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Is the Magic Happening?

A Systematic Literature Review of the Economic Multiplier of Cash Transfers

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Abstract

The multiplier effects of cash transfers are receiving renewed attention globally. The existence of multipliers—or the generation of additional dollars for every one dollar injected as cash transfers—illuminates new aspects of the impacts of social assistance and holds the potential to redefine how "fiscal sustainability" is generally interpreted. However, multipliers also attract questions: are multipliers real and tangible? How are multipliers estimated? What method might be more suitable than others in different contexts? What does the evidence reveal about those effects? This paper briefly summarizes emerging findings from existing literature on low- and middle-income countries, including a total of 23 studies. The paper discusses the main estimation methods, such as social accounting matrix and econometric techniques; presents results on multipliers across studies; and draws lessons for future research and practice.

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1. Introduction

In a recent interview, Rory Stewart, former UK secretary of state for international development and now at the helm of GiveDirectly, recalled that while in government he "… was trying to show the public that $1 in foreign aid delivers $1 of benefit. But if you show that it delivers $2.40, it starts to feel less like giving a fish and more like giving… a magic fish".[1] Codifying that "magic" multiplier is the core aim of this paper.

Cash transfers have become a mainstay in social protection systems globally. Yet, they remain contested. Criticism is principally levied at various forms of purported behavioral effects in ways that run counter to prevailing notions of self-sustainment, mutual help, and work ethics. Empirical evidence tends to disprove those concerns as minimal or overstated (Baird et al 2018; Handa et al 2018; Bastagli et al 2016; Ravallion 2016). Yet, skepticism should not be easily dismissed, and the risks of serious policy debates being infused with an excessive dose of advocacy, as opposed to a balanced interpretation of the evidence, are real and may detract from a genuine understanding of the pros and cons of cash (Baird et al 2022; Della Guardia et al 2022; Palacios, Crombrugghe, & Gassmann, 2022).

This paper does not espouse cash transfers as an instrument for which global knowledge is conclusive and unilaterally positive; rather, while generally supportive and encouraging, factors like worldviews, information gaps, trade-offs and alternative interventions provide cautionary arguments to maintain an objective, open-minded and facts-based approach. This is particularly important considering the exponential increase in cash transfers worldwide as part of both pandemic and inflation responses (Gentilini, et al. 2022a, 2022b).

In this spirit, the contribution of our analysis lies in exploring a specific dimension – the economic multipliers of cash transfers – for which much debate has been mounting recently, but relatively little is known in terms prevalent methods, results, and implications. In fact, the implications stemming from recognizing the knock-on effects of cash in the economy are significant. For one, the generation of multipliers may spark some rethinking around what is considered "sustainable": if a cash transfer generates more cash than it injects, and a government could tax part of that economic activity to help sustain programs, the fiscal viability of cash can be seen under a different light than just a social expenditure. In other words, the study of multipliers reveals that there is more to the concept of cash transfers than "just give money to the poor" – cash can have a cascade effect on local economies more widely, and this paper is set to capture the main insights on such effects briefly and critically, including as documented by careful empirical studies.

The key findings of the review can be summarized as follows: even though there has been increasing interest in the multiplier effects of cash transfer programs, there is scant rigorous evidence. The existing studies show large heterogeneity in terms of methods, multiplier channels, outcome variables, country context, transfer temporality and national coverage. Although most studies report positive multipliers, the magnitude of the effect differs widely, and results are not directly comparable.

The structure of the paper is as follows: the next section outlines conceptual underpinnings that link cash transfers to economic outcomes at the meso- and macro-levels. Section 3 lays out the paper's methodology adopted for literature search and review. Results from a review of 23 studies are presented in section 4. An overview of the data requirements and comparative merits of each method is also offered in such context. A broader reflection on the results and their implications are offered in sections 5 and 6, respectively.

[1] https://www.vox.com/future-perfect/2022/8/31/23329242/givedirectly-cash-transfers-rory-stewart

2. Concepts

The hesitance of governments to invest in non-contributory cash transfer programs derives from several arguments. Fiscal affordability is a major stumbling block. Especially in lower-income countries, this argument is non-trivial. While fiscal space options exist (Ortiz et al. 2017a, 2017b), the productivity attached to alternative uses of resources – particularly around investing in "infrastructure versus people" – is a recurrent debate in high-needs, revenue-constrained environments. Secondly, normative arguments, which can have longstanding, historical roots, may caution governments to introduce cash transfer programs. Among the most frequently cited concerns are fears of dependency and labor market disincentives (Banerjee et al. 2017). Part of those views are connected to competing narratives on the causes of poverty (e.g., whether it is the individual's fault or the structural imbalances in society), which in turn can affect societal attitudes towards redistribution through cash transfers and other measures (Alesina and Giuliano, 2011; Bullock et al 2003).

Recent evidence is helping to inform those quandaries further. In fact, cash transfers can influence growth through macro-level, meso-level, and micro-level effects (Kesteren et al 2018; Mideros et al 2016; Alderman and Yemtsov, 2012; Barrientos 2012). While trade-offs exist and should be carefully gauged (e.g., Ravallion 2016), cash transfers can contribute to economic growth through five main channels: consumption, human capital investments, productive investments, shock resilience and labor supply. The first channel operates in the short run, while the other channels require more time to become effective.

First, short-term economic gains are realized through spending and consumption. There is consensus that transfers affect output primarily through consumption rather than investment (Bracco, Galeano, Juarros, Riera-Crichton, & Vuletin, 2021). Allocating resources to economic agents with a high marginal propensity to consume (or redistribution between agents with a different propensity to consume) can increase the entire economy's average marginal propensity to consume (Bastagli et al 2016; Mathers and Slater 2014). As beneficiaries spend their cash, that may increase demand for goods and services, inject liquidity and spur economic activity (Kuss et al 2021). Under certain macroeconomic conditions, the growing interest in using large-scale cash transfers as unconventional monetary policy (or 'helicopter money') is predicated precisely on the expected growth effects of spending cash in the economy (Gentilini 2022).

Second, cash transfers help in building human capital. This occurs via uptake of services in education, health, and nutrition, as well as specific effects on cognitive and socio-emotional skills. Cash transfers have been shown to save lives in various ways, such as from utero (e.g., Nigeria) to preventing suicides (e.g., Brazil, US) (Schady et al 2023; Troller-Renfree et al 2022). Cash transfers have also been shown to reduce violence and improve psychological wellbeing. Cross-country evidence shows that cash transfers can reduce intimate partner violence within households, decrease depression among women, and bolster self-confidence (Peterman and Roy 2022).

Third, cash transfers enable investments in productive activities. Low-income people can suffer from reduced mental bandwidth, be subject to a cognitive tax, and live in high-stress environments, including violence. These issues prevent a mindset for innovation and entrepreneurship. Evidence indicates that cash transfers have positive effects on entrepreneurship when they are designed for that purpose, such as in *graduation packages* (Andrews et al 2021). Yet effects tend to decline over time, including between 5-12 years, like in Uganda and Ethiopia (Fiala et al 2022; Blattman and Dercon 2022).

Fourth, cash transfers can enhance resilience to shocks. For example, the pandemic would have had a much wider effect on poverty in the absence of fiscal policy like cash transfers (World Bank2022).[2] Also, the design of *anticipatory* cash transfers before shocks hit can help preserve assets and livelihoods: in Bangladesh, transfers provided before floods hit helped households engage in less costly borrowing and report higher earnings (Pople et al 2021).

Finally, cash transfers can help facilitate job transitions and reforms for competitiveness. This may include offsetting the private costs of labor reallocation and reskilling, or the reform of large-scale, regressive subsidies (Mukherjee et al 2023).

The main object of this paper, the multiplier effect, can be considered a cross-cutting channel. Multiplier or spillover effects occur because of households spending the money or through signaling effects, whereby non-beneficiary households may act in ways conducive for the development of human, social and physical capital.

Economic multipliers are used with caution in policy settings as their accurate estimation is not trivial. The concept of a multiplier effect has its roots in macroeconomic theory. The idea of a distinctive investment multiplier originated in the 1930s, and although different economists claimed the concept at that time, the Keynesian interpretation has prevailed (Markwell, 2000). According to Keynes (1978, p. 115), a multiplier is a factor that (multiplied by the increase in aggregate investment) determines the resulting increment of income in the economy. Thus, the multiplier is strongly determined by the population's marginal propensity to consume, as the larger the share of the additional income is spent, the higher the multiplier. This still provides the foundations of how multipliers are understood and estimated (Cunha et al., 2022; Jorge & da Graça, 2019; Whalen and Reichling, 2015; Lehmann & Masterson, 2014).

The literature distinguishes between transfer and purchase multipliers. Fiscal purchase multipliers tend to be larger than transfer multipliers (Pennings, 2021; Vagliasindi & Gorgulu, 2021), and they are less sensitive to other macroeconomic channels (Pennings, 2021; Giambattista & Pennings, 2017). First, the economic multiplier is sensitive to the permanence of the fiscal transfer (Pennings, 2021). Regular cash transfers are related to larger multiplier effects than one-off transfers.[3] The marginal propensity to consume is also higher in households that have limited capacity to save. The larger the share of *hand-to-mouth* households among the transfer recipients, the larger the multiplier effect (Bracco et al., 2021; Pennings, 2021). Given the high share of poor households in low-income countries, we could assume that the cash transfer multiplier effect is particularly large.[4] However, it is rarely the case that all *hand-to-mouth* households are covered due to budget constraints and targeting errors.

Second, it matters on what or where the transfer money is spent. According to the New Keynesian model with sticky wages and prices, output is demand-driven in the short-run. Yet, the extent to which local output increases depends on the fraction that is spent on locally produced goods. The economic multiplier is higher in regions with a larger share of home-biased consumption (Pennings, 2021).[5]

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[2] A similar argument is made by Pennings (2021), who showed that US states with larger temporary federal transfers in 2001 and 2008 had faster short-run growth in labor income or GDP.

[3] This is theoretically and empirically shown in Pennings (2021), comparing cross-regional multiplier effects of an increase in the old age pension and a one-off stimulus payment.

[4] Bracco et al (2021) find that the large difference in transfer multipliers between Latin American and developed countries is due to the larger share of financially constrained households in Latin America.

[5] In a neoclassical model, local general equilibrium effects of fiscal transfers are negative because any increase in demand will be followed by an increase in the relative price of the home-produced good. This can shift demand

Third, given the sensitivity of fiscal multipliers to price and wage adjustments, monetary policy matters. Giambattista and Pennings (2017) show that transfer multipliers are more sensitive to monetary policy rules than purchase multipliers. Central Bank policies aimed at containing inflation will reduce the transfer multiplier effect. Higher interest rates in response to transfer programs would eventually affect output and reduce GDP.

Finally, tax policies and government spending may affect the potential of transfers to generate multiplier effects. Sustainable cash transfer programs require funding from general government revenues. This may necessitate the increase in taxes, which could be counterproductive for economic growth in the longer run.

In this paper, we adopt a working definition to ensure clarity and consistency on the concept: *the economic multiplier effect of a cash transfer is the quantifiable factor by which cash transfers increase the aggregate income in the considered economy, beyond the original transfer value*. The next section discusses the methodology for selecting the multiplier studies examined in later parts of the analysis.

3. Methodology

To minimize bias, ensure transparency, and provide reliable findings, this study applied the PRISMA methodology to conduct a systematic literature review (Page et al., 2021). The PRISMA statement consists of a 27-item checklist and a four-phase flow diagram deemed essential for transparent reporting of a systematic review.

As a first step, keyword search strings were determined based on the research questions (Table 1).[6] These keywords are divided between input, process, and output. Input includes different terminologies used to refer to cash-based social protection interventions. Process terms refer to expected effects of cash transfers, and outputs are the different economic indicators potentially used to measure the effect of cash transfers. Three reviewers independently conducted an initial round of literature scoping in various academic databases in May 2022.[7]

to goods produced elsewhere, eventually leading to a decrease in local output. Yet, according to Pennings (2021), the empirical evidence is more consistent with the New Keynesian model.

[6] The final search string was: *ab: ("Cash transfer" OR "Monetary transfer" OR "Social transfer" OR "Social cash transfer" OR "Cash grant" OR "Cash allowance" OR "Cash assistance" OR "Social protection" OR "Social assistance" OR "Last resort program*" OR "Safety net" OR "Anti-poverty program*") AND ("Return" OR "Multiplier" OR "Spill-over" OR "Increase" OR "Externalities" OR) AND ("GDP" OR "Consumption" OR "Revenue" OR "Growth" OR "Local econom*" OR "Productivity" OR "Income" OR "Price" OR "Spending" OR "Investment" OR "Welfare" OR).*

[7] Scopus, Wiley, JSTOR, Econlit, EBSCO A-Z, Web of Science, ScienceDirect, DOAJ, Google Scholar.

Table 1. Overview of research keywords

Input	Process	Output
Cash transfer	Return	GDP
Monetary transfer	Multiplier	Consumption
Social transfer	Spill-over	Revenue
Social cash transfer	Increase	Growth
Cash grant	Externalities	Local economy*
Cash allowance		Productivity
Cash assistance		Income
Social protection		Price
Social assistance		Spending
Last resort program*		Investment
Safety net		Welfare
Anti-poverty program*		

*Source: Authors' elaboration. *allows for different spelling.*

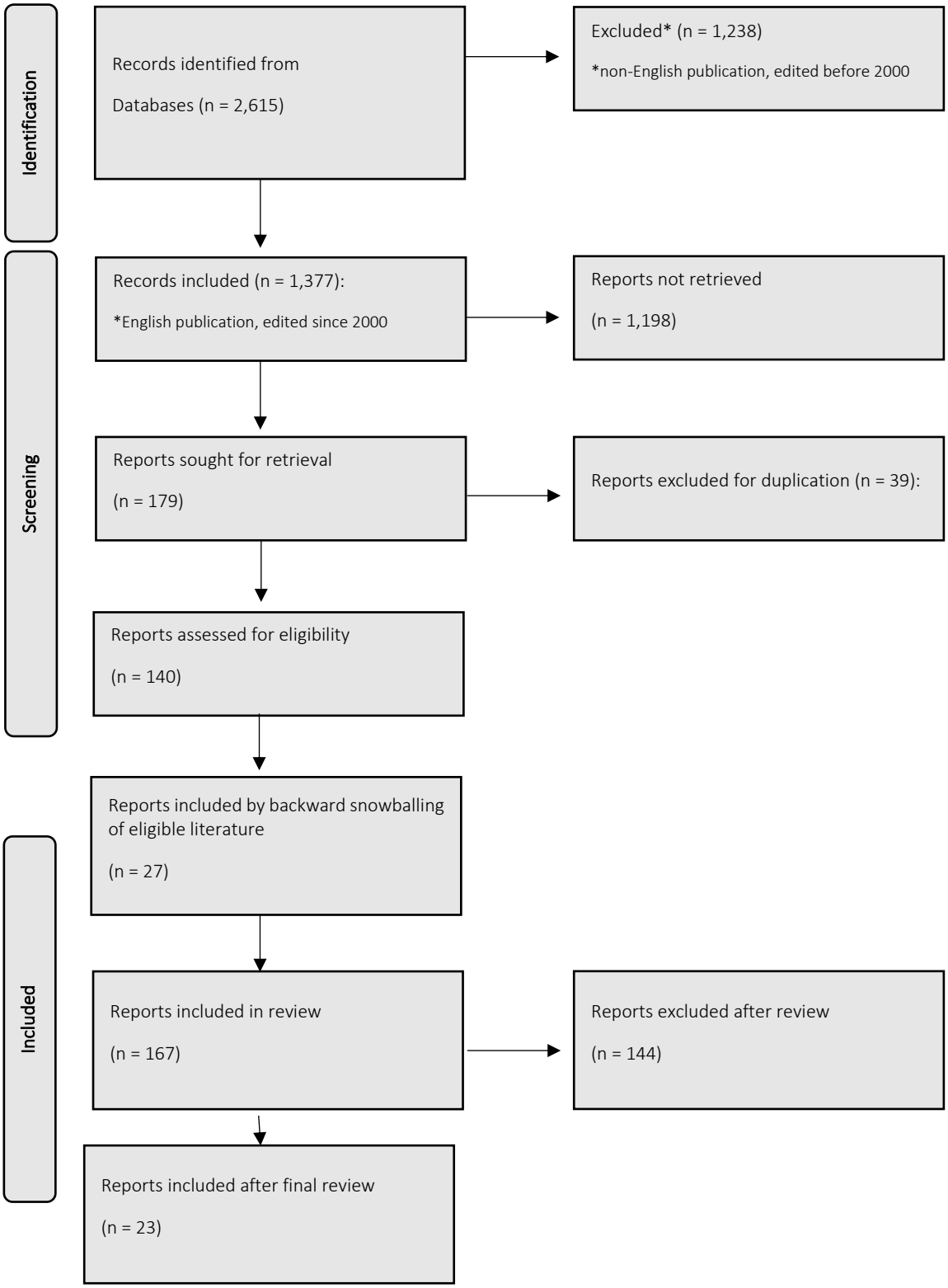
The database search generated 2,615 results, including journal articles, grey literature, working papers, conference articles, and book chapters. The selection of publications in English and published from 2000 onwards restricted the sample to 1,377 results. The qualitative assessment of the title, abstract, and keywords led to the further exclusion of 1,198 records. The main exclusion criteria at this stage focused either on the input side (e.g., the social protection program not precisely defined[8] or voucher and in-kind assistance) or on the output side (e.g., studies on the direct impacts of cash transfers, such as beneficiaries' consumption). The remaining 179 papers were listed and classified in a spreadsheet based on the title, authors, year, publication, and APA reference. This led to the further exclusion of 39 duplicate titles. The chosen approach does not guarantee an exhaustive overview as there is always an element of choice, especially regarding the search terms. Therefore, the list was complemented with 27 studies found by a backward forward reference check key resource.[9]

The researchers downloaded and read the 167 identified studies for the final selection step. This step led to the further exclusion of 144 results. In general, these exclusions were motivated by the core idea of this review, which is to focus on the multiplier effects of cash transfer programs that have been implemented. With this in mind, we excluded studies that refer to total governmental spending on social protection, simulations of potential interventions, and papers that present direct impacts of cash transfer programs, such as beneficiaries' marginal propensity to consume. This resulted in the final selection of 23 studies, of which 14 were published in peer-reviewed journals (see annex B). The complete literature selection process is detailed in Figure 1. The remaining 23 studies were classified by objective, methodology, approach, data requirement, results, country context, COVID-19 relation, program type, name, size, and publication type (Table 2).

[8] Only studies that refer to specific cash transfer programs were included in the review. Papers analyzing the effects of social protection more generally or those simulating program options were excluded.

[9] The bibliographies of key resources were carefully reviewed to identify papers that did not appear during the initial search.

Figure 1. Literature selection process



Source: Authors' elaboration

Table 2. Studies included by country and program

Author and year	Country	Context	Program name (year of start)	Program type	Target group	Program cost (% GDP)[10]	Coverage (% pop)[11]	Average monthly transfer size (USD)[12]	Adequacy (2019)[13]	Transfer frequency;
(Cunha et al., 2022)	Brazil	MIC	Auxilio emergencial (2020)	Emergency (COVID-19)	Informal workers and unemployed population	0.69%	18.4%	185.4	66.3%	**monthly**
(Freire et al., 2018)	Brazil	MIC	Bolsa Familia (2004)	National	Poor households with children	0.42%	16.2%	53.9	13.1%	**monthly**
(Jorge & da Graça, 2019)	Brazil	MIC	Bolsa Familia (2004)	National	Poor households with children	0.45%	20.5%	50.2	11.1%	**monthly**
(Neri et al., 2013)	Brazil	MIC	Bolsa Familia (2004)	National	Poor households with children	0.46%	27.9%	69.6	9.9%	**monthly**
(Rougier et al., 2018)	Brazil (Ceará)	MIC	Bolsa Familia (2004)	National	Poor households with children	0.42%	16.2%	53.9	13.1%	**monthly**
(Villa, 2016)	Colombia	MIC	Familias an Accion (2000)	National	Poor households with children under 18	0.19%	9.1%	22.1	7.6%	**bimonthly**
(Kagin et al., 2014)	Ethiopia	LIC	Social Cash Transfer Pilot Program (SCTPP) (2011)	Pilot	Extremely poor and labor-constrained households with children and persons with disabilities	0.001%	0.02%	7.9	5.8%	**monthly**

[10] Program cost is calculated based on historical country GDP data available from the World Bank database. The figures refer to the year of the study.

[11] Program coverage is calculated based on historical country population data available from the World Bank database. The figure refers to the year of the study.

[12] Average monthly transfer size in USD is calculated based on IMF exchange rate annual average for the relevant year of the study.

[13] Adequacy is calculated as the daily average transfer size in USD currency as percentage of daily median income in USD. Due to data availability, the reference year is 2019.

Author and year	Country	Context	Program name (year of start)	Program type	Target group	Program cost (% GDP)[10]	Coverage (% pop)[11]	Average monthly transfer size (USD)[12]	Adequacy (2019)[13]	Transfer frequency;
(Thome K. , et al., 2014)	Ghana	LIC	Livelihood Empowerment Against Poverty (LEAP) (2008)	National	Households in poor communities	0.02%	1.7%	12.4	4.2%	**bimonthly**
(Egger et al., 2021)	Kenya	MIC	GiveDirectly cash transfer program Kenya (2014)	Pilot	Poor households in 653 randomized villages	na	0.08%	1,000 (one-off transfer, not monthly)	21.0%	one-off
(Thome K. , et al., 2013)	Kenya	MIC	Cash Transfer Program for Orphans and Vulnerable Children (2004)	Pilot	Ultra-poor households with orphans or vulnerable children	0.09%	0.4%	23.2	24.7%	**monthly**
(Lehmann & Masterson, 2014)	Lebanon	MIC	Winter Cash Assistance Program for Syrian Refugees in Lebanon (2013)	Emergency	Vulnerable Syrian refugees	0.09%	9.2%	114.1	21.5%	**monthly**
(Filipski et al., 2015)	Lesotho	MIC	Lesotho's child grant (2009)	National	Orphans and vulnerable children	0.18%	3.2%	14.9	14.0%	**quarterly**
(Davies & Davey, 2008)	Malawi	LIC	Dowa emergency cash transfer (2006)	Emergency	Households affected by the 2006-07 lean season	0.03%	0.4%	14.5	6.5%	**monthly**

Author and year	Country	Context	Program name (year of start)	Program type	Target group	Program cost (% GDP)[10]	Coverage (% pop)[11]	Average monthly transfer size (USD)[12]	Adequacy (2019)[13]	Transfer frequency;
(Angelucci & De Giorgi, 2009)	Mexico	MIC	Progresa (Oportunidades) (1997)	National	Poor rural households	0.38%	22.8%	91.7	23.7%	**bimonthly**
(Barrientos & Sabatés-Wheeler, 2010)	Mexico	MIC	Progresa (Oportunidades) (1997)	National	Poor rural households	0.21%	24.8%	102.5	24.8%	**bimonthly**
(Cord & Wodon, 2001)	Mexico	MIC	PROCAMPO (1993)	National	Agriculture producers	0.02%	2.7%	35.2	3.2%	**one-off**
(Sadoulet & Janvry, 2001)	Mexico	MIC	PROCAMPO (1993)	National	Agriculture producers	0.02%	2.7%	35.2	3.3%	**one-off**
(Taylor et al., 2016)	Rwanda	LIC	WFP cash assistance (2015)	Emergency	Refugees living in a refugee camp	0.13%	0.4%	9.6	17.6%	**monthly**
(Tiberti et al., 2018)	South Africa	MIC	Child Support Grant (CSG) (1998)	National	Poor households with children below 18	1.13%	21.5%	30.2	21.4%	**monthly**
(Thome K. , et al., 2014)	Zambia	LIC	Child Grant Program (2010)	Pilot	Households with children under six	na	1.2%	11.4	12.0%	**bimonthly**
(Staunton, 2011)	Zimbabwe	LIC	Zimbabwe Emergency Cash Transfers (ZECT) (2009)	Pilot	Food insecure households	0.05%	0.5%	6.9	11.4%	**monthly**
(Thome K. , et al., 2016)	Ethiopia	LIC	Tigray Social Cash Transfer (2011)	National/Pilot	Labour-constrained, ultra-poor female, elderly, or disabled,	na	Na	na	5.8%	**monthly**

Author and year	Country	Context	Program name (year of start)	Program type	Target group	Program cost (% GDP)[10]	Coverage (% pop)[11]	Average monthly transfer size (USD)[12]	Adequacy (2019)[13]	Transfer frequency;
	Ghana	LIC	Livelihood Empowerment against poverty (2008)	National/Pilot	Extreme poor with elderly, disabled or OVC member	0.04%	3.6%	10.7	4.9%	**bimonthly**
	Kenya	LIC	Cash Transfer for Orphans and Vulnerable children (2004)	National/Pilot	Poor households with OVC	0.11%	0.7%	19.7	24.7%	**monthly**
	Lesotho	LIC	Child Grant Program (2009)	National/Pilot	Poor households with OVC	0.17%	3.1%	38.8	14.0%	**quarterly**
	Malawi	LIC	Social Cash Transfer Program (2006)	National/Pilot	Ultra-poor, labour constrained households	0.74%	5.5%	5.7	13.1%	**monthly**
	Zambia	LIC	Child Grant (2010)	National/Pilot	Household with children under five in three poor districts	na	na	6.8	12.0%	**monthly**
	Zimbabwe	LIC	Harmonized Social Cash	National/Pilot	Food poor and labour constrained households	0.01%	1.9%	25.0	37.6%	**bimonthly**
(Filipski & Taylor, 2012)	Malawi and Ghana	LIC	Malawi Social Cash Transfer Scheme (2006)	Pilot	Extremely poor rural households	0.01%	1.0%	4.8	3.8%	**monthly**
	Ghana	LIC	Ghana 's Livelihood	Pilot	Extremely poor rural households	0.04%	1.2%	19.7	4.2%	**bimonthly**

Author and year	Country	Context	Program name (year of start)	Program type	Target group	Program cost (% GDP)[10]	Coverage (% pop)[11]	Average monthly transfer size (USD)[12]	Adequacy (2019)[13]	Transfer frequency;
			Empowerment Against Poverty (2008)							

Source: Authors' elaboration

4. Results

This section first reviews the 23 papers with respect to country and program context and then presents and discusses the underlying data and methods used for the analysis of cash transfer multiplier effects. Subsequently, the magnitude of the estimated multiplier effects is summarized.

4.1 Country and program context

The 23 papers cover a total of 13 different countries. Eight studies focus on low income (LIC) and 15 on middle income (MIC) countries. Most studies analyze cash transfer programs in Latin America (10) and Sub-Saharan Africa (11). Only one paper analyzes a program in the Middle East (Lehmann & Masterson, 2014). The vast majority of the papers focused on regular cash transfer programs with either monthly, bi-monthly or, in a few cases, quarterly payments. Only three papers analyzed one-off cash transfer programs (GiveDirectly in Kenya and PROCAMPO in Mexico).

The reviewed papers encompass 19 different cash assistance programs. Most of the studies focus on national programs (13 out of 23 studies), with four papers discussing the Brazilian Bolsa Familia program, and four other papers dedicated to Mexico's Progresa/Oportunidades and PROCAMPO programs.[14] The two conditional cash transfer programs Bolsa Familia and Progresa/Oportunidades have been extensively analyzed and are a constant presence in the literature related to cash transfers. Four papers focus on emergency programs, one related to a COVID-19 response program, and three of the papers focus on WFP's cash transfer programs to refugees in different contexts. As the world's largest provider of humanitarian cash transfers, WFP transferred US$2.3 billion to over 41.7 million people in 69 countries in 2021 (WFP, 2022). Finally, six of the papers focus on pilot programs. Among these pilot programs, two are in Kenya, including the GiveDirectly initiative, which has been widely analyzed.[15] In 2014, GiveDirectly delivered one-time unconditional cash transfers to over 10,500 households in rural western Kenya. The transfer of about USD 1,000 was equivalent to 75 percent of a typical household's annual expenditure – all the transfers amounted to 15 percent of the area's GDP (CEGA, 2022).

4.2 Methods for estimating cash transfer multiplier effects

This systemic review has identified four main methodologies that are used to estimate the multiplier effects of cash transfers:[16] econometric techniques, local economy-wide impact evaluations (LEWIE), computable general equilibrium models (CGE), and social accounting matrixes (SAM). An overview of each of these methods is presented below. The most common method used by the studies is a combination of econometric techniques (9 out of 23), followed by Local Economy-wide Impact (LEWI) models (7 out of 23).

Table 3. Summary of methods used by reviewed studies

Method	LIC	MIC	Total
Social Accounting Matrix (SAM)	2	1	**3**
Computable General Equilibrium (CGE)	1	2	**3**
Local Economy-Wide Impact Evaluation (LEWIE)	5	2	**7**
Econometric techniques	-	10	**10**

[14] Mexico's conditional cash transfer program (subsequently called Progresa/Oportunidates/Prospera) was abolished in 2019.

[15] Multiple reports have been published analyzing the multiplier effects of the GiveDirectly program. In this systematic review, the publication from Egger et al. (2022) was selected to represent these studies.

[16] Another method often used to estimate the effect of fiscal stimulus on the economy is the Input-Output (I-O) method. None of the selected studies used this method, therefore it was not included in this report.

Source: Authors' elaboration

Social Accounting Matrix (SAM)

A Social Accounting Matrix (SAM) is a mathematical representation of the economic activity of an economy, capturing the interactions between a set of agents. The agents are reported into a matrix, each representing the transaction (i.e., monetary expenditure) between one agent and another. The agents can be producers and consumers (firms and households), production factors (labor and capital), government investors, and trade agents (i.e., the foreign accounts requiring export and import). By itself, a SAM is not an economy-wide model but a representation of the economic behavior of agents of an economy. SAM can estimate the multiplier effects of a cash injection in an economy, as the matrix results represent them (Sape, Ferrari, & Mcdonalds, 2018). An advantage of this method is the possibility of building a simplified model of an economy and the estimation of the final multiplier as an input-output ratio.

In a SAM model, if beneficiary agents (households) spend money in the (local) economy, these expenditures are reflected in the matrix and recorded as other agents' income. Subsequently, new agents' income turns into expenditure, which can be functionally described in a power series expansion. The basis of these functions lies in the assumption concerning the marginal propensity to consume of the agents involved. The MPC is nothing other than the proportion of the income that the agents (and the assumption is usually made by the category of agents) spend in the economy of reference. Nonetheless, the assumptions regarding the MPC and the direct relation between one agent's expenditure and the other the agent's income are considered negative aspects of SAM models, as they assume a closed economy and do not consider price elasticities.

Thus, it is possible to estimate economic multipliers by representing the circular flow of the cash transfer injection. For example, Staunton (2011) used SAM to quantify the multipliers of cash and food aid in rural markets in the Gokwe North region of Zimbabwe for the pilot program Zimbabwe Emergency Cash Transfers (ZECT). Staunton's procedure required data concerning the proportional expenditures of each actor to the others. The data on primary consumers (i.e., beneficiaries of the cash transfer) was collected throughout the implementation phase of the program. In contrast, the proportional expenditure of secondary beneficiaries was estimated through ad-hoc interviews and focus groups. This database allowed the researcher to simulate the local economy income multiplier in a snapshot in time. Apart from beneficiaries, the agents included in the ZECT SAM are small and large farmers, traders, schoolteachers, clinics, other local agents, and external agents. The results indicate that the cash transfer may have had a multiplier of 2.59, a sizeable benefit for more than just the immediate recipient households.

Moreover, Neri et al. (2014) used a SAM model to estimate the short-term multiplier of different social protection programs in Brazil, including Bolsa Familia. The researchers used data from the 2009 Brazilian National Accounts and a household budget survey to design the model. Also, this model is supported by three assumptions. First, it assumes that causality starts with demand injections; second, it assumes that supply is perfectly elastic; and third, it assumes that the household's propensity to save and consume does not change with an increase in income. Finally, unlike Staunton (2011), this model focuses on macro-economic indicators and concludes that if the government increased Bolsa Familia expenditures by 1 percent of GDP, overall economic activity would grow by 1.78 percent.

Lastly, Davies & Davey (2008) constructed a SAM model to estimate the multiplier effect of the Dowa Emergency Cash Transfer (DECT) in Malawi. This method allowed the researchers to observe the exogenous cash injection around the local economy and identify secondary and indirect beneficiaries of the program. This study used data from the DECT monitoring and evaluation process, including information on beneficiaries' spending on their transfer. Furthermore, interviews were conducted with

secondary beneficiaries to establish the spending patterns of all relevant actors in the local economy. Unlike most SAM models, in this study, average income and expenditure are calculated based on a sample of interviewees rather than total regional financial flows.[17] Eventually, the study estimated a multiplier of between 2.02 and 2.45 for the DECT program in the TA Chakhaza region.

Computable General Equilibrium (CGE)

Over the past 45 years, Computable General Equilibrium models have become a standard tool for empirical economic analysis. CGE models describe and include, through functional interactions, the entire set of exogenous (e.g., labor supply) and endogenous (e.g., prices and quantities) variables of an economy. These interactions describe the activity of economic agents such as firms, households, governments, investors, and foreign markets. Because of their comprehensiveness, CGE models can simultaneously encompass an economy's entire financial activity, i.e., considering production, consumption, employment, trade, taxes, and savings. Thus, the simulation of all these agents' activities describes the macroeconomic behavior of the economy.

CGE models combine economic theory with actual economic data to simulate the impacts of inputs (e.g., public policies or shocks) in the economy. As CGE models consider the interdependencies between different sectors, agents, and markets in the economy, they can shed light on policies' broader economic impact and reveal their indirect or unintended effects (Lofgren, Harris, & Robinson, 2002). A CGE model estimates a policy's or economic shock's effects by comparing before and after scenarios. The pre-policy baseline is generated by fitting a system of model equations and the behavioral parameters to the base year data. The model assumes that the economy starts from an equilibrium position in the baseline. When a policy change or economic shock is introduced, the economy converges to a new equilibrium, governed by the economic relationships specified in the equations system. Finally, the model estimates a solution by finding a new set of prices and allocating goods and factors such that the economy is in equilibrium again (Milne, 2016).

Two primary components feed CGE models. Firstly, the central database of CGE is based on a SAM. While the content of the SAM can differ significantly among different CGE models, this typically includes several aggregated macroeconomic accounts such as commodities, production activities, factors of production, taxes, private households aggregate, government, investment, and rest-of-the-world. The second component of CGE models is the elasticity database. While the SAM is a snapshot in time of the equilibrium state of an economy, the elasticity database sets the dynamic environment of changes from two subsequent stationary stages. Elasticities link the accounts to each other and are the wires conducting the economic changes and defining a post-policy new equilibrium. Hence, if data is available to estimate the elasticity database, a CGE model can provide more comprehensive results than a simple SAM.

CGE models are more complex and comprehensive if compared to a SAM. Accordingly, with a CGE, it is possible to build a macro-micro integrated model and estimate several macroeconomic indicators with confidence intervals and significance levels. Also, dynamic models include an elasticities database, correcting for one of the shortcomings of SAM models. However, CGE models are very data-intensive, which might hinder the implementation of the method in some contexts.

Filipski and Taylor (2012) designed a CGE model to evaluate the multipliers of social cash transfers on the welfare of beneficiary and non-beneficiary households in rural Malawi and Ghana. In their model,

[17] This strategy is justified by the fact that the study aims at following the financial flows only around the region where the program is implemented.

household data is nested into a broader model for the local rural economy, which includes macroeconomic aggregate variables such as production, consumption, and imports into and exports from the rural economy. Furthermore, these relate to exogenous indicators such as government expenditure. Thus, as a more comprehensive model, the design of this CGE required a household survey to build a SAM and data on national agricultural production, consumption information, and income aggregates. Moreover, the CGE model allowed for the construction of two measures of transfer efficiency – household-level efficiency and total transfer efficiency. Household efficiency reflects the ability of beneficiaries to convert their transfer payment into welfare. At the same time, the total transfer efficiency estimates the welfare impacts not only on households receiving the transfer but also on households that may be impacted indirectly. Also, this simulation method facilitates assessing a given intervention's effects under different market conditions. Therefore, the researchers simulated four different market conditions and the different impacts of the cash transfer program. Malawi's total transfer efficiency varied from 1 to 1.47 and Ghana's from 1 to 1.42, depending on the market condition.

Furthermore, Freire et al. (2018) developed a CGE model to estimate the Bolsa Familia (BF) program impacts on the Brazilian economy. Firstly, the researchers used a multiple households SAM for the Brazilian economy from 2008,[18] followed by the development of a standard CGE model calibrated to consider issues related to income distribution and their impact on household consumption levels and the productive structure of the Brazilian economy. The results from this study indicate that even those that do not receive the BF transfer still benefit from increased income. Thus, the policy has positive impacts on income deconcentration. Nonetheless, the researchers concluded that the Bolsa Familia could not be considered a growth policy in the short term, as its effect on growth is negligible (0.3 percent).

Another study that uses a CGE model is Tiberti et al. (2018), which evaluates the economic impact of a reform on the South African Child Support Grant (CSG). The study uses a bottom/up top/down CGE model to capture not only the general equilibrium effects generated by the increased government spending but also the general equilibrium effects engendered by the variation in the labor force participation and household consumption due to the reform in the program. The CGE is calibrated on the Social Accounting Matrix (SAM) from Davies and Thurlow (2013) based on 2009 data. Additionally, the researchers used the National Income Dynamic Study (NIDS) from 2008 combined with the General Household Survey (GHS) 2007. Finally, the study concludes that the CSG reform positively impacts the South African economy, with an average increase in real GDP of 0.27 percent.

Local Economy-Wide Impact Evaluation (LEWIE)

LEWIE methodology was developed to estimate the full impacts of cash transfers on local economies and non-beneficiary households, linking CGE models with microsimulation techniques (Taylor, 2012). The LEWIE is a specific category of CGE models, tailored to the local context where the policies are implemented. LEWIE models can be calibrated using a local SAM constructed using household, enterprise, and community survey data or using econometric techniques. The microdata is collected at baseline and follow-up time points. Furthermore, LEWIE study designs often benefit from the randomization of the benefit allocation, which strengthens the validity of results, allowing for more

[18] The SAM was developed by Burkowsky et al. (2014).

robust estimates. Estimates are also processed through Monte Carlo simulations,[19] enabling the estimation of sensitivity analysis and construction of confidence intervals for the results obtained.

A specific feature of LEWIE models is the possibility to evaluate the effect of cash transfers on the demand for goods in treated and non-treated areas. The modeling of the supply elasticity to demand growth is crucial for carefully estimating real price-adjusted multipliers in the local economy of interest. An elastic supply can generate higher real multipliers, while an inelastic supply environment can cause prices to increase rather than create economic spillovers. In extreme cases, the highest inelasticity could also create undesirable inflationary effects.

The main difference between a LEWIE and a CGE is that the former focuses on a local economy. Just as with the CGE, the main positive points of a LEWIE model include the possibility of building a macro-micro integrated model that accounts for price effects and estimates results with confidence intervals and significance levels. Consequently, a LEWIE model is data-intensive and requires baseline and follow-up data collection.

Thome et al. (2014) adapted the LEWIE method to model the spillover of Ghana's pilot program Livelihood Empowerment Against Poverty (LEAP) on Ghana's rural economy. The study's SAM is based on beneficiary and non-beneficiary households in treated communities and potentially eligible and ineligible households in non-treated neighboring communities. The accounts refer to these households' principal economic activities, income sources, and functional expenditure categories. The LEWIE model for the LEAP program found income multipliers at a scale of 2.50, with a 90 percent confidence interval of 2.38 – 2.65. Furthermore, the model tests for inflationary effects and estimates a real-income multiplier lower than the nominal one, at a scale of 1.50, with a confidence interval of 1.40 – 1.59. Thus, the estimation of price effects is decisive in determining unbiased multipliers.

Kagin et al. (2014) estimate the Local Economy-Wide Impact Evaluation for the Ethiopian Social Cash Transfer Pilot Program (SCTPP). The study required household and business enterprise surveys, both at baseline and after implementation, and sought the spillovers generated by beneficiaries' expenditures. The STCPP LEWIE model does include a SAM database, and the multipliers are estimated by the interplays between prices and outputs effect. These are defined by, on the one hand, the increase in the demand for goods among (non-)beneficiary households and the elasticity of the supply side from this increase. The model found total income multipliers of 2.52 and 1.35, depending on the region analyzed. However, estimates considering price elasticities find a real income multiplier of 1.84 and 1.26.

Thome et al. (2013) employed a LEWIE model to estimate the production spillovers (by type of activity and by treated/non-treated households), as well as the income multipliers, of a Kenyan Cash Transfer Program for Orphans and Vulnerable Children (CT-OVC). The researchers analyze these effects for two regions of the country (conjointly), part of the pilot phase of the program, selected among treated areas for their more isolated position concerning the national market (thence promising higher internal validity for the estimates). The data used consist of microdata from national surveys (HEDS-OVC 2009, 2011; KIHBS 2004) and an ad-hoc developed business enterprise questionnaire. With those sources, baseline values for all sectors and households are created, and the model is not calibrated with a SAM. Instead, the model is validated with Monte Carlo techniques to perform a comprehensive

[19] Monte Carlo techniques, in the case of LEWIE studies, consist in repeatedly extracting a random value of each parameter from its distribution and re-estimating the model on this base. Because of the high number of alternative cases that can be generated, these techniques are robust to validate a sensitivity analysis.

sensitivity analysis grounded in econometrics. Thome et al. (2013) find that the CT-OVC has a (real) multiplier effect on production of 1.598, led mainly by the retail sector.

Thome et al. (2014) applied the LEWIE technique to estimate the income and production multipliers of the Zambian Child Grant Program (ZCGP). Like (Thome, Filipski, Kagin, Taylor, & Davis) (2013) previous study, this model is unconstrained from a SAM and relies on the econometric estimation of model parameters (Monte Carlo techniques) to ensure its internal validity. The data used are the ad-hoc ZCGP monitoring surveys from 2010 and 2012, the 2012 ad-hoc ZCGP business enterprise survey, and the nationally representative 2010 LCMS survey. Because of the randomized nature of the program, surveys are fitted as baseline and endline timepoints. The ZCGP is found to stimulate the demand in the local economy and determine a response from the supply side that generates spillovers in production of both treated and non-treated households, as well as a sizable real income multiplier. The latter is estimated to be 1.34 in magnitude.

For their LEWIE, Filipski et al. (2015) use a micro agricultural household model integrated with general-equilibrium methods to evaluate the impacts of Lesotho's Child Grants Program (LCGP). The model parameters are estimated using baseline household survey data, and the validity is ensured, once more, via Monte Carlo simulations. As the previous ones, this LEWIE distinguishes between beneficiaries' and non-beneficiaries' households (including, in this case, control households) and aims to understand (and measure) the program's effect on demand, supply, and prices on local markets as well as income multipliers. Their results indicate a real local income multiplier of 1.53.

In 2015 Taylor et al. (2016) based their models on the LEWIE protocol to analyze the impact on host communities' economies of three Congolese refugee camps in Rwanda. This study is also informed by microdata obtained through ad-hoc surveys (in and outside the refugee camps), such as surveys related to households' socioeconomic status and production activities of firms and households. These surveys are nested into a general equilibrium model describing the local economies (e.g., the price elasticities to market changes and the market relationships between the hosting economies and the refugees' livelihoods). This unique study's results indicate that each additional dollar in aid to refugees in the two cash camps increases income in the local economy by $1.51 and $1.95. The estimated multiplier effect of the camp delivering in-kind aid is also positive, indicating that per every dollar for in-kind assistance delivered in-camp, the spillover is 1.2 dollars.

Lastly, Thome et al. (2016) used a LEWIE model to estimate the local economic impacts of social cash transfer programs in seven African countries (Ethiopia, Ghana, Kenya, Lesotho, Malawi, Zambia, and Zimbabwe). The study identified beneficiary and non-beneficiary households in all locations and structured the LEWIE model centered on the principal economic activities these households participate in, the households' income sources, and the goods and services households consume. The simulations reveal that each US dollar transferred to poor eligible households generates a real income multiplier ranging from 1.08 to 1.81, depending on the country.

Econometric estimation techniques

Several studies in our list (9 out of 23), all designed for middle-income countries, adopt estimation techniques relying on econometric methods. These include typical experimental techniques such as Difference in Difference, Indirect Treatment Effects, and quasi-experimental or non-experimental approaches, including three-stage least squares (3SLS), ordinary least squares (OLS), and fixed-effects regressions. The advantage of using econometric techniques is that the method can be chosen based on the data availability and the researchers' technical capabilities. Nonetheless, as the method is developed based on the specifications of the study, it often relies on fundamental assumptions and cannot be standardized into a single protocol.

An interesting approach is put forward by Villa (2016). This study assesses the effects of Colombia's program *Familias en Accion* on municipal GDP growth rates and GDP per capita growth. A gradual roll-out over time allowed a natural experiment to be examined using the difference in differences estimation technique. The comparison was made between treated and untreated municipalities, and the outcome proxy was produced with the support of luminosity data, a consistent predictor of GDP at multiple levels (Villa, 2016). This study employed panel survey microdata including about 5,000 households, data on public transfers to the municipalities and regions, and open data on Earth's luminosity. This approach and data availability also allowed sensitivity tests on spillover effects by adapting the geographical radium of the luminosity data. This study was the first to approach the assessment of cash transfer interventions at the subnational level using luminosity data. The results, corroborated by robustness checks, showed that the cash transfer may have generated a GDP per capita growth rate increase of 0.7 percentage points at the municipal level.

Another econometric technique estimates indirect treatment effect (ITE). ITE models have become widespread in the social sciences, as more rigorous examinations of causal impacts have become crucial in social science research. Treatment effect models are often used to generate evidence to test hypotheses regarding the potential implications of social policies and programs. An indirect treatment effect model specifies that a causal variable influences an outcome variable via one or more intervening variables called mediators. An indirect effect hypothesis may be tested empirically using different statistical techniques, including path analysis, product approach, and longitudinal design (Thrash, Belzak, Wadsworth, & Sim, 2019).

Angelucci & Giorgi (2009) and Barrientos & Sabatés-Wheeler (2010) evaluated the multiplier effects of the Mexican program Progresa (Oportunidades) using ITE techniques. The data used by both research teams were gathered from micro-level household surveys capable of differentiating treatment and non-treatment areas. In both cases, the results pointed to significant spillover effects among the non-treated. Angelucci & Giorgi (2009) estimated a total multiplier of about 1.1 and Barrientos & Sabatés-Wheeler (2010) indicated that household food consumption among noneligible households in treatment areas was 12.3% higher compared to noneligible households in control areas.

Additionally, we have identified studies that use multiple regression methods to estimate the multiplier effect of cash transfers. Regression analysis is a widespread statistical technique that identifies which variables impact a topic of interest. Regression analysis can determine which factors matter most, which factors can be ignored, and how these factors influence each other (Chatterjee & Simonoff, 2012). Cord & Wodon (2001) and Sadoulet & Janvry (2001) estimate the micro-economic impacts of the Mexican PROCAMPO program. Both studies used panel data derived from household surveys from 1994 and 1997 to build their regressions. Results from these studies indicate that the PROCAMPO program promoted significant indirect effects through the multiplication of the liquidity received. Results indicate an income multiplier for all households in the magnitude of two in the first study and in a range of 1.5–2.6 in the second one.

Cunha et al. (2022), Rougier et al. (2018) used regression analysis to estimate the impact of two different cash transfers in Brazil, COVID-19 auxilio emergencial and Bolsa Familia, respectively. Both studies focus on meso-economic effects, with Cunha et al. (2022) on municipalities and Rougier et al. (2018) on the state of Ceará. The latter consists of a 2SLS regression model with basic indicators and data on macro-economic indicators. The 2022 study runs OLS regressions using program administrative data, labor market indicators, COVID-19 indicators, and mobility data. Both studies observed positive impacts, with the COVID-19 auxilio emergencial promoting a multiplier of around 1.5 and Bolsa Familia generating an average additional GDP growth of 2 percent.

On the other hand, another study on the Brazilian Bolsa Familia program finds opposite results. Jorge et al. (2019) conduct panel data analysis techniques to estimate the meso-economic effects of Bolsa Familia. The study used fixed effects and random effects techniques to determine which variables have the greatest impact on GDP growth of cities in the state of Sergipe, during the studied time series. Notably, Jorge et al. (2019) concluded that the Bolsa Familia program did not statistically contributed to GDP growth of municipalities in Sergipe.

Lehmann & Masterson (2014) designed a randomized control trial combined with a regression discontinuity design to estimate the multiplier effect of cash aid to Syrian refugees in Lebanon. The study was based on a rigorous design that allowed to quantify the causal impacts of the winterization program. The program targeted only households above 500-meters of altitude. Thus, to evaluate the program's impact, the study compared beneficiaries residing slightly above 500 meters (treatment group) to similar non-beneficiaries living slightly below (control group). The study measured multiple welfare indicators and local economic multipliers. Regarding multiplier effects, the researcher concluded that each dollar that beneficiaries spend generates 2.13 dollars of GDP for the Lebanese economy.

Lastly, Egger et al. (2022) developed a study to estimate the aggregated impacts of large cash transfer programs. The study was conducted between mid-2014 and early 2017. It provided a one-time cash transfer worth roughly USD 1,000 (distributed by the NGO GiveDirectly) to over 10,500 poor households in a sample of 653 villages in rural Kenya. To identify spillovers within and across the villages, the researchers employed a two-level randomization design to select the villages where eligible households would receive the transfer and other villages where there would not be beneficiaries. Also, baseline and end-line household surveys were collected in all villages to develop a general equilibrium model. Ultimately, the study concluded that the cash transfer program led to sharp increases in the consumption expenditures of recipient households, and extensive broader effects on the local economy, with an estimated local transfer multiplier of 2.4.

Magnitude of multiplier effects

Mathers and Slater (2014) observed that much of the evidence gathered from studies on LIC and MIC focuses on the impact of productivity on the micro and meso levels. We have encountered similar results when it comes to LIC, with seven studies analyzing meso level effects and only one focusing on the macro level. The papers analyzing programs in MIC are distributed around micro, meso, and macro level effects (four, seven, and four, respectively[20]). The studies focusing on macro-level impacts were published 2012 or later, which might indicate that this type of evaluation is more likely once the programs have been implemented for a longer time or in countries where the social protection system has matured, and macro data is more widely available.

In general, the multiplier effects are presented in percentage (point) or monetary increases – the outcome variable is dependent on the economic level the study focuses on (Table 4 summarizes the results of the included studies, sorted by economic level).[21] A typical representation of multipliers is the projected effect after a 1 percent increase in expenditure or the injection of $1 in the economy. For example, Neri et al. (2013) concluded that when expenditures for the Bolsa Familia program

[20] Some papers present results for multiple levels, i.e., micro and macro at the same time.

[21] Considering that a meta-evaluation of cash transfer economic multipliers is not feasible with a quantitative approach, this systematic review does not intend to present any judgment or make a comparative analysis of the results from the selected papers.

increase by 1 percent of GDP, the national GDP would grow by 1.78 percent. In Ethiopia, every Ethiopian birr (ETB) transferred by the Social Cash Transfer Pilot Program in the district of Hintalo-Wajirat, generated an extra 1.52 ETB in the local market (Kagin et al. 2014). In Malawi, every dollar transferred by the Dowa Emergency Cash Transfer generated an additional income of over $2 for beneficiaries and non-beneficiaries (Davies & Davey, 2008).

According to theory, the extent of the multiplier effects depends on beneficiaries' marginal propensity to consume and the program modality, its permanence, the transfer size, and the number of beneficiaries. In LICs, small benefit levels might limit multiplier effects (Mathers & Slater., 2014). However, among the selected studies, we do not necessarily observe a smaller multiplier in LICs than in MICs. For instance, Thome et al. (2014) observed a multiplier of 1.79 in Zambia, similarly to the 1.5 multiplier presented by Cunha et al. (2022) in Brazil. These results might be influenced by the fact that the literature often focuses on large national programs or significant emergency cash assistance, and the effect of these types of programs could be similar regardless of the country's context.

How can we gauge the magnitude of the results? According to Giambattista and Pennings (2017), a transfer multiplier is large if it is greater than one. Based on this criterion, the majority of the reported transfer multipliers is large. Comparing the reported outcomes with infrastructure multipliers provides additional insights. Purchase multipliers are larger in Penning's empirical and theoretical models (Penning, 2021). A less clear-cut conclusion emerges from Vagliasindi and Gorgulu's review (2021): Whether or not public investment multipliers exceed transfer multipliers depends on the time horizon, the economic condition at time of the investment, the absorptive capacity of the country and the extent to which fiscal and monetary policies are coordinated.

Not only the method, but also the underlying data, identification strategy, choice of the channel, and the definition of the outcome indicator used to estimate multiplier effects matter. It also makes it difficult to compare the results within and across programs and countries. The four studies of Brazil's Bolsa Familia program serve as an example. Two studies at the macro level both use the national GDP as outcome variable and consumption as main transmission channel. Yet, one uses SAM and the other uses a CGE, leading to rather different outcomes: a GDP multiplier of 1.78% versus 0.3% increase of GDP. Studies 3 and 4 focus on the municipal level. Although the method is similar, the underlying data range differs, and the outcome is either no effect or an effect of two percentage points (Ramey, 2019). These studies illustrated the impact of the method choice by estimating the effect of fiscal spending using three methods and arriving at rather different results. In their review of fiscal multipliers, Vagliasindi and Gorgulu (2021) argue that data-driven methods based on time series and narrative methods produce lower, but more plausible results. They conclude that "the key lessons underscore that the spending multiplier is highly sensitive to different modeling and methodological choices, as well as more innocuous choices of time period considered in the analysis" (Vagliasindi and Gorgulu, 2021:7).

Table 4. Summary of multiplier effects

Country (author)	Program name	Time range of study	Method	Multiplier Channel	Outcome Indicator	Multiplier	Measurement unit
Macro							
Brazil (Neri et al., 2013)	Bolsa Familia	2009	SAM	Consumption, production	National GDP	0.78	1.78% GDP growth for 1% increase in BF spending
Brazil (Freire et al., 2018)	Bolsa Familia	2008-2015	CGE	Consumption, investment	National GDP	1.04	Real GDP growth per 1 $ spent
Ghana (Filipiski & Taylor, 2012)	Livelihood Empowerment Against Poverty	2007	CGE	Consumption, production	Transfer efficiency	1-1.42	Additional rural welfare per 1$ spent
Lebanon (Lehamnn & Masterson, 2014)	Winter Cash Assistance Program for Syrian Refugees	2014	Econometric techniques and back-of-the envelope calculation	Consumption	National GDP	2.13*	**Additional GDP**
Malawi (Filipiski & Taylor, 2012)	Social Cash Transfer Program	2004	CGE	Consumption	Transfer efficiency	1-1.47	Additional rural welfare per 1$ spent
South Africa (Tiberti et al., 2018)	Child Support Grant	2009	CGE (integrated micro-macro model)	Consumption, labor supply, production	National GDP	0.26%-0.28%	Change in real GDP for 20% increase in CSG spending
Meso							
Brazil (Cunha, et al., 2022)	Emergency Aid	2020	Econometric techniques (IV regression)	Private formal employment	Regional GDP	0.5-1.5	Increase in GDP per 1 $ spent
Brazil (Jorge & da Graca, 2019)	Bolsa Familia	2004-2012	Econometric techniques (panel data, OLS)	Consumption	GDP of municipalities in Sergipe	0*	Estimated impact on municipal GDP (regression coefficient)

Brazil (Rougier et al., 2018)	Bolsa Familia	2003-2010	Econometric techniques (reduced form local (structural) growth model with IV	Consumption, local productive structures	Municipal GDP in Ceará	0.0011 – 0.0017 12-18%	pp increase in local growth per 1 pp increase in BFP/GDP ratio Additional GDP growth for 1 sd increase in BFP/GDP
Colombia (Villa, 2016)	Familias an Accion	2000-2004	Econometric techniques (DID with fixed effects; luminosity data)	Consumption	Municipal GDP	0.7 pp	Additional GDP growth
Ethiopia (Kagin et al., 2014)	Social Cash Transfer Pilot Program	2012	LEWIE	Consumption, production	Local income multiplier	1.35-2.52 1.26-1.84	Nominal and real total income multiplier per 1$ transferred
Ethiopia (Thome et al, 2016)	Social Cash Transfer Program Pilot	2011	LEWIE	Consumption, production	Local income multiplier	1.35-2.52 1.23-1.81	Nominal and real total income multiplier per 1$ transferred
Ghana (Thome et al., 2014)	Livelihood Empowerment Against Poverty	2010-2012	LEWIE	Consumption, production	Local income multiplier	2.5 1.5	Nominal and real total income multiplier per 1$ transferred
Kenya (Thome et al., 2013)	Cash Transfers for Orphans and Vulnerable Children	2011	LEWIE	Consumption, production	Local income multiplier	1.81 1.22 1.58	Nominal and real total income multiplier per 1$ transferred Real production multiplier
Kenya (Egger et al 2022).	GiveDirectly Cash Transfer Program	2014-2017	Econometric techniques (macro-experimental approach)	Consumption, investment	Local economy multiplier	2.3-2.5	Real expenditure-income based multiplier per 1$ transferred
Kenya	Program for Orphans and	2009-2011	LEWIE	Consumption, production	Local economy multiplier	1.34 1.08	Nominal and real total income

(Thome et al, 2016)	Vulnerable Children						multiplier per 1$ transferred
Lesotho (Thome et al, 2016)	Child Grant	2009	LEWIE	Consumption, production	Local income multiplier	2.23 1.36	Nominal and real total income multiplier per 1$ transferred
Lesotho (Filipiski et al., 2015)	Child Grant	2009**	LEWIE	Consumption, production	Local income multiplier	2.21 1.53	Nominal and real total income multiplier per 1$ transferred
Malawi (Thome et al, 2016)	Social Cash Transfer Program	2006	LEWIE	Consumption, production	Local income multiplier	1.27 1.18	Nominal and real total income multiplier per 1$ transferred
Malawi (Davies & Davey, 2008)	Dowa Emergency Cash Transfer	2006-2007	SAM	Consumption	Regional economic multiplier	2.02 - 2.45*	**(Nominal?) total income multiplier per 1$ transferred**
Rwanda (Taylor et al., 2016)	WFP cash transfers to refugees	n.a.	LEWIE	Consumption	Local income multiplier (10km radius camps)	1.51-1.95	Real income increase per 1$ transfered
Zambia (Thome et al., 2014)	Child Grant	2010-2012	LEWIE	Consumption, production	Local income multiplier	1.79 1.34	Nominal and real total income multiplier per 1$ transferred
Zimbabwe (Thome et al, 2016)	Harmonized Social Cash Transfer	2011	LEWIE	Consumption, production	Local income multiplier	1.73 1.4	Nominal and real total income multiplier per 1$ transferred
Zimbabwe (Staunton, 2011)	Emergency Cash Transfers	2009-2010	SAM	Consumption	Local economy multiplier	2.59*	**(Nominal?) total income multiplier per 1$ transferred**
			Micro				
Mexico (Barrientos & Sabates-Wheeler, 2010)	Progresa	1998-2000	Econometric techniques (RCT, ITE, ATE)	Consumption, loans and transfers	Adult equivalent food consumption and assets for non-beneficiaries	4.5-12.3% 5.1-9.7% 10.7-16.7%	Higher food consumption Land ownership Livestock ownership

Mexico (Angelucci & De Giorgi, 2009)	Progresa	1998-1999	Econometric techniques (RCT, ITE and ATE)	Consumption, loans, transfers	Adult equivalent food consumption for non-beneficiaries	0.11	Increase in food consumption per 100$ transferred
Mexico (Cord & Wodon, 2001)	PROCAMPO	1994-1997	Econometric techniques (panel regression with IV, 3SLS)	Consumption	Income multiplier for beneficiary households	2	Additional income per 1$ transferred
Mexico (Sadoulet & de Janvry, 2001)	PROCAMPO	1994-1997	Econometric techniques (robust regression models)	Consumption	Income multiplier for beneficiary households	1.97-2.24	Additional income per 1$ transferred

Note: ITE= Intended treatment effects; ATE=average treatment effects; RCT=randomized control trial; sd=standard deviation; pp=percentage point; $ local currency unit; *to be treated cautiously; **cannot be clearly established; Source: Authors' elaboration based on: (Lehmann & Masterson, 2014; Cunha, Perreira, Perrelli, & Tosavni, 2022; Rougier, Combarnous, & Fauré, 2018; Villa, 2016; Freire, 2018) (Kagin, Taylor, Alfani, & Davis, 2014; Egger, Miguel, Niehaus, & Walker, 2022) (Thome, Filipski, Kagin, Taylor, & Davis, 2013) (Davies & Davey, 2008) (Taylor, et al., 2016) (Thome K. , et al., 2014) (Filipski & Taylor, 2012) (Filipski M. , Taylor, Thome, & Davis, 2015) (Thome K. , Taylor, Kagin, Davis, & Osei, 2014) (Cord & Wodon, 2001) (Sadoulet & Janvry, 2001) (Angelucci & De Giorgi, 2009) (Barrientos & Sebatés-Wheeler, 2010) (Jorge & Maclaine da Graça, 2019) (Thome K. , Taylor, Filipski, Davis, & Handa, 2016) (Neri, Vaz, & de Souza, 2013) (Tiberti, Maisonnave, Chitiga, & Mabugu, 2018)

5. Discussion

For a long time, cash transfer programs have been perceived as hand-outs with little expectations regarding future returns to the resources spent on such programs (Handa, et al., 2018). Yet, the potential of cash transfers exceeds the mere redistribution of incomes and reduction of poverty. Cash transfer programs, and social protection more generally, support the proximate, intermediate, and ultimate determinants of economic growth (Szirmai, 2012). There is compelling evidence on the effects of cash transfers on households' nutrition, health, housing, education, and access to basic services (Bastagli, et al., 2016). But easing a household's budget constraint has effects beyond the immediate recipient. An increase in purchasing power raises demand for goods and services, thereby stimulating the local (and national) economy. In order to meet increased demand, local enterprises may expand their production, creating an expansion of the economy (Taylor et al., 2014). Recent qualitative research from Uganda, for example, has illustrated the growth-mediating and productive pathways through which multiplier effects are generated (Kuss et al., 2021).

The review in this paper has shown that cash transfers, similar to other public investments, can have multiplier effects. This applies to both very poor and middle-income countries. The applied systematic approach was very strict. Only studies that analyzed the effects of existing cash transfer programs were considered for the review. Hence, the results presented above reflect actual effects. They confirm that a dollar allocated to a beneficiary household creates added value in the local and national economy. This evidence is crucial as it counters the argument that direct cash transfers to poor and vulnerable households are only a cost to the government. Cash transfers are productive investments strengthening household resilience and creating opportunities beyond the immediate beneficiary.

As analysts, we would love to compare the findings, but a meta-analysis of the results was not possible. While there is an established methodology for evaluating the impacts of cash transfers on recipients, the methods used to measure multiplier effects are manifold as this review has shown. Not only do methods differ, it is also interesting to note that multipliers are uniquely conceptualized given the country context and focus of analysis. There is no shared definition of the main intended outcomes or the unit of measurement. The question is whether a preferred set of outcome, unit and method can be determined and whether it would be desirable to have such standardized outcomes.

It seems challenging to identify a single best option with respect to the estimation methodology of multiplier effects. Transaction tables (based on SAMs) seem to be at the basis of most methods. Econometric techniques are an alternative when SAM-CGE methods are not applicable. The review has shown that the choice of the method is closely linked to the research question, respectively the outcome indicator to be studied. Other criteria include key program variables such as stage of implementation, nature of the program, the availability of data and the capacity of the researcher. Building CGE models, for example, requires significantly more effort and knowledge compared to the other methods. The focus on the supply side and price effects is a positive feature of the LEWIE method, although these can be considered in broader CGE models too. Models based on econometric methods are flexible. Using robust identification strategies can increase robustness and internal validity of the studies. But there is also a risk that econometric models are overly complicated, which may limit the interpretation and replicability of the models.

What are the potential benefits of a (more) standardized approach to the measurement of multiplier effects? The biggest advantage would be the comparability of outcomes. That would allow the further analysis of the determinants of the multiplier effects across country context, but most importantly, it would provide insights to the extent to which the design of cash transfers impacts the magnitude of the effects. The cash transfer programs reviewed in this paper vary in terms of target group, targeting

approach, transfer size, payment frequency and program duration. Yet, it is impossible to say to what extent these factors matter for the obtained results due to the diversity in methods and data. From the policy impact literature we know that design matters. It can be expected that the same applies to the magnitude of economic multiplier effects.

The size of the economic multiplier depends on the response of the household to the cash transfer, its marginal propensity to consume (Souleles, 1999). The literature of the determinants of the MPC refers, among others, to the transfer size, the target group (Fisher, Johnson, Smeeding, & Thompson, 2020), and the payment frequency. One-time transfers, such as provided by GiveDirectly can be considered a windfall gain for the recipient household. As summarized by Souleles (1999) the evidence on the MPC of windfall gains is mixed, but it appears that the higher the relative gain, the lower the MPC. This is in line with those that argue that the MPC is decreasing with increasing transfer size because a large transfer is more likely to be labeled as income to be saved (Thaler, 1990), but the evidence is inconclusive (Souleles, 1999). What seems to matter is the welfare level of the recipient household. Poor households have a higher MPC (Souleles, 1999) (Fisher, Johnson, Smeeding, & Thompson, 2020) (Canbary & Grant, 2019) (Albuquerque & Green, 2022). If the MPC is higher for households in need, then it could be expected that the economic multiplier effects of cash transfers to those in financial distress may eventually be larger compared to transfers to wealthier households. The heterogeneity in response to a change in income (Fisher et al. 2020) and the magnitude of economic multipliers have aggregate implications for fiscal policy, in particular when large groups are receiving the transfer (Souleles, 1999). Recent evidence from the pandemic indicates that transfers to those in need are more effective in stimulating demand (Albuquerque & Green, 2022). This supports the argument that redistribution from the rich to the poor stimulates aggregate consumption and contributes to economic growth (Fisher, Johnson, Smeeding, & Thompson, 2020).

It can also be expected that the predictability of the transfer and the targeting mechanism affect the MPC and the extent of economic multiplier effects. For example, targeting practices, whereby all eligible households are reassessed with a proxy-means test every four to five years, can create implicit disincentives. Knowing that assets play a role for the assessments, recipients may hold back on increasing their assets (Ludena, 2017). Finally, local community context should not be forgotten. The MPC also depends on the functioning of markets and the opportunities for households to spend on goods and services according to their preferences. This also determines whether the immediate multiplier effects are generated within the community or beyond (Kuss et al., 2021).

There might also be arguments against a standardized approach for the measurement of economic multiplier effects of cash transfers. Evidence of economic multipliers can garner political support for the extension and sustainability of cash transfer programs and contribute to government accountability and transparency. Yet, that may require a country-specific approach that accounts for differences in political and economic context and priority setting with respect to outcome indicators. Standardization may also require making compromises with respect to the scope and sophistication of outcomes and methods, yet for some countries this might still be too much to be asked in terms of data and local analytical capacity.

6. Concluding remarks

Overall, data needs are intensive irrespective of the method. The higher the level of aggregation (from micro to macro), the more data is needed, ranging from household and firm-level surveys to detailed local/national account data. Especially in LICs, the data availability and quality might present a challenge to the development of sophisticated models. Capacity building at the local and national levels on producing local economic indicators and supply elasticity analyses can support the development and application of LEWIE models and also provide inputs to the development of SAMs

and CGEs at the national level (Annex 1 provides on overview of the different models comparing data requirements, advantages, and caveats).

Economic multiplier studies are ideally planned at the outset of a cash transfer program. Similar to policy impact evaluations, it is challenging to retroactively assess the presence and extent of multiplier effects if the counterfactual is missing. Hence, modeling may require more sophisticated methodologies and data, and analysts may have to resort to policy simulations. Retrospective analyses of national programs may also be restricted to the data (and models) already available both in terms of national macroeconomic indicators and program monitoring information. Prospective studies at the start of a new cash transfer program have the possibility of collecting baseline and follow-up data. For (randomized) pilot programs, data can be collected among beneficiaries and non-recipient households and enterprises in both treated and non-treated communities for the analysis of robust effects.

Yet, what if it is not possible to randomize program implementation or collect a comprehensive set of data? Prospective studies of national programs could assess whether existing surveys are ready to include key indicators relative to the program. Evaluation of national programs can nest such surveys in economy-wide CGE models, which require the functional specification of economic interactions. In situations where a national CGE model is not already in place, a standalone study for its production and plan for maintenance could be envisaged.

If the above is not feasible, the available data determine what is eventually possible. In the best-case scenario, for a pilot or emergency program baseline and follow-up expenditure surveys, at least among beneficiaries, are available. These data can be used to impute consumption aggregates to embed in broader, macroeconomic models. In case that surveys were also circulated among firms, the respective data can be included in transaction tables to identify second-level spillover effects. Yet, the retrospective construction of transaction tables is challenging and going back to the field after implementation for collecting such data is not realistic. If transaction tables are not available, then the choice of the methodology could be limited to econometric techniques. The choice of the econometric strategy eventually depends on the data availability and the confidence of the researchers with the array of available instruments.

The estimation of multiplier effects In the context of (existing) national programs requires a different approach, which depends primarily on the local capacity in terms of data availability and technical knowledge. The estimation of output multipliers at the macro-level is one way forward. Yet, micro-level data, for example collected during the pilot phase, can be used to estimate income multipliers at the micro-level and possibly support the analyses of local economy effects at the meso-level. In all cases, the data needs must be made explicit, both with respect to ad-hoc surveys (households and firms) in support of general SAM databases, and to create counterfactuals. At the macro-level, consistent time series on government economic and financial indicators, as well as program level data will also benefit the estimation of MPCs and economic multiplier effects of cash transfer programs.

Ideally, a new program (or program reform) is tested with a pilot using a randomized controlled trial (RCT) design. In that case, the analysis of economic multiplier effects can be planned from program inception. Household surveys at baseline and endline can be administered to both beneficiaries and non-beneficiaries in treatment areas and non-beneficiaries in non-treatment areas. Enterprise and community surveys in both areas will support the development of input-output models that are needed for the design of a LEWIE. If an RCT is not foreseen, detailed longitudinal household, community and enterprise survey data (ideally with baseline data collected before the start of the program) will allow for the application of econometric tools for the estimation of economic multiplier effects.

For an existing national cash transfer program, assessing multiplier effects is much more challenging as the counterfactual is often lacking. The feasibility of estimating multiplier effects depends on the quality and extent of available data at both the macro and micro levels. The latter is often directly related to the development level of a country. A very crude way to assess potential multipliers could be through the estimation of MPCs. MPCs can be estimated based on national time-series data, yet are unreliable as income is endogenous. In general, household budget and income survey data are preferred and allow for more detail, especially if MPCs vary across socio-economic groups (see, e.g., Canbary and Grant, 2019).

Although the existence of multiplier effects has been acknowledged for quite some time, empirical evidence is still relatively limited. This paper systematically reviewed the existing literature on the economic multipliers of cash transfers. Of the 23 studies included in the review, all focused on cash transfer programs in MICs or LICs. Most studies focused on estimating multiplier effects at the macro-meso-level. Only four papers considered the micro-level. The review has shown that a variety of methodologies are used to estimate multiplier effects of cash transfers. LEWIE models at the local level and econometric models are the most prevalent methods. Given the lack of a standardized approach, results from exiting studies cannot be compared. Not only are the methods different, but also outcome indicators and the units of measurement. Future standardization could benefit the comparability and further analysis of the influence of cash transfer design parameters, but it may also limit its usefulness at the national level given differences in political and economic context and perceptions towards cash transfer programs.

Annex 1. Overview of estimation methods

Method	Description	Data requirements	Examples	Pros	Cons
Social Accounting Matrix (SAM)	A matric representation of the transactions between agents in an economy. It captures the economic interactions between a set of agents.	Data concerning the agents' spending patterns among each other's. Estimates via households/firms survey and/or sampled interviews.	*Staunton (2011):* ZECT-Zimbabwe beneficiaries, non-beneficiaries, farmers, traders, schools, teachers, clinics and other agents' expenditure collected through structured interview questionnaires. The local market multiplier of the cash transfer is 2.59.	- Build a simplified model of an economy, by selecting main agents only. - Estimate the multiplier as an input-output ratio.	- Ad-hoc data collection. - MPC assumptions. - No price effects (elastic supply). - Closed economy. - Cross-sectional snapshot.
Computable General Equilibrium (CGE)	Comprehensive representations of functional interactions of exogenous and endogenous variables of an economy. Describe the macroeconomic behavior of an economy combining theory and data. Based on SAMs, CGE expand the model with dynamic interactions based on elasticity functions.	Same as SAMs for the input model. SAMs nested in macroeconomic models requiring aggregates variables. Elasticities database.	*Tiberti et al. (2018):* CSG-South Africa estimation of a 20 per cent increase in the grant. Outcome variables include households' welfare and macroeconomic aggregates. Integrates recursive micro-macro approach. The reform increases real GDP by about 0.28 per cent.	- Build a macro-micro integrated model. - Dynamic models include elasticities database. - Estimate several macroeconomic indicators. - Estimate confidence intervals and significance levels.	- Data-intensive. - Functional specification of the economy and elasticities.
Local Economy-Wide Impact Evaluation (LEWIE)	CGE models specifically adapted to the economy where the policy is applied. Integrate microsimulation techniques comparing treated and non-treated areas.	Budget household surveys in both treated and non-treated areas at baseline and follow-up. Same as CGEs for the economic model, e.g., activities, commodities, factors. Notably, supply elasticities database.	*Thome et al. (2014):* LEAP Ghana income multipliers estimation by comparing beneficiary and non-beneficiary households in treated communities and potentially eligible and ineligible households in non-treated neighboring communities.	- Build a macro-micro integrated model. - Account for price effects. - Focus on local economy. - Estimate confidence intervals and significance levels. - Longitudinal technique.	- Data-intensive. - Require ad-hoc baseline and follow-up survey. - Functional specification of the economy and elasticities.

Method	Description	Data requirements	Examples	Pros	Cons
			Nominal income multiplier at a scale of 2.50 and real-income multiplier of 1.50.		
Econometric techniques	Rely on econometric methods. Can be experimental, quasi-experimental or non-experimental techniques.	Wide variation depending on the technique and availability: micro and/or macro data, baseline and/or follow-up	*Cunha et al. (2022):* cross-sectional use of 2SLS on Brazi''s 2020 federal cash transfers to vulnerable households. Estimated GDP multiplier in the range of 0.5-1.5. Analysis at the municipal level using GDP proxies. *Lehmann and Masterson (2014):* use of regression discontinuity design for estimating the multipliers of Lebanon's emergency cash transfer on GDP (2.13).	- Choice of technique based on data availability. - Choice of technique based on researchers' capacity. - Estimate confidence intervals and significance levels.	- Limitations depending on each technique. - Each technique is based on fundamental assumptions. - Limited external validity. - Hard to standardize in a single protocol.

Source: Authors' own elaboration.

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Appendix

Annex A. Studies included by context, type of program, and method

CONTEXT	PROGRAM TYPE	METHODOLOGY
LIC	Pilot	Social Accounting Matrix (SAM)
MIC	National	Social Accounting Matrix (SAM)
LIC	Emergency	Social Accounting Matrix (SAM)
MIC	National	Computable General Equilibrium (CGE)
MIC	Pilot	Computable General Equilibrium (CGE)
LIC	Pilot	Computable General Equilibrium (CGE)
MIC	National	Computable General Equilibrium (CGE) and microsimulation
MIC	National	Computable General Equilibrium (CGE) and microsimulation
LIC	Emergency	LEWIE
LIC	Pilot	LEWIE
MIC	National	LEWIE
LIC	Pilot	LEWIE
LIC	National	LEWIE
LIC	Pilot	LEWIE
MIC	National	LEWIE
MIC	National	Econometric (3SLS)
MIC	National	Econometric (3SLS)
MIC	National	Econometric (Differences in Difference)
MIC	National	Econometric (ITE)
MIC	National	Econometric (ITE)
MIC	Emergency	Econometric (OLS)
MIC	National	Econometric (Panel data analysis)
MIC	Emergency	Econometric (RCT)
MIC	National	Econometric (Fixed effects; Least absolute deviations)

Source: Authors' elaboration

Annex B. Studies by type of publication

Author and year	Type of publication	Journal/publisher
(Cunha et al., 2022)	Working paper	IMF
(Freire et al., 2018)	Conference paper	Purdue University
(Jorge & da Graça, 2019)	Journal article	**Revista Publicatio UEPG - Ciências Sociais Aplicadas**
(Neri et al., 2013)	Report	Institute for Applied Economic Research, Brazil
(Rougier et al., 2018)	Journal article	World Development
(Villa, 2016)	Journal article	Economic Development and Cultural Change
(Kagin et al., 2014)	Report	FAO
(Thome K. , et al., 2014)	Report	FAO
(Egger et al., 2022)	Journal article	Econometrica
(Thome, et al., 2013)	Journal article	American Journal of Agricultural Economics
(Lehmann & Masterson, 2014)	Report	International Rescue Committee
(Filipski et al., 2015)	Journal article	Agricultural Economics
(Davies & Davey, 2008)	Journal article	Development Policy Review
(Angelucci & De Giorgi, 2009)	Journal article	American Economic Review
(Barrientos & Sabatés-Wheeler, 2010)	Journal article	Applied Economics
(Cord & Wodon, 2001)	Journal article	**Cuadernos de Economía**
(Sadoulet & Janvry, 2001)	Journal article	World Development
(Taylor et al., 2016)	Journal article	PNAS
(Tiberti et al., 2018)	Journal article	World Development
(Thome K. , et al., 2014)	Report	FAO
(Staunton, 2011)	Conference paper	Institute of Development Studies
(Thome, et al., 2016)	Book chapter	From Evidence to Action, Oxford University Press
(Filipski & Taylor, 2012)	Journal article	Journal of Development Effectiveness

Source: Authors' elaboration