz/document/?doc_id=1026672#pos=7;-30

average wage rate of 50,978 tenge for the unskilled (Workforce Development Center, 2019; Committee of Statistics, 2019). In our sample population in *Oblast Y* the reported average wage rate at the time of application for the CTSA was 63,390 tenge (see Appendix II). This number is consistent with an average wage of 60,000-70,000 among the CEC applicants mentioned in the interview with the Director of the CEC.

In addition, the average monthly benefit payment among the interviewed participants was equal to 83,329 tenge per household, ranging from 42,500 (the lowest) to 138,000 (the highest) tenge of benefits per household in 2019 (see Appendix II). To compare, the income per member of household in the first decile in 2018 in Kazakhstan (no regional averages available) was 303,479 tenge per person for the entire year, which (when divided by 12) is equivalent to 25,290 tenge per person on average (Committee of Statistics, 2019, p.57). Although information on the income in the first decile in Oblast Y is not available, the inter-oblast variance is not expected to be significant. All interviewed participants reported themselves in the poorest decile ranked by income per person, also the means test 'filters out' those who are not poor enough.

1.4. Net wage gain (NW)

In practice it is difficult to estimate the net wage gain and for this reason it is often set to unity (Ravallion, 1999). This step would be justifiable if all CTSA program participants would have been unemployed in the absence of the program. However, such a scenario is unlikely because people who live in poverty "cannot afford to be idle" (Ibid, p.37). Unemployed would instead help in a small family-run business or do odd jobs to generate some income. Unless in times of major economic crises, a typical unemployed person has a positive possibility of being employed either formally or informally. Thus, participation in the CTSA program would leave less time to look for a job. As a result, the net wage gain would be lower than the gross wage received (Ibid). The section below outlines the method for estimating NW.

a. *The probability of getting a job while a participant of the CTSA (P) and while not being a participant (P*).*

One of the assumptions is that being employed full-time or even part-time in a government supplied job leaves less time to look for a better-payed one. This, in turn, results in a lower net wage gain. In Ravallion's (1999) framework the probability of an unemployed person to find a job

is P* at the wage rate W* in the absence of program. Had not the CTSA program existed the potential beneficiary would earn P*W*. If a member of a household applies for CTSA program, then s/he is facing a probability P of finding a job outside the program at a wage rate W. Therefore, in the original framework the participant's expected income gain is PW* + (1-P)×W. Therefore, for the participants of the CTSA program the net wage gain would be: NW=(1-P)×W - (P*-P)×W*.

Although the data on the unemployment rate in the 1st decile is not available, the collected data indicate that 52% of interviewed recipients had an unemployed spouse/partner, while 39% of households had both heads of the household (single-parent households included) unemployed at the time of application for the CTSA (see Appendix II). The unemployment rate in Oblast Y was 4.6% in 2019 (Statistics Committee, 2020). In our case, joining the CTSA scheme does not seriously affect the probability of getting a job, as 44% of interviewees had the same job prior and during the participation in CTSA program, while only 16% got employed as part of the active labor market measures (see Appendix II). This is lower than the officially reported 22.26% participants employed through the government policies in 2019 and might be due to the small sample size (Open Budget, 2020b). For the purpose of this research, we set the probability of getting a job while being a participant of the CTSA program (P) as an average of two values ~ 20%.

b. Salary of recipients in the absence of program (W)*

In some instances, the workfare program generates a zero forgone income for the participants because there is no alternative to the employment offered within the scheme. If this is true, then the participant forgoes no income and the NW/W would be equal to 1. However, this situation is unrealistic since the official unemployment rate is below the 5%. The average salary in the absence of a program (W*) among the interviewees was identified around 75,000 tenge per month (see Appendix II).

c. Income of CTSA program participants (W).

For the purpose of this research the analytical framework has been modified for the original workfare wage (W) to incorporate the benefit component, since it becomes a major component of the household income in Oblast Y. Therefore, in our sample population the income of the CTSA participants, which consists of 'salary + benefits', is calculated as 63,390 + 83,329 = 146,719 tenge (W_1). However, according to the Minister of Labor and Social Protection the average TSA in the

country was equal to 105,000 tenge per participating household in 2019 (Kapital, 2019). To be objective, two values: 146,719 tenge (W_1) and 105,000 tenge (W_2) would be used in calculating the CER.

1.5.Percentage of Earnings to Poor/ Targeted Labor Earnings (W/W+L)

One of the objectives of interviewing the CTSA recipients was to identify the potential wage/benefit leakage to the non-poor in our sample. The wage/benefit leakage could be estimated as a proportion of misappropriated benefits within the CTSA program that was identified during MLSP audit and returned to the government to the proportion of public expenditure on the program. CTSA benefits were paid to 39,000 families in Oblast Y in 2019. The MLSP audit identified 9,632 families, who hid their real income, which would otherwise disqualify them from receiving benefits (Kazinform, 2019). As a result, the proportion of households who hid their income is estimated at one-quarter of all participating CTSA households in the oblast. In our study, one interviewee openly admitted to deceiving the managers of the Employment Center, while 16% of the interviewees reported a lower income to meet the eligibility criteria of the program, because they were employed informally and had no labor contracts and didn't pay taxes. Data from our sample indicate that the 'leakage' to the non-poor is assumed to be around 16 to 20%. We suggest using a more conservative estimates for the benefit 'leakage'.

1.6.Administrative costs

In January 2020 out of 53 people working at the CEC of City X, 18 employees, including 11 managers, 1 department head, 2 consultants and 5 assistants were directly involved into operation of CTSA program. The other half of the CEC professional staff was involved in managing other employment programs (from interview with the Director). Therefore, we assume that no more than a third of salary and administrative costs should be included in calculation. At the same time, the republican government fully covered wages of consultants and coordinators at the CEC during the 2019 budget cycle (Open Budgets, 2020b). The program consultant mentioned in her interview that the bulk of funding went to benefits, salaries and entrepreneurship grants. These activities were covered from the republican budget, while overhead costs were covered by the local budget.

Table 4. CTSA Overhead in Oblast Y, 2019

Budget expenditure category on administrative costs	**1000 Tenge**
Consultants, Employment Center	18,565
Project Assistants, Employment Center	82,159
Salary, from local budget (30%)	8,628
Administrative costs (30%)	28,665.69
Maintenance of "e-halyk" system (30%)	28,643.7
Purchase of equipment	908.8
Total	**167,570.190**

Source: Budget Implementation Report in 2019, Division of Employment Coordination and Social Programs under Akimat of Oblast Y.

1.7. Current Benefits

As the CTSA program does not offer employment that targets poor areas, both poor and non-poor benefit from such employment. During the interview process it has been identified that the jobs offered by the CEC are not necessarily labor-intensive public works, although they are relatively low paid jobs (security guard or post office jobs). In this case, Ravallion (1999) suggests that the share of social benefits (to the whole population) that target the poor (CB/SB) be set at the poverty rate in the region. While the official unemployment rate in the oblast is 5.4%, the share of self-employed people to the labor force was around 33% (Workforce Development Center, 2020). This number is close to the 39% unemployment rate in the sample population (see Appendix 2). Since we used benefits over the period of one year instead of indirect benefits that accrue in the future (and are negligible), the values in the formula are replaced with the current benefits (Ravallion, 1999). The framework uses CB/SB, where SB denotes social benefits (to the entire population) from the program, while CB/SB simply indicates the share of benefits going to the poor, which is 0.33.

Table 5 lists all the CER components that are used in calculations.

Table 5. Cost-Effectiveness Ratio Variables in Oblast Y, 2019

Variables	**Value**
Income of poor program participants (W), which is salary + benefits	(a) 146,719 tenge (b) 105,000 tenge
Administrative costs	167,570,190 tenge
Benefits of non-poor participants (L) or benefit leakage	16-20%
Income of poor in the absence of program (W*)	75,000 tenge
Probability of getting a job in the absence of program (P*)	61% (0.61)
Probability of finding a job, while enrolled in a program (P)	20% (0.2)

Government spending on a program (G)	21,351,732,600 tenge
Private co-financing (C)	0
Net wage benefits to the poor (NW)	0.157
Minimum wage	42,500 tenge
The wage rate of unskilled (informal sector) labor in 2018	50 978 tenge
Official unemployment rate in Oblast Y, 2019	4.6%
Unemployment rate among the interviewed households	39%
Share of self-employed population	33%

Cost-Effectiveness Ratio:

$$\frac{B}{G} = \frac{(G+C)}{G} \times \frac{(W+L)}{(G+C)} \times \frac{W}{(W+L)} \times \frac{NW}{W} \times \left(1 + \frac{IB}{NW}\right)$$

1 2 3 4 5

To calculate the cost-effectiveness ratio (B/G) and the ratio of current benefits to government outlays (CB/G) two scenarios were considered: scenario (a) when L or 'benefit leakage' is 16% and scenario (b) when L is 20%. Moreover, to minimize potential bias the ratios were calculated using income of the CTSA participants in sample population denoted by W_1 and average income of the CTSA participants in *Oblast Y* denoted by W_2. The components of the cost-effectiveness ratio, as well as final values are listed in Tables 6a and 6b. To review the step by step calculation process please consult Appendix I.

The value of B/G equals 0.44 to 0.5 and means that it would take from 2 to 2.27 tenge to increase the income of the CTSA participant by 1 tenge. However, since this study only uses current benefits and does not consider indirect benefits that are accrued in the future, the CB/G would range from 0.108 to 0.162, which means that to increase the income of the CTSA participant in 2019 by 1 tenge it took the government from 6.17 to 9.26 tenge on average to transfer one tenge to the poor under the CTSA program (see Table 6a and 6b).

*Table 6a. Cost-effectiveness components, when W_1=*146,719 (sample average)

Variable	**L=0.16**	**L=0.2**
Budget leverage: (G+C)/G	1	
Labor intensity: (W+L)/(G+C)	0.31	0.32
Targeting effectiveness: W/(W+L)	0.83	0.86
Net wage gain: NW/W	0.59	
Share of total benefits that goes to the poor: IB/SB	0.33	

Benefit/cost ratio: SB/(G+C)	1	
Cost-effectiveness: B/G	0.48	0.5
Cost of transfer 1 tenge to the poor (in tenge)	2.08	2
Current benefits gain per 1 tenge of program spending: CB/G, when IB=0	0.152	0.162
Cost of 1 tenge extra current earnings (tenge)	6.58	6.17

Table 6b. Cost-effectiveness components, when W_2=105,000 (official average)

Variable	**L=0.16**	**L=0.2**
Budget leverage: (G+C)/G	1	
Labor intensity: (W+L)/(G+C)	0.22	0.23
Targeting effectiveness: W/(W+L)	0.83	0.86
Net wage gain: NW/W	0.59	
Share of total benefits that goes to the poor: IB/SB	0.33	
Benefit/cost ratio: SB/(G+C)	1	
Cost-effectiveness: B/G	0.44	0.45
Cost of transfer 1 tenge to the poor (in tenge)	2.27	2.18
Current benefits gain per 1 tenge of program spending: CB/G, when IB=0	0.108	0.117
Cost of 1 tenge extra current earnings (tenge)	9.26	8.55

Thematic Analysis of the interviews with program participants and management of the City Employment Center.

While exploring the cost-effectiveness of the CTSA scheme four themes emerged during the process of interview coding: (1) CTSA allocation mechanism, (2) targeting performance, (3) CTSA effectiveness, and (4) employment.

2.1. The CTSA allocation mechanism

The head of the CEC mentioned that the purpose of the CTSA program is to involve able-bodied family members in labor activities. Although the MLSP issued very clear guidelines for the rollout of the new CTSA, the practice of CTSA allocation in *Oblast Y* has not been systematic. The program manager pointed out that in practice, eligibility based on income, which is means-tested, has been subject to interpretations by the consultants and means-testing commission (MTC). The staff interviews revealed that not all CTSA consultants were familiar with the eligibility requirements and allocation mechanism, which slowed down the process as the latter often needed to call their colleagues and superiors for consultation on cases. The interviews revealed a

discrepancy between the way income and expenditure have been calculated by the CTSA consultants. The experience of being 'groundlessly' (in applicants' opinion) rejected or having a relative being rejected has been mentioned in at least 8 interviews.

Furthermore, procedures and protocol were not properly followed, as the staff turnover has been high and institutional memory, as a result, low. The MLSP internal audit *('ministerskaya proverka')* revealed multiple mistakes: cases were not referred to the commission, applicants' documents were not checked, the system experienced delays over the recommended 7-day period. Although the consultants should act as 'gatekeepers' for those who do not meet the requirements, in practice the former fail to do this, by constantly 'escalating' cases to the superiors.

a. Application process

Over two thirds of interviewees reported that the CTSA application process was easy and they had encountered no problems with document collection and enrollment. For 23% of the respondents, the application process was affected by bureaucratic delay, long ques and difficulties documenting their eligibility. A former employee of the CEC confirmed this by pointing out that because of the temporary registration system or *propiska*, it was often difficult for family members to prove that they live together when they were registered at different locations. Their landlords refuse to register tenants in the rented accommodation to avoid paying taxes on their rental business. This has been supported in the interviews with the people, whose application was rejected due to not meeting the eligibility criteria, like obtaining temporary registration (the eligibility criteria will be discussed in more details in the section on *targeting performance*). In the same interview it has been stated that application process for people from rural areas was cumbersome, as they must obtain a veterinarian certificate that confirms all the household's livestock (that must be registered).

Twenty-five percent of CTSA participants complain about the long ques in the employment centers, two interviewees made several attempts to apply for this program over the period of 2-3 months because of the enormous crowds that overwhelmed the system. Another complain was the poor performance of the CEC's employees and the *e-halyk* database, which were not ready for the sudden inflow of people.

b. Changes to the allocation mechanism

Since its launch, the TSA program was modified twice: the first major change was in April 2019 and the last change was introduced on 1 January 2020. The latest CTSA program covers only large families with more than 4 children. By our own estimates 68% of respondents enrolled into the new scheme have 4-plus children.

c. Improvements suggested by participants

All program participants, with rare exceptions, wished for benefits to increase. Those recipients, whose benefits were reduced by 50% in January 2020, have expressed their dissatisfaction with this fact. One of the most common suggestion for an improvement, which supported nine out of twenty-five interviewees, is related not to the amount of benefits but children's education. The respondents indicated that because they are members of large families with many children, they have problems arranging pre-school and extracurricular activities for their children, because those were not guaranteed under a state package for families with more than four children and were quite expensive. It is important to mentioned that under the latest version of CTSA, large families are entitled to free transportation and meals for school age children (Office of the Prime Minister, 2020). One of the women interviewed, who has been working as a vendor at the local bazaar, suggested that the state should control the benefit utilization, as children of the CTSA recipients spent their summer vacation substituting for their parents at the bazaar.

2.2.Targeting performance

a. Eligibility criteria

The eligibility criteria overlap with the application process that will be discussed below. The program manager pointed out that CTSA applicants commonly misunderstood the eligibility criteria. Many applicants believed that having a big family qualified them for the CTSA program. However, there are many additional details that need be considered, such as property ownership and a standard of living. To make sure that only households with income below the poverty line receive benefits, a means-testing commission (MTC) visits the family and assesses their income and expenditures to finalize the decision on acceptance into the CTSA. The commission should be able to do it within 7 days. One eligibility criterion is that all members of household should be

registered in one location (house or apartment), otherwise the family member not residing is not included in the calculation. Absence of registration disqualifies some families, as the MTC would check the rent contract, the dwelling, household members and their standard of living.

One of the challenges encountered by the MTC in the region was difficulty with identifying that some households have income, when they claim zero income. Furthermore, corruption was reported by one program participants – she was asked for a bribe by a commission member for the positive decision on the CTSA.

b. Rejection from the program

The most common reason for being rejected was having per capita income above the poverty line. The CEC consultant calculates the total income in the last three months and if it exceeds the 70% of the subsistence minimum per capita, then the household is rejected. Five respondents recalled that consultants calculated annual leave allowance that was received in the last quarter and in all 5 cases it disqualified the applicants. Once rejected, they must wait for 3 months before they could re-apply. In two interviews, CTSA applicants mentioned that because of layoffs and vacation period they had overtime and it also disqualified them since they went above the poverty line.

One of the interviewed applicants was rejected because she was renting an apartment from her own brother (though officially) and the commission decided that the applicant colluded with relatives. The applicant claimed that she is living separately from her relatives because one of her children needs to be home-schooled due to health issues.

c. Benefit 'leakage'

According to the data from City X's CEC, 15,000 households applied for CTSA in the city and 7,000 applicants were rejected due to not meeting the eligibility requirements. Among the reasons mentioned by the Director were providing false information and non-eligible applicants applying to see whether they were lucky. The program managers mentioned that in some cases it is difficult to identify a family's income, which self-identifies as low-income family, while having valuable property and assets. When the employment center rejects such applicants, these applicants sometimes sue them because technically they have zero income and are eligible for the CTSA

benefits. Zero and low-income tactics has been employed by the vendors at the bazaar, who work informally, and as a result do not pay income and pension tax.

There was another case of corruption with respect to the CTSA program. An anonymous recipient mentioned that some of the bazaar workers who applied for the CTSA program were approached by a local MTC with an offer to fake their real income (exceeding the eligibility requirement) in exchange for money. The commission registered only a minimum income, increasing their chances for participation approval. Almost all interviewed participants have mentioned of being aware of the cases of fraud as "everyone is trying to find a way to get 21,000 tenge" (female, 40 years old).

2.3. CTSA effectiveness

During the interview process we attempted to find out the definition of effectiveness from those who administer the CTSA program. The Head of the CEC argued that the CTSA program is effective in helping large families with many children to meet their needs. When asked about the effectiveness criteria, he replied that they cannot evaluate the CTSA performance. This task is left up to the local authorities – *the akimat*. His opinion is in stark contrast with the opinion of a program manager and a former employee, who consider the program ineffective and 'waste of money.' A former employee revealed that the MLSP estimates the number of potential applicants for the CTSA program and obliges local authorities to fully utilize all allocated funds. The program manager believed that this program encourages "dependency culture," because to maximize net benefits some applicants register as unemployed with zero income and get substantial benefits. The average benefit size one could get if registered as unemployed was around 80,000 tenge in 2019, while the salary of a janitor, who works 40 hours per week is 50,000 tenge (interview with CEC manager). There is a strong sentiment among the interviewed employees of the CEC that the republican funds could have been used more productively as an investment into infrastructure or creation of jobs instead of "doling out" money to people, who do not work.

a. So, how helpful is the program?

One hundred percent of the interviewed participants consider the program as quite helpful, the majority of families used the money to smooth consumption, cover their basic needs in terms of education, transportation, nutrition, and clothing for children. 13% of the interviewees used benefits to cover rent, while roughly 32% of them use the money for their loan payments. In three

cases TSA benefits were used to buy livestock and as an investment into existing entrepreneurship activities. Two interviewees reported that while the program has been helpful, it did not significantly impact their wellbeing. In the words of one participant "we haven't started eating caviar with this program," as money is used to service debt and cover basic needs (female, 45 years old). While no one is getting rich with this program, many families rely on it for survival.

b. Problems encountered

The interview with the Director of CEC revealed that the electronic database 'e-halyk' was not ready for the large number of applicants when the program has been announced. Later the technical flaws were removed by the MLSP. Some of the unemployed CTSA recipients, who agreed to obtain new skills, were referred to the training program by the CEC. Those program participants often complained that sometimes a couple of months would pass before they could start the training program. While waiting for training to start, they received no benefits, as those were tied either to employment or training. The management confirmed that first the state commission identifies the training centers and the number of potential students, then the employment centers sign contracts with the training centers and match them with program participants who need skills upgrade. This process can take two or three months to complete. One interviewee mentioned than when she consulted about applying for '*Business Bastau'* entrepreneurship program that administers small grants, she was told that because thousands of people were on a waiting list, the chances of enrolling in 2019 were small.

At least four cases had their benefits terminated in January 2020 with the rollout of the new version of CTSA. As mentioned earlier, the new CTSA mechanism focuses on assisting low income families with many children. The new scheme, in addition to the existing mechanism, has incorporated a *guaranteed social package* for two categories of children: below 6 years old and below 18 years old. (Office of the Prime Minister, 2020). Although, the threshold of 70% of subsistence minimum remained unchanged, under the current scheme children receive the same benefits as other family members. It practically reduces total benefits received by the family with three children and less.

2.4.Employment Assistance for the CTSA Participants vs Alternatives

The program manager mentioned that because there have not been enough job openings for all applicants, they either must wait for a job opening or they can register as self-employed and become eligible for the CTSA benefits. To do so one needs to register as an individual entrepreneur by opening a 'patent' with the local Tax Office. While opening a patent, one can declare only a minimum income, which is equal to minimum salary of 42,500 tenge, and therefore pay minimum tax. She further mentioned that 60% of families registered for the CTSA program were self-employed and had to legalize their activities in 2019, while only 20% of participants were involved into the '*Enbek'* program (employment and entrepreneurship development program). Another reason for the low number of job placements was that jobs offered by the CEC were not paid well. Public and social works pay slightly above the minimum salary. For the CTSA participants it would be better to register as self-employed and maximize benefits rather than enroll into low-paying public works. Four CTSA participants out of twenty-five entered employment during the program, while other four registered as individual entrepreneurs with the Tax Office. The self-employed interviewed worked in construction, trade, farming or were day laborers. Two participants received a small grant for small-scale livestock farming.

The former employee of the CEC supported the managers opinion about the shortage of jobs for all the unemployed registered at the CEC. One of the reasons being that applicants lack higher education and skills. One of the CTSA participants mentioned that since she had no education and skills, she could not find a job and had to be a stay-at-home mother. The government refers unskilled CTSA applicants to the training centers. The three months re-training program offered by the CEC trains for jobs that are not in high demand in the labor market (i.e. furniture makers, seamstresses and hairdressers). In addition to that, the CEC manager mentioned that participants referred to training centers did not choose professions that are in demand by the labor market (i.e. electrician or technician), which lowered chances of finding a well-paid job. He was also concerned that the CEC lacked leverage over companies that refused to hire the unemployed from CTSA program referred by the CEC.

When it comes to the alternatives to the participation in the CTSA program, 14% of the interviewees consider informal employment in trade, construction, and farming (including seasonal works) as a viable alternative. Another 43% of CTSA participants would hold the same

employment/position in the absence of the program, while 29% would be self-employed. Among the alternatives, vending at the bazaar is the most frequently mentioned/desired type of employment.

DISCUSSION

In this section, we focus on evaluating how various components of the CER affected the proportion of current benefits to government outlays (CB/G). In addition, the CTSA program is compared to similar CCT programs in South Africa and a stylized workfare program in a middle-income country based on World Bank data.

1. How much does it cost to transfer 1 tenge under the CTSA program in Oblast Y?

The study of the cost-effectiveness of the CTSA program calculated the value of B/G to range from 0.44 to 0.5, implying that it took the government 2 to 2.27 tenge to increase the income of the CTSA program participants by 1 tenge. When indirect benefits (IB) were excluded it took from 6.17 to 6.58 tenge to transfer 1 tenge to the program participants in the sample population (W_1) and from 8.55 to 9.26 tenge with the official average benefit being equal to 105,000 tenge per household (W_2).

The B/G ratio in our study is slightly above the ratio calculated by Ravallion (1999) using his framework both for a middle-income and a low-income country, which corresponded to 0.4 and 0.41 accordingly (see Table 7). In a South African study that evaluated more than 100 workfare programs, the B/G ratio was 0.40 on average, while G/B ratio (amount of South African *rands* to transfer 1 *rand* to the poor) ranged from as low as 0.81 to as high as 28.83 (Adato & Haddad, 2001, p.15). The B/G ratio in our study has fallen within the range of values derived in the context of South Africa, which is a middle-income country according to the World Bank (World Bank, 2020). However, the ratio of current benefits to government outlays and therefore the cost of increasing current earnings of the poor by 1 tenge in our study is significantly higher than Ravallion's hypothesized value for a middle-income country, which is 5 (see Table 7). This suggests that the CTSA program in *Oblast Y* is less cost-effective than a traditional workfare program in a middle-income country as Ravallion (1999) based his calculations on the data from Argentina's *Trabajar* program.

Table 7. Comparison of CER values in Kazakhstan (Oblast Y) against middle- and low-income countries and South Africa.

	CTSA program in Oblast Y L=0.16 and W_1*	CTSA program in Oblast Y L=0.2 and W_1	CTSA program in Oblast Y L=0.16 and W_2**	CTSA program in Oblast Y L=0.2 and W_2	Workfare program in a middle-income country (Ravallion)	Workfare program in low-income country (Ravallion)	Workfare program in South Africa (mean)
B/G	0.48	0.50	0.44	0.45	0.40	0.41	0.40
CB/G	0.152	0.162	0.108	0.117	0.20	0.28	N/A
Cost of transfer 1 tenge to the poor	2.08	2	2.27	2.18	2.50	2.50	6.15
Cost of 1 tenge extra current earnings	6.58	6.17	9.26	8.55	5.0	3.60	N/A

Source: Ravallion (1999), Adato & Haddad (2001).
*W_1 - average CTSA income in sample population
**W_2 - average TSA income in Kazakhstan

In our study, the B/G ratio of the CTSA program has outperformed a hypothetical untargeted cash transfer program in terms of cost-effectiveness. When the program is administered in a region with high poverty rate, then both Ravallion (1999) and Adato & Haddad (2001) suggest administering untargeted social assistance. The official poverty rate, measured as a proportion of people living below the subsistence minimum, in *Oblast Y* was 5.3% in 2019 (Taldau IAC, 2020). However, it would make more sense to measure poverty by the number of people who applied for the CTSA benefits in 2019 to the number of people in labor force (since their income had to be below the 70% of subsistence minimum to qualify for benefits). Thus, using this information, we estimate the de-facto poverty rate as 32% (173,015/533,800) (Workforce Development Center, 2020). The B/G value of 0.44-0.5 is ten times larger than a share of benefits poor people would get from a hypothetical uniform payment if measured by the official poverty rate. Even if measured by the poverty ratio of 0.32, the share of benefits under the CTSA program are 27-36% larger than under a hypothetical untargeted cash transfer (Ravallion, 1999, p.39).

When only current earnings of the participants were considered (i.e., CB/G), the CTSA program was less cost-effective than our hypothetical UCT program. This contradicts Ravallion's (1999) findings for the workfare program in the middle-income country that performed no better or no

worse than a uniform payment across the entire population. Moreover, it contrasts with the results in South Africa, where almost 90% of all workfare programs outperformed an UCT program by a wide margin (Adato & Haddad, 2001). This difference in results could be explained by a variation in values of the cost-effectiveness components and to a certain degree by the de-facto poverty rate in the oblast, which will be discussed in detail below.

2. Components of the CER decomposed

To understand why the CTSA program is not performing well compared to other workfare programs in middle-income countries one should look closely to the values of the ratio.

2.1.Targeting performance: W/(W+L)

Those who administer the workfare program commit two types of errors because of asymmetrical information: (1) inclusion and (2) exclusion (Coady et al, 2004; Slater, 2011). The design of a program, strictness of eligibility requirements greatly affects what type of error it would be. Stricter rules, more requirements potentially reduce the 'leakage' to the non-poor (or inclusion error) but at the same time might exclude the poor, who cannot provide all required information. Raising the poverty line would likely result in greater coverage and greater inclusion error. With a limited program budget, a program administrator should be aware of such a trade-off and balance policies accordingly.

The CTSA program's targeting performance value of 0.83-0.86 is lower than the one Ravallion (1999) calculated. In his model, he assumed that since the workfare wage/benefits was designed to be below the minimum wage, only those truly poor would apply to the program. Therefore, he set the value of W/(W+L) to 1, implying that there was no wage/benefit 'leakage' to the people with incomes above the poverty line (Ibid). According to the World Bank, the benefit leakage in Mexico's *Oportunidades* reached 61% at one point, while similar trends were reported in Argentina, Ecuador and Peru (Saavedra, 2016) In our study, the 'leakage' in the sample population ranged from 16 to 20%, reducing the targeting performance to 0.83-0.86. This is most likely a result of the CTSA wage/benefits set significantly above the minimum wage and the wage rate of unskilled labor in the region, which attracted not only poor people.

Another possible explanation for a 'leakage' is a high level of informality in the economy, when employment status is difficult to verify (Alik-Lagrange et al, 2017). Up to a fifth of interviewed participants worked informally or declared zero or minimum income at the employment center. Even though the CTSA program was means-tested and employed 18 staff in City X's CEC in addition to 12 consultants and 75 assistants in the oblast to ensure compliance with requirements, they could not prevent 'leakage' and verify income (Open Budgets, 2020). Moreover, some interviewees reported that they were either asked for 'grease' or knew someone who was offered by the commission to forge documents about income.

2.2. Labor intensity: (W+L)/(G+C)

The CTSA Labor intensity (0.31-0.32) in the sample population- the proportion of wages received by the poor in the total cost of the program - is lower compared to the average of 0.37 in South Africa and very close to the value of 0.33 generated by Ravallion for the middle-income country (Adato & Haddad, 2001; Ravallion, 1999). However, when labor intensity was calculated based on the average CTSA benefit in the country, it produced values of 0.22-0.23, which are significantly lower than figures in two other studies. This implies that poor CTSA participants received a lower share of transfers out of the total budget of a program. The bigger is the labor intensity, the more goes to the poor as wage/benefits, and vice versa. Lower share of wages/benefits transferred to the poor lowers the overall CER (i.e., B/G as well as CB/G).

Lower than expected labor intensity could be explained by the design of the CTSA program in Kazakhstan and *Oblast Y*. Traditional workfare programs are quite labor-intensive to generate enough employment through construction of durable assets like roads and schools. The CTSA program that conditions benefits on the fulfilment of the work requirement, nevertheless, has not involved applicants into large infrastructure or public works projects, by design. Only 16% of people in the sample as opposed to official 22.16% had benefited from participation in the *enbek* program that promotes active employment measures (Open Budget, 2020). Among those 16% who got employed, only 1 interviewee got involved into a public works program like street cleaning, while others got regular positions as security guards and post office clerks. Nevertheless, it should be noted that a project does not need to be labor-intensive to be cost-effective, which is confirmed by some workfare projects in South Africa (Addato & Haddad, 2001).

Though the CTSA program in *Oblast Y* met their active employment measure KPIs in 2019, the KPI itself is quite low. This might be due to: (a) skills mismatch in unemployed CTSA participants; (b) lack of well- and regularly paid jobs in the rural area; and (c) high levels of informality in the region. All three challenges were mentioned during interviews with the CEC former and current employees and the CTSA participants. As has been mentioned earlier, four participants opened a *patent* to register with the CEC as self-employed/individual entrepreneurs, while several of them had long been unemployed.

3. Issues with program design and implementation

An issue that affected program implementation was the high level of informality in the economy. It has been a challenge to verify employment status and source of income for families who claim zero or minimal income. Informally employed CTSA applicants are interested in reporting a minimum income, even if they earn more, to maximize the benefits. Interviews with the CEC indicates that discrepancies in application of eligibility criteria among CEC consultants and means-testing commission, varying interpretation of income resulted in inconsistent enrollment. This is due not only to lack of clear guidelines and failure to stick to a protocol, but also high CEC staff turnover, low institutional memory and to some extent corruption among the employees that was mentioned several times in the interviews.

Although the CTSA program conditioned its benefits and attached a positive value to employment, the result was less than satisfactory. Our study has indicated that some CTSA claimants prefer to register as self-employed instead of being involved into a low-paying public or so-called 'social' work. This way an applicant did not have to work but still received benefits. 'Formalizing' employment might improve employment statistics for the CEC, but it did not generate meaningful employment as no value was created. Another possible explanation might be the pressure from the central government to utilize all funds allocated to the region. It has been a common practice that a failure to 'implement' the budget leads to 'cuts' in the following budget cycle. Therefore, local authorities are inadvertently 'interested in' spending as much as possible, resulting in inefficiencies.

Another critique concerns the poverty line that has been used in all measurements. The same level of subsistence minimum was applied to all regions, although the poverty rate, average salaries,

household composition and standards of living vary substantially across regions in Kazakhstan. This might to a certain degree explain higher than expected number of applicants since the subsistence minimum in the region is lower than the republican average.

Lastly, tying benefits to temporary registration, also known as *propiska*, has resulted in considerable personal costs to some of the participating families, who spent time and resources proving that the family members live together. At the same time a number of otherwise eligible households were excluded from the program failing to provide *propiska* to the employment center. Being a vestige of Soviet legacy used for population control, temporary registration creates administrative barriers for potential program participants.

RECOMMENDATIONS

We provide several recommendations to be considered to enhance the performance of the CTSA program in *Oblast Y*. They are as follows:

1. **Enhance the targeting performance component to minimize the errors of inclusion of non-poor program participants**. First, the CTSA benefits should be low enough to attract only those who need this program the most. This way, the CTSA program coverage could be maximized. Second, clear step-by-step guidelines on calculating applicants' income and verifying its source should be available to CEC's consultants and means-testing commissions. However, one should be aware that introducing stricter eligibility criteria to exclude the non-poor might also exclude some poor applicants by making it more difficult to apply. In addition, better targeting could induce some of the recipients to "reduce their labor supply" and their income to qualify for the benefits (Coady et al, 2004).

2. **Increase the share of wages/benefits to improve the performance of the program in raising the current incomes of the poor**. Increasing the share of wages/benefits against the program's total would immediately increase the CB/G ratio and program's performance and is preferable in a short-term perspective. However, to increase participants' benefits in the long-run, program administrators should consider creating valuable assets in the communities with higher poverty rates and unemployment rates, such as rural areas. Asset creation could be achieved by targeting social, public works and potential CTSA projects to the poor areas. In addition, such projects should employ locals to achieve even greater benefit.

3. **Wherever possible, preference should be given to job placement offered by the employment centers using republican database over registering applicants as self-employed**. Registering as self-employed to declare minimum income should be discouraged. Currently, with the average offered wage rate for social and public works (45,000-50,000 tenge) being approximately equal to the *minimum statutory wage* (42,500 tenge) and *unskilled wage* (50,987 tenge), applicants prefer to avoid being formally employed. Hence, priority placement into government-offered jobs could incentivize the CTSA program participants to take a normal job with a higher wage rate when it becomes

available. Program administrators should put greater emphasis on formal work and productive employment.

4. **Introduce a 'graduation' mechanism into the program.** Since the goals of the CTSA program involve not only raising beneficiaries out of poverty but also engaging them into productive employment, a time limit on duration of program participation should be introduced for certain categories of able-bodied CTSA beneficiaries. This measure would ensure that program participants would be motivated to leave the program and find sustainable employment. Of course, this mechanism should be differentiated based on the individual characteristics of a household, like giving more time for families with young children, etc.

5. **Emphasize greater linkage with *Enbek* program and active labor market measures**. This would allow a greater number of unemployed participants to upgrade their skills and, in the long run, achieve a sustainable livelihood through employment. Greater coverage through short-term skills upgrade opportunities (with a scholarship for a duration of study) coupled with other interventions like employment assistance and conditional grants for entrepreneurship should be preferred to simple benefit transfers. Another approach involves closer cooperation with employers and direct placement of CTSA program participants facilitated by employment centers.

LIMITATIONS TO THE RESEARCH

There are several limitations to this study. First, doing a case study of one region out of fourteen potentially makes the results less generalizable to the whole Kazakhstan. *Oblast Y* is one of the poorest in the country with a sizeable rural population, which could have affected the results. However, a case study allowed us to study in-depth the CTSA program and learn about the personal experience of various participants. Second, the sample size could have been larger and more representative to ensure no selection biases. We recruited 25 CTSA participants and 4 employees of City X's CEC. This study used convenience sampling due to difficulties in accessing CTSA program participants Given more time and resources, the sample and geographic coverage could have been bigger. Third, a quantitative analysis might produce more accurate results should the program level raw data become available. Fourth, all assumptions made in this study are open for challenge by other researchers. However, we tried to make conservative estimates based on the best information available.

CONCLUSION

As the first attempt to evaluate the cost-effectiveness of the CTSA program in Kazakhstan this study produced several useful lessons. We found out that it took 2 to 2.27 tenge to transfer 1 tenge to the poor under the CTSA program, which was close to the values in other middle-income countries. However, when only current earnings were considered, the CTSA program has been less cost-effective than other workfare programs. High level of informality in the economy and large benefits have contributed to inclusion error and benefit 'leakage' to the non-poor, and as a result negatively affected the CER. In addition, lower than desirable labor intensity has decreased the program's performance.

Our findings suggest that changes to the program design like lower benefits and better targeting could increase the cost-effectiveness in the short run. Though, one should carefully consider trade-offs associated with both inclusion and exclusion errors before deliberating. Also, targeting workfare projects towards poorer communities could potentially increase the indirect benefits and overall cost-effectiveness of the program in the long run. Better integration with the *Enbek* program for skills upgrade and job placement are among other measures for the government to consider.

One should remember that cost-effectiveness analysis is not the only, but one of many instruments used in evaluating the impact of a program. This study has its limitations and future research should attempt a more systematic evaluation of the CTSA program by conducting a comprehensive study with a large *n*. A quasi-experimental quantitative research of the CTSA effectiveness in raising income of the poor would be of great value. Furthermore, a consistent comparison of performance against other alternatives would be of great academic and public interest.

REFERENCES

Alik-Lagrange, A., Attanasio, O., Meghir, C., Polana-Reyes, S., & Vera-Hernandes, M. (2017). Work pays: Different benefits of a workfare program in Colombia.

Adato, M., & Haddad, L. J. (2001). *How effectively do public works programs transfer benefits to the poor? evidence from South Africa* (No. 579-2016-39273).

Beazley, R., & Vaidya, K. (2015). Social protection through work: Supporting the rural working poor in lower income countries. Oxford: Oxford Policy Management.

Besley, T., & Coate, S. (1992). Workfare versus welfare: Incentive arguments for work requirements in poverty-alleviation programs. *The American Economic Review*, *82*(1), 249-261.

Bryman, A. (2016). Social research methods. Oxford University Press.

Caruana, C. (2010). Measuring the Efficiency and Effectiveness of the Welfare State: A Comparative Study of the EU-27 Member States. *Bank of Valletta Review*, *42*, 75-106.

Committee of Statistics of the Republic of Kazakhstan (2017). "Quality of Life." Statistical compilation. Retrieved from http://stat.gov.kz/faces/publicationsPage/publicationsOper/homeNumbersLivingStandart?_afrLoop=1445912212779463#%40%3F_afrLoop%3D1445912212779463%26_adf.ctrl-state%3D4stzjxi7y_4

Committee of Statistics of the Republic of Kazakhstan (2019). Standard of Living of Population of Kazakhstan, 2014-2018. *Statistical compilation.*

Coady, D., Grosh, M., & Hoddinott, J. (2004). *Targeting of transfers in developing countries: Review of lessons and experience*. The World Bank.

Dutta, P., Murgai, R., Ravallion, M., & Van de Walle, D. (2014). *Right to Work?: Assessing India's Employment Guarantee Scheme in Bihar*. The World Bank.

Fernald, L. C., Gertler, P. J., & Neufeld, L. M. (2008). Role of cash in conditional cash transfer programmes for child health, growth, and development.

Forbes (2019, September 18). More than 2 million citizens received TSA in 2019. *Forbes Kazakhstan*. Retrieved from https://forbes.kz/news/2019/09/18/newsid_208384.

Rosen, H. S., & Gayer, T. (2014). Public Finance (Global Edition).

Handler, J. F. (2004). *Social citizenship and workfare in the United States and Western Europe: The paradox of inclusion*. Cambridge University Press.

Hughes, M., & Tucker, W. (2018). Poverty as an adverse childhood experience. *North Carolina medical journal*, *79*(2), 124-126.

ILO (2012). The Methodologies of the Subsistence Minimum Determination in Kazakhstan: The Ways and Approaches to Improve.

ILO (2017). World social protection report 2017–19: Universal social protection to achieve the Sustainable Development Goals.

Kapital (2019, June 24). Srednij razmer ASP sostavil 105 tysjach tenge [The average TSA amount is 105 thousand tenge]. *Kapital news outlet.* Retrieved from https://kapital.kz/economic/79284/sredniy-razmer-asp-sostavil-105-tysyach-tenge.html

Kasy, M. (2018). Why a universal basic income is better than subsidies of low-wage work, Data for progress working paper 2.

Kazinform (2019, October 16). More than 9,6 thousand families should reimburse the TSA to the government in *Zhambyl Oblast*. Retrieved from https://www.inform.kz/ru/bolee-9-6-tys-semey-dolzhny-vernut-nepravomerno-naznachennuyu-asp-v-zhambylskoy-oblasti_a3575985

King, W. E. (2007). *A qualitative study of individuals in transition from welfare to work in an Appalachian area* (Doctoral dissertation, Ohio University).

Kudebayeva, A., & Barrientos, A. (2017). A Decade of Poverty Reduction in Kazakhstan 2001–2009: Growth and/or Redistribution? *Journal of International Development*, *29*(8), 1166-1186.

Kursiv (2018, October 18). Zarabotal novyj format ASP v ramkah gosprogrammy «Өrleu» [New TSA mechanism launched under 'Orleu' program]. *Kursiv.* Retrieved from https://kursiv.kz/news/finansy/2018-10/zarabotal-novyy-format-asp-v-ramkakh-gosprogrammy-orleu

Lødemel, I., & Trickey, H. (Eds.) (2001). *'An offer you can't refuse': workfare in international perspective*. Policy Press.

"Law on Targeted Social Assistance No.246" as of 17.07.2001. Retrieved from http://adilet.zan.kz/rus/docs/Z010000246_

Maltseva, E. (2012). *Welfare reforms in post-Soviet states: a comparison of social benefits reform in Russia and Kazakhstan* (Doctoral dissertation).

Marx, I., & Nelson, K. (2013). A new dawn for minimum income protection? In *Minimum income protection in flux* (pp. 1-27). Palgrave Macmillan, London.

Mead, L. M. (1986). *Beyond entitlement*. Simon and Schuster.

Milanovic, B. (1999). The role of social assistance in addressing poverty. In *Poverty and Social Assistance in Transition Countries* (pp. 99-156). Palgrave Macmillan, New York.

Ministry of Labor and Social Protection (2018). On state social assistance as of 1 January 2018. Retrieved from https://www.enbek.gov.kz/ru/node/348151

Ministry of Labor and Social Protection (2019, 23 December). Number of recipients and amount of Targeted Social Assistance as of 1 December 2019. Retrieved from https://www.enbek.gov.kz/ru/node/365410

Murgai, R., Ravallion, M., & van de Walle, D. (2015). Is workfare cost-effective against poverty in a poor labor-surplus economy? The World Bank Economic Review, 30(3), 413-445.

O'Brien, C., & Pellerano, L. (2015). Determinants of take-up of welfare programmes: evidence from a conditional cash transfer in Kazakhstan. *Journal of Poverty and Social Justice*, *23*(2), 89-104.

Office of the Prime Minister (2020). Obnovlennyj format okazanija social'noj pomoshhi: chto izmenilos' s 1 janvarja 2020 goda [New Social Protection Mechanism: What Has Changed since 1 January 2002].]Retrieved from https://primeminister.kz/ru/news/interviews/obnovlennyy-format-okazaniya-socialnoy-pomoshchi-chto-izmenilos-s-1-yanvarya-2020-goda

"On Social Assistance as of 1 January 2019." Ministry of Labor and Social Protection of the Republic of Kazakhstan. Retrieved from http://www.enbek.gov.kz/ru/node/358169

Open Budget (2020a). Report on budget implementation in the *oblast* as of 01.01.2020. Retrieved from https://budget.egov.kz/material/material?id=902549&govAgencyId=4972962

Open Budget (2020b). Report on budget implementation of programs in 2019. Division of employment and social programs coordination of the *Akimat of Zhambyl Oblast* Retrieved from https://budget.egov.kz/material/material?id=960887&govAgencyId=3569

Open Budget (2020c). Budget program 027: Social security of different categories of citizens. Retrieved from https://budget.egov.kz/budgetprogram/budgetprogram?govAgencyId=879451&budgetId=789376

Pierre, G. (1999). *A framework for active labour market policy evaluation* (p. 49). Geneva: ILO.

Ravallion, M. (1999). *Appraising Workfare Programs*. The World Bank.

Ravallion, M. (2007). Evaluating anti-poverty programs. *Handbook of development economics*, *4*, 3787-3846.

Ravallion, M. (2019). Guaranteed employment or guaranteed income? *World Development*, *115*, 209-221.

Ravi, S. (2014, December 11). Workfare as an effective way to fight poverty: The MNREGA. Retrieved from https://www.brookings.edu/opinions/workfare-as-an-effective-way-to-fight-poverty-the-mnrega/

Rawlings, L. B., & Rubio, G. M. (2005). Evaluating the impact of conditional cash transfer programs. *The World Bank Research Observer*, *20*(1), 29-55.

Saavedra, J. E. (2016, May). The effects of conditional cash transfer programs on poverty reduction, human capital accumulation and wellbeing. In *United Nations Expert Group Meeting: "Strategies for eradicating poverty to achieve sustainable development for all" convened in New York on June* (pp. 1-3).

Slater, R. (2009). *Cash transfers: graduation and growth*. Overseas Development Institute. Retrieved from https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/4606.pdf

Slater, R. (2011). Cash transfers, social protection and poverty reduction. *International Journal of Social Welfare*, *20*(3), 250-259.

Taldau Information Analytical System (2020). *Share of population below the subsistence minimum*. Retrieved from https://taldau.stat.gov.kz/ru/NewIndex/GetIndex/704498

Tang, K. L., & Cheung, C. K. (2007). Programme effectiveness in activating welfare recipients to work: The case of Hong Kong. *Social Policy & Administration*, *41*(7), 747-767.

Yin, R. K. (2015). *Qualitative research from start to finish*. Guilford publications.

Workforce Development Center, IAC (2020) Demography and labor market in the 2nd and 3rd quarter of 2019. Retrieved from https://iac.enbek.kz/ru/node/767

World Bank (2020). World Bank Country and Lending Groups. Retrieved from https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

APPENDIX I

Cost-Effectiveness Ratio:

$$\frac{B}{G} = \frac{(G+C)}{G} \times \frac{(W+L)}{(G+C)} \times \frac{W}{(W+L)} \times \frac{NW}{W} \times \left(1 + \frac{IB}{NW}\right)$$

1 2 3 4 5

1. **Budget leverage**. Since C=0, then 21,351,732,600 / 21,351,732,600 =1.
2. **Labor intensity** - the share of all wages paid in total operating cost.
   In scenario (a) if L = 0.16 and W_1 = 146,719: (146,719 × 39,000 + 146,719 × 39,000 × 0.16) / 21,351,732,600 = 6,637,567,560 / 21,351,732,600 = 0.31 or when L = 0.2, then 0.32.
   In scenario (b) if L = 0.16 and W_2=105,000: (105,000 × 39,000 + 105,000 × 39,000 × 0.16) / 21,351,732,600 = 4,750,200,000 / 21,351,732,600 = 0.22 or when L = 0.22, then 0.23.
3. **The proportion of the benefits paid to the poor program participants**: with the benefit 'leakage' around 16-20%, the W/(W + L) = 1/1.16 (or 1.2 if L=0.2), therefore the value of this component would be between 0.83 for L = 0.16 and 0.86 for L = 0.2.
4. **The share of the gross wage after subtracting all costs of participation, including forgone income:** NW = (1-P)W-(P*-P)W*.
   Then, in a scenario (a) NW_1 = (1-0.2) × 146,719 - (0.61 - 0.2) × 75,000= 86,625.5. Therefore, the NW/W_1=86,625.5 / 146,719 = 0.59.
   In a scenario (b) NW_2 = (1 - 0.2) × 105,000-(0.61-0.2) × 75,000 = 53,250. Then NW/W_2=53,250 / 105,000 = 0.51.
5. **Indirect Benefits.** The IB/NW component can be further decomposed as $\frac{IB}{NW} = \frac{CB}{SB} \times \frac{SB}{(G+C)} \Big/ \frac{NW}{(G+C)}$, while $\frac{NW}{(G+C)}$ can be written using other component of the ratio: $\frac{NW}{(G+C)} = \frac{NW}{W} \times \frac{W}{(W+L)} \times \frac{(W+L)}{(G+C)}$.

Therefore, in scenario (a) NW/(G+C) = 0.59 × 0.83 × 0.31 = 0.152. Let us assume that CTSA program produces benefits that cover its cost, then SB/(G+C) = 1. Next, IB/NW=0.33 × 1 / 0.152 = 2.17.

In scenario (b) NW/(G+C) = 0.59 × 0.86 × 0.32 = 0.162. IB/NW = 0.33 × 1 / 0.162 = 2.037.

If we take W=105,000, then NW/(G+C) = 0.59 × 0.83 × 0.22 = 0.108. IB/NW = 0.33 × 1 / 0.108 = 3.06 with L = 0.16. While NW/(G+C) = 0.59 × 0.86 × 0.23 = 0.117. IB/NW = 0.33 × 1 / 0.113 = 2.82 with L = 0.2.

Finally, if we plug in all values with W_1 = 146,719 in scenario (a) B/G= 1 × 0.31 × 0.83 × 0.59 × (1 + 2.17) = 0.48, and in scenario (b) B/G = 1 × 0.32 × 0.86 × 0.59 × (1 + 2.037) = 0.5.

If W_2 = 105,000, then B/G = 1 × 0.22 × 0.83 × 0.59 × (1 + 3.06) = 0.44, and
in scenario (b) B/G = 1 × 0.23 × 0.86 × 0.59 × (1 + 2.82) = 0.45.

APPENDIX II

DESCRIPTIVE STATISTICS (SAMPLE POPULATION)

Gender	92% of the CTSA recipients are female and 8% are male
Ager	The youngest is 27 and the oldest recipient is 56 years, average age among participants being 38 years.
Level of Education	Among the participants interviewed: 25% had university degree 29% had only secondary school 25% attended vocational School 21% did not provide any answer
Number of Children	Participating households have 4.2 children on average, ranging from 1 to 7 children per household. 20% of them have 6 children, 12% - 5 children, 32% - 4 children, 12% - 3 children, 12% - 2 children and another 12% - 1 child per household.
Duration of participation	CTSA participation ranged from 1 month to 18 months, being 8.8 months.
TSA amount	On average, interviewees reported 83,328.43 tenge of benefits per household on average. Range in tenge: 42,500 (min)-138,000 (max)
Average income of CTSA participants	63,390 tenge (mean)
Employment prior to CTSA	Interviewed CTSA participants reported that prior to the enrolment into the program they were: Were unemployed - 39% Were on maternity leave - 17% Had stable job - 40% Did not disclose - 4%
Employment /Training during CTSA	While being enrolled into CTSA program 44% of recipients had the same job, 16% got new job, 12% remained unemployed, 16% stayed on maternity leave/ taking care of children, 4% enrolled into training program, while 8% registered as self-employed. 52% of households have an unemployed family member.
Easy to apply for TSA (Yes/No)	77% - Yes 23% - No

Is TSA helpful (Yes/No)	For 100% of interviewees participation in the CTSA was helpful.
Alternative source of income in the absence of program	In the absence of the program: 43% of participants would hold the same job - 43% 14% would work in trade/bazaar 29% would be self-employment, while 14% would remain unemployed.
Will it be a formal or informal employment?	45% would work informally 55% would be formally employed.
How much would you earn in the absence of a program?	The income of CTSA participants in the absence of a program would be 75,000 tenge on average.
How to improve TSA	36% want benefits to increase, 64% are satisfied with the program.
Wage/benefit leakage	16-20% 'leakage' to the non-poor

APPENDIX III

Survey Instruments

EVALUATING THE COST-EFFECTIVENESS OF CONDITIONAL TARGETED SOCIAL ASSISTANCE IN KAZAKHSTAN

Part I. Senior Program Manager(s), City Employment center of City X.

Thank you for agreeing to meet with us for this interview. If you do not have any questions regarding this study, information sheet or else, we could start our interview. With your permission, I will record your answers. You can stop it any time. There are no risks associated with your participation. Your responses are confidential, and your name or position will not be mentioned in any document.

Gender	☐Male		☐Female		
Age Bracket	[18-24]	[25-34]	[35-44]	[45-54]	[older than 55]

1. What is the unemployment rate in Oblast Y and City X?
2. Could you please tell us more about Conditional Targeted Social Assistance Program? What are the objectives of the program?
3. How does the targeting works?
4. How do you make sure that only those, who earn below the subsistence minimum apply?
5. What is the average salary that people receive under this program?
6. What are the design and implementation issues that you have encountered so far?
7. In your opinion, has this program been successful?
8. If yes, what kind/set of criteria do you use to measure success?
9. What would be a rough estimation of a proportion of administrative costs (salaries etc.) to total costs.

Thank you for your time! Your participation was very helpful!

Part II. Program operators (direct supervisors), City Employment center of City X.

Thank you for agreeing to meet with us for this interview. If you do not have any questions regarding this study, information sheet or else, we could start our interview. With your permission, I will record your answers. You can stop it any time. There are no risks associated with your participation. Your responses are confidential, and your name or position will not be mentioned in any document.

Gender	☐Male ☐Female
Age Bracket	[18-24] [25-34] [35-44] [45-54] [older than 55]

1. How many people in the program do you coordinate?
2. For how long do they usually stay in a program?
3. What type of jobs are available for the program participants?
4. What parts of the city are the projects (jobs) located?
5. How do you make sure that you target only those people who need it, so there are no wage leakages?

Thank you for your time! Your participation was very helpful!

Part III. Program Participants (TSA recipients), City Employment center of City X.

Thank you for agreeing to take part in this survey. If you do not have any questions regarding this study, information sheet or else, we could start the survey. With your permission, I will record your answers. You can stop it any time. There are no risks associated with your participation. Your responses are confidential, and your name or position will not be mentioned in any document.

Gender	☐Male ☐Female
Age	[18-24] [25-34] [35-44] [45-54] [older than 55]
Started the program (date)	
Last place of employment	_____ ☐ Formal ☐ Informal
Highest degree completed	☐ None ☐ Primary ☐ Secondary ☐ High School ☐ University
Hours worked per day	

1. How did you learn about this program?
   ☐Employment Center ☐Friend ☐News ☐Internet ☐Other_____
2. Could you describe the mechanism of applying/ receiving conditional TSA?
3. Was it easy or was it difficult to apply? ☐Yes ☐No
4. Does this program help to meet your objectives? If ***not***, please explain.
5. What suggestions would you offer to improve this program?
6. What would you be doing now if this program did not exist? How would you be making a living?
   (formal/informal sector) _____
7. How much do you think you would be earning per month (in tenge)?
   [<50,000] [50,000-100,000] [100,000-150,000] [>150,000]

Thank you for your time! Your participation was very helpful!

NVivo Nodes Report

Name	Files	References	Created By	Created On	Modified	Modified On
Conditional TSA	22	53	ID	3/4/2020 1:59 PM	ID	3/4/2020 2:56 PM
application process	19	29	ID	3/2/2020 6:35 PM	ID	3/4/2020 2:41 PM
difficulties	3	3	ID	3/4/2020 2:37 PM	ID	3/4/2020 2:41 PM
CTSA mechanism	4	18	ID	3/3/2020 1:44 PM	ID	3/4/2020 2:49 PM
criticism	2	3	ID	3/4/2020 2:46 PM	ID	3/4/2020 2:48 PM
improvement	13	20	ID	3/2/2020 6:37 PM	ID	3/4/2020 2:47 PM
CTSA duration	9	9	ID	3/2/2020 6:34 PM	ID	3/3/2020 1:35 PM
new CTSA	6	8	ID	3/2/2020 6:45 PM	ID	3/4/2020 11:56 AM
objective	2	2	ID	3/3/2020 1:58 PM	ID	3/4/2020 11:42 AM
overhead	2	4	ID	3/3/2020 2:00 PM	ID	3/4/2020 11:59 AM
CTSA effectiveness	26	45	ID	3/4/2020 2:12 PM	ID	3/4/2020 2:58 PM
effectiveness	3	5	ID	3/3/2020 1:40 PM	ID	3/4/2020 11:55 AM
problems	6	8	ID	3/2/2020 6:51 PM	ID	3/4/2020 1:21 PM
program usefulness	23	32	ID	3/2/2020 6:37 PM	ID	3/3/2020 1:59 PM
Employment	0	0	ID	3/4/2020 2:13 PM	ID	3/4/2020 2:13 PM
activation measures	10	23	ID	3/2/2020 6:34 PM	ID	3/4/2020 2:53 PM
alternative employment	9	9	ID	3/2/2020 6:38 PM	ID	3/4/2020 1:56 PM
Targeting performance	0	0	ID	3/4/2020 2:14 PM	ID	3/4/2020 2:14 PM
benefit leakage and fraud	7	11	ID	3/2/2020 6:36 PM	ID	3/4/2020 1:04 PM
eligibility	3	10	ID	3/3/2020 1:48 PM	ID	3/4/2020 1:55 PM
commission	8	12	ID	3/3/2020 11:52 AM	ID	3/4/2020 11:47 AM
legalization	2	5	ID	3/2/2020 6:43 PM	ID	3/4/2020 12:00 PM
rejection	5	11	ID	3/3/2020 11:54 AM	ID	3/3/2020 1:24 PM
poverty line	5	9	ID	3/2/2020 6:55 PM	ID	3/4/2020 11:26 AM
requirements	4	10	ID	3/2/2020 6:42 PM	ID	3/3/2020 1:38 PM

APPENDIX IV

NVivo Codebook

Conditional Targeted Social Assistance

Nodes

Name	Description
Conditional TSA	
application process	Application process for the CTSA program
difficulties with application	issues with the CTSA program design
CTSA duration	How long participants were enrolled into program
CTSA mechanism	How CTSA works in Kazakhstan and Oblast Y
new CTSA	Changes to the CTSA program starting Jan2020
suggestion for improvement	CTSA participants suggest how to improve CTSA program
CTSA effectiveness	
problems and challenges	Challenges with the program rollout and implementation
program effectiveness	How CEC managers define 'effectiveness'
program usefulness	participants' opinion about the usefulness of the CTSA program
Employment	
alternatives to participation in CTSA	What participants would do in the absence of the program
employment assistance	Cases of involvement into *enbek* (productive employment program)
overhead	Administrative costs of the program

Name	Description
Targeting performance	The proportion of the wages/benefits that go to the poor program participants
benefit leakage	wages/benefits received by the non-poor CTSA participants
eligibility	
commission	performance of the means-testing commission
legalization	Legalization of informal employment that is required in order to qualify for the CTSA
rejection	reasons for rejection from the CSTA
requirements	requirements for program participation