



Title: Poor Children in Rich Households and Vice Versa: A Blurred Picture or Hidden Realities?

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Original Article**Poor Children in Rich Households and Vice Versa: A Blurred Picture or Hidden Realities?**

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Abstract An expanding evidence base suggests that children experiencing monetary and multidimensional poverty are not the same. This article breaks new ground by providing a unique mixed methods investigation of drivers of child poverty mismatch in Ethiopia and Vietnam, considering the role of measurement error and individualistic and structural factors. The analysis capitalises on large-scale secondary quantitative panel data and combines this with purposively collected primary qualitative data in both countries. It finds that factors at the household and structural level can mediate the effects of monetary poverty in terms of multidimensional poverty and vice versa, but that the size and sign of these effects are specific to place and time. The policy mix aiming to reduce all forms of child poverty need to be targeted on the basis of a multidimensional assessment of poverty and reflect the complex and context-specific interactions between determinants of child poverty.

Une base de données croissante suggère que les enfants qui connaissent une pauvreté monétaire sont différents de ceux qui connaissent une pauvreté multidimensionnelle. Cet article ouvre une nouvelle voie en fournissant une analyse unique sur les facteurs entraînant un déséquilibre de la pauvreté infantile en Éthiopie et au Vietnam, en utilisant des méthodes mixtes et en considérant le rôle de l'erreur de mesure et des facteurs individualistes et structurels. L'analyse s'appuie sur des données d'un panel quantitatif secondaire à grande échelle et les combine avec des données qualitatives primaires recueillies délibérément dans les deux pays. Elle constate que les facteurs au niveau des ménages et de la structure peuvent agir comme médiateurs des effets de la pauvreté monétaire en termes de pauvreté multidimensionnelle et vice versa, mais que la taille et le signe de ces effets sont spécifiques au lieu et au temps. Le dosage des politiques visant à réduire toutes les formes de pauvreté infantile doit être ciblé sur la base d'une évaluation multidimensionnelle de la pauvreté et refléter les interactions complexes et contextuelles entre les déterminants de la pauvreté infantile.

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Keywords: child poverty; poverty measurement; wellbeing; mixed methods; Ethiopia; Vietnam

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Introduction

Expanding empirical evidence from both developed and developing country contexts suggests that outcomes based on monetary and multidimensional approaches are often loosely associated and that one measure cannot serve as a proxy for another (Baulch and Masset, 2003; Bradshaw and Finch, 2003; Klasen, 2000; Nilsson, 2010; Wagle, 2009). Evidence with respect to child poverty is less extensive but points towards similar mismatch patterns (Notten, 2012; Roelen *et al*, 2012; Roelen and Notten 2013) and indicates that monetary and multidimensional child poverty are different phenomena (Roelen, 2017).



Despite the growing evidence base on differential outcomes when using monetary or multidimensional measures, limited research has been undertaken to explore drivers underlying this dissonance. While the measures' conceptual underpinnings may offer theoretical explanations (see Alkire *et al*, 2015; Ruggeri *et al*, 2003; Thorbecke, 2008), we are not aware of comprehensive empirical investigations into factors explaining differential poverty status. Such an investigation would not only serve academic curiosity but is also crucial for policy purposes (de Neubourg *et al*, 2014, p. 16). A case for prioritising children is easily made: children have different basic needs than adults do and a denial of those needs has long-term adverse and often irreversible consequences, both for children and society at large (Walker *et al*, 2007).

This article seeks to advance research and contribute to child poverty reduction efforts by exploring explanations for differential poverty status for children when using different measures. In other words: Why do some children experience monetary poverty but not multidimensional poverty and vice versa? Using a unique and innovative combination of data and methods, this study considers the role of measurement error and factors in the private and public spheres. By capitalising on secondary quantitative panel data and combining this with the analysis of purposively collected qualitative data from multiple stakeholders, findings shed unique light on drivers of poverty mismatch and provide impetus into policies aiming to reduce all forms of child poverty. This study focuses on Ethiopia and Vietnam, representing countries with rapid poverty reduction but considerable mismatch between monetary and multidimensional poverty (OPHI, 2015; Tran *et al*, 2015; World Bank, 2015). Exploring poverty mismatch in diverse country contexts allows for learning lessons from across low- and middle-income country contexts and regional specificities.

This article commences with a short review of association and mismatch between monetary and multidimensional child poverty and potential explanations for such mismatch. This is followed by a section describing data, methods and analytical strategy. Next, the article presents and discusses empirical findings before concluding with a summary of lessons learned and policy implications.

Association and Mismatch of Monetary and Multidimensional Child Poverty

A review of available evidence reveals that poverty estimates based on monetary and multidimensional measures are weakly correlated, and that different measures identify different groups of children as being poor. In Indonesia, for example, the majority of children living in calorie-deficient households were found to be above the monetary poverty line (Hadiwidjaja *et al*, 2013). In Congo Brazzaville, indicators for monetary poverty proved a crude tool for identifying children at risk of deprivation in terms of their physical environment (Notten, 2009). In Darfur *et al* (2013) conclude that income deprivation does not adequately reflect the reality and complexity of child poverty.

Similar results can be observed in developed country contexts. A cross-country study in four countries in the European Union (EU) finds that children living in monetary poor households are not necessarily those suffering from deprivation in non-monetary dimensions, and vice versa (Roelen and Notten, 2013). Analogous observations were made for children in Portugal (Bastos *et al*, 2004). With respect to child poverty in the UK, Brewer *et al* (2009) find that as household income rises, children's levels of deprivation first rise and then fall.

Explanations for Differential Child Poverty

Investigations of explanations for child poverty mismatch are thin on the ground. Measurement error is the most frequently considered explanation, grounded in the conceptual notion that monetary and non-monetary poverty are similar phenomena but those that issues with reliability and validity of underlying measures lead to differential outcomes (Bradshaw and Finch, 2003). Other explanations for mismatch can be derived from studies of determinants of childhood deprivation. Research within childhood and child development traditions has long recognised that multiple risk factors, such as parental health and education, child-parent relationships and neighbourhood conditions (Ciula and Skinner, 2015), determine children's outcomes.

Studies of intergenerational transmissions of poverty distinguish between factors operating at different levels, such as individual- and community-level factors (Engle, 2012), household-level and extra-household-level factors (Bird, 2007) or private and public transmissions (Harper *et al*, 2003). We apply the categorisation of individualistic and structural factors (Qi and Wu, 2016) in explaining overlap or mismatch of monetary and multidimensional child poverty, while recognising that in practice these factors are often so interlinked that they do not form distinct processes per se (Engle, 2012; Harper *et al*, 2003).

Measurement Error

The role of measurement error in explaining poverty mismatch is based on the premise that any poverty measurement is subject to error and therefore does not represent a perfectly accurate reflection of reality (Bradshaw and Finch, 2003). It follows that attempts to combine or contrast findings using such flawed measures will result in compounded errors and inevitably lead to different groups being identified as poor. In seeking to explain differential findings of monetary and non-monetary child poverty in the UK, for example, Brewer *et al* (2009) question the reliability of the income measure with respect to its equivalence scale and indicator for disposable income. At the same time, they consider measures of living standards potentially practically or conceptually flawed.

Differential use of units of analysis may also lead to or compound measurement error. Monetary measures are predicated on household-level aggregates of welfare while multidimensional measures generally aim to include more individual-level indicators, often as a direct consequence of the criticism that monetary measures do not adequately capture individuals' living conditions. This holds particularly true for measuring child poverty. Indeed, Ayala *et al* (2011) postulate that the focus on different types of individual wellbeing partly explains the lack of a statistically significant relationship between income poverty and multidimensional poverty.

Time and lagged effects can also contribute to measurement error. Monetary indicators are considered much more likely to fluctuate in the short term than non-monetary indicators are (Clark and Hulme, 2005; Hulme and Shepherd, 2003) as an increase in monetary resources and may not immediately translate into improvements in non-monetary outcomes (or vice versa). Some consider monetary poverty measures a reflection of a short-term condition, while multidimensional poverty indicators might be more representative of a permanent situation (Ayala *et al*, 2011) or structural condition of poverty (Battiston *et al*, 2013).

Notwithstanding the existence of measurement error, mismatch patterns cannot be fully attributed to such error on conceptual and empirical grounds. Ayala *et al* (2011), for example, consider measurement error to play a role in the weak correlation between income-based and



multidimensional poverty. Yet they refute such error to be the sole explanation for limited association between poverty measures as only a small proportion of those having exited income-based poverty also fared better with respect to multidimensional aspects of poverty. Similarly, Brewer *et al* (2009) challenge the role of measurement error in explaining differential poverty outcomes in the UK for conceptual reasons, stating that they are “fundamentally different concepts”.

Individualistic Factors

Characteristics and behaviours at the individual and household level can mediate the effect of one of the multiple forms of poverty – for example, by prioritising children’s education despite limited household resources – and thereby form an explanation for child poverty mismatch.

Studies investigating micro-determinants of monetary or (indicators of) multidimensional (child) poverty commonly consider individual characteristics, such as gender and age, household characteristics such as household size, and characteristics of the household head such educational attainment, occupational status and marital status (Baulch and McCulloch, 2002; Grootaert, 1997; Leu *et al*, 2016; Qi and Wu, 2016). Analysis of such factors associated with experiencing poverty mismatch is less common. A few studies have investigated the role of household characteristics in explaining discrepancies between monetary and multidimensional poverty using survey data and regression modelling. Research in South Africa and Vietnam find that household size, gender and education of the household head and ethnicity are associated with varying levels of poverty mismatch (Klasen, 2000; Tran *et al*, 2015). With respect to children, a study in Tanzania found the degree of mismatch between monetary and non-monetary child poverty to be larger for lower levels of maternal education (Ballón *et al*, 2016).

Studies from high but increasingly also low-income country contexts establish linkages between parental engagement more generally and children’s poverty status. Such engagement can reinforce or override the monetary situation within a household. While parental attitudes and behaviours are often correlated with household income (Goodman and Gregg, 2010), it can also counteract income effects. A systematic review in low-income contexts indicates that parental awareness and parenting practices can reduce violence against children and promote safe and nurturing environments (Knerr *et al*, 2011). A global review shows that parents’ roles in making connection, controlling behaviour, respecting individuality, modelling appropriate behaviour and offering protection are crucial in preventing health risk behaviours and improving health outcomes for adolescents (WHO, 2007).

Children’s time use and role in household work can also feed into mismatch between monetary and multidimensional poverty status. Economic models of children’s time use assume that households make decisions about children’s time allocation so that it maximises household utility, thereby balancing short-term income gains against returns to investments in children’s long-term development (Orkin, 2012). It follows that if households derive greater utility from short-term gains in income, children’s immediate wellbeing may be compromised, either directly through children engaging in productive activities or indirectly through children substituting for adult contributions to unpaid care work. At the same time, children’s engagement in work and domestic chores has also been found to equip them with essential skills and can foster self-esteem (Woodhead, 2004), thereby challenging binary notions about child work as being either good or bad (Bourdillon, 2014). This holds particularly true for adolescents as a strict dichotomy between childhood and adulthood *obscures our understanding of what happens in the lives of children* (Bourdillon, 2006). Hence, the extent to which

children's contributions to household wealth – either directly or indirectly – constitute a differential poverty outcome should be considered with caution.

Structural Factors

Availability of infrastructure and access and quality of services are determining factors for non-monetary poverty status regardless of income levels within the household. Bhutan's low level of development with weak infrastructure, incipient markets and poor access to services was found to be a crucial factor in explaining why a large group of households experienced multidimensional poverty but was not considered monetary poor (Santos, 2012). In China, children of rural migrants in urban areas are at a greater risk of experiencing multidimensional poverty due to the 'hukou' household registration system that prevents them from accessing basic services such as housing (Qi and Wu, 2016).

The wider socioeconomic environment is also imperative for children's monetary and non-monetary poverty status. Migration as a result of lack of economic opportunities, for example, may lead to greater economic resources for the family but also leave children without parental care with potential negative consequences for wellbeing and care (Gassmann *et al*, 2013). Geographical indicators can be used as proxies to investigate the role of socioeconomic conditions, with studies finding differential poverty outcomes depending on residence in urban or rural areas or particular districts (Klasen, 2000; Tran *et al*, 2015).

Although the role of social relations and belief systems are less widely studied as they are less amenable to being captured in quantitative methods (Harper *et al*, 2003), they are imperative for children's poverty status. Cultural norms and values about parental sacrifice for children's development and children's contributions to household production as well as patriarchal values and traditional practices such as early marriage and child labour crucially determine children's outcomes regardless of their families' financial status (Boyden and Crivello, 2012).

Data and Methods

Mixed methods approaches are widely acknowledged to offer breadth and specificity that quantitative and qualitative measures in isolation fail to achieve (Shaffer, 2013). Approaches can vary in their degree of integration (Carvalho and White, 1997) ranging from the use of participatory methods as a complement to quantitative data for incorporating issues that are often overlooked or ignored (Camfield *et al*, 2009) to a tightly integrated and iterative study aiming to duly acknowledge and unpick poverty's complexities (Roelen and Camfield, 2015). This study occupies middle ground by combining secondary quantitative panel data with primary qualitative data through an iterative process.

Data

Sources of secondary quantitative data included in this study are the Ethiopian Rural Household Survey (ERHS) waves from 1999, 2004 and 2009¹ and the Vietnam Household Living Standards Survey (VHLSS) waves from 2004, 2006 and 2008.²

The ERHS is a panel survey dataset focusing on rural livelihoods with rounds in 1994, 1995, 1997, 1999, 2004 and 2009. Despite its relatively small size of 15 villages and a sample of 1477 households in the first full round in 1994, it is representative of the main agricultural systems in



Ethiopia (Dercon *et al*, 2012). Sample attrition between 1994 and 2009 is low, with a loss of only 16.1 per cent (or 1.1 per cent per year) and most of the attrition occurs in the early years of the study; attrition between 2004 and 2009 is less than 0.6 per cent per year (Dercon *et al*, 2012; Dercon and Porter, 2011). This study uses data from the last three waves.

The VHLSS is a nationally representative dataset and has been undertaken every second year since 2002 by the Government Statistical Office (GSO), following the World Bank’s Living Standards Measurement Survey (LSMS) methodology. Survey samples from 2002 to 2010 were drawn from a master sample, which is a random sample of the 1999 Population Census enumeration areas and includes a rolling sample. It provides microdata at the level of both the household and its individual members on a range of issues related to children’s wellbeing and poverty. Previous studies using the VHLSS data did not find attrition bias (Baulch and Masset, 2003) and assumed an unbiased sample (Günther and Klasen, 2009).

Sample sizes per cross-sectional wave and for the full panel datasets are presented in Table 1.

Qualitative data collection took place in four sites in Ethiopia and Vietnam from August to December 2013. Site selection was informed by analysis of secondary data, including quantitative data and other reports, and pragmatic considerations. In Ethiopia, qualitative fieldwork took place in the northern region of Tigray in Harresaw and Limat kushets, Harresaw tabia in Atsbi Woreda and Kaslen and Wela-Alabur kushets, Geblen tabia in Subhasaesie woreda. Tigray region was selected given its relatively high poverty figures, while research sites were chosen to mirror those included in the ERHS dataset. In Vietnam, qualitative data collection was undertaken in southern Mekong River Delta region in Xã Mỹ Hòa and Xã Long Hậu communes in Dong Thap province and Xã Mỹ Hòa and Thị trấn Óc Eo communes in An Giang province. These sites were selected as analysis of survey data indicated that mismatch of poverty outcomes was most prominent in these four sites. Sample sizes per country are presented in Figure 2.

Qualitative fieldwork engaged adults – parents and caregivers, community members, teachers, social workers – and children and consisted of focus group discussions, key informant interviews, household case studies, and both individual- and group-based participatory exercises. Given the technical nature of and negative connotation with the terms monetary poverty and multidimensional poverty, questions for adults and children were framed around the positive concepts of household wealth and child wellbeing as applicable in local languages. Adults and children were asked about manifestations of child wellbeing and household wealth, the extent to which they overlapped or not and explanations for differential outcomes. Community members in all four sites formulated criteria for household wealth and child wellbeing and subsequently discussed households’ situations with respect to these criteria.

Ethical protocols for the study were approved by the Institute of Development Studies (IDS) Research Strategy Committee. All researchers involved in undertaking fieldwork signed a code of conduct before the start of the research, thereby agreeing to ethical research procedures. This included respecting privacy, anonymity and confidentiality, seeking explicit informed consent,

Table 1: Sample statistics – quantitative data

	1999	2004	2009	Panel
Ethiopia (ERHS)	5054	3709	4937	1497
	2004	2006	2008	Panel
Vietnam (VHLSS)	12,154	10,696	9960	1068

Table 2: Sample statistics – qualitative data

	<i>Adults</i>	<i>Children</i>	<i>Total</i>
Ethiopia	88	61	159
Vietnam	145	78	223

respecting participants’ time and commitment and offering adequate explanations about the objective of the research without raising unrealistic expectations. Fieldworkers were trained to identify and respond to distress as a result of research participation, and to discontinue the research activity at any sign of distress or when requested by the research participant.

Analytical Strategy

The analytical strategy includes parametric and non-parametric analysis of quantitative data and multi-stakeholder analysis of qualitative data. An overview of the analytical strategy is provided in Table 3.

The use of descriptive statistics includes poverty profiles. Multinomial regression models estimate associations between individual-, household- and community-level factors and child poverty outcomes. Analysis is undertaken for each wave based on the panel sample, allowing for the inclusion of poverty status in previous periods as a control.

The dependent variable refers to ‘poverty group status’ with children belonging to either one of the four groups: (1) poverty overlap: children that are both monetary poor and multidimensionally poor (AB); (2) positive mismatch: children that are monetary poor but are not multidimensionally poor (B); (3) negative mismatch: children that are multidimensionally poor but are not monetary poor (A); and (4) no poverty overlap: children that are not multidimensionally poor and are not monetary poor (C).

Independent variables at individual level include gender and age of the child. Household-level variables include gender, age, marital status, educational attainment and occupational status of the household head, household size and location. The Ethiopia models include an indicator for the presence of household members in bad health or being immobile, while the Vietnam models include indicators for proportions of children in the household. Community indicators for Ethiopia include distance to town, availability of electricity, piped water, schools and government hospital (see also Dercon *et al*, 2012; Dercon and Porter, 2011). Community indicators in Vietnam include living in an area where a disaster happened in 2004, living in an area with limited opportunities and living in an area with an ECD centre. As the availability of

Table 3: Analytical strategy

<i>Analytical categories</i>	<i>Method</i>
Measurement error	Descriptive statistics Community wealth and wellbeing ranking Focus group discussions
Individualistic and structural factors	Multinomial regression analysis Community wealth and wellbeing ranking Focus group discussions Case studies



community indicators in Ethiopia and in Vietnam is limited to rural areas (Baulch, 2011), we estimate an overall model and rural model.³

Mismatch Monetary and Multidimensional Child Poverty in Ethiopia and Vietnam

Before proceeding to analyse explanations of poverty mismatch, we report outcomes for monetary and multidimensional child poverty in Ethiopia and Vietnam and their degree of mismatch as investigated in earlier work (Roelen, 2017). Measures of monetary child poverty are based on real per capita consumption in Ethiopia and real per capita expenditures in Vietnam while measures of multidimensional child poverty include country-specific sets of indicators and employ the ‘counting approach’ for aggregation (Atkinson, 2003), mirroring methodologies as applied by OPHI’s Multidimensional Poverty Index (MPI) (Alkire *et al*, 2015) and UNICEF’s Multiple Overlapping Deprivation Analysis (de Neubourg *et al*, 2014). As availability of information regarding child deprivation in the Ethiopian dataset is mostly confined to time use, the multidimensional measure captures school attendance, family work and engagement in domestic chores. In Vietnam, data availability is more comprehensive, and the measure includes nine indicators reflecting education, health, shelter, water and sanitation, child work and social inclusion.⁴

Findings indicate that substantial groups of children are either multidimensionally poor (negative mismatch) or only monetary poor (positive mismatch). Proportions of poverty mismatch are largest in Ethiopia, with limited correlation between monetary and non-monetary indicators. Despite greater correlation between monetary and non-monetary outcomes in Vietnam, children living in multidimensional poverty are not necessarily monetary poor and vice versa. Sensitivity analysis shows that these levels of mismatch persist across the income distribution. An overview of poverty group proportions is presented in Table 4.

Analysis of poverty dynamics points to many transitions between poverty groups over time in both Ethiopia and Vietnam with large proportions of children changing poverty group from one period to the next, including moves out of poverty but also falls into poverty. It should be noted that while the empirical investigation in this article does include longitudinal analysis, the analysis focuses on explanations for poverty group membership in a given wave as opposed to transitions between poverty groups over time.

Table 4: Poverty overlap and mismatch in Ethiopia and Vietnam

	<i>N (# children)</i>	<i>Monetary poor and multidimensionally poor (%)</i>	<i>Multidimensionally poor but not monetary poor (%)</i>	<i>Monetary poor but not multidimensionally poor (%)</i>	<i>Non-poor (%)</i>	<i>Total (%)</i>
Ethiopia						
1999	2893	19.2	23.9	25.6	31.3	100
2004	2726	24.7	25.4	26.8	23.1	100
2009	3230	13.5	23.2	26.0	37.3	100
Vietnam						
2004	12,154	22	16	16	45	100
2006	10,696	15	13	16	56	100
2008	9960	14	13	13	60	100

Source: Roelen (2017).

Results: Explaining Poverty Mismatch

This section explores explanations of child poverty overlap and mismatch based on the combined analysis of quantitative and qualitative data, focusing on measurement error and individualistic and structural factors.

Measurement Error

We first consider the extent to which mismatch is sensitive to the choice of poverty lines. A clustering of mismatch around the poverty lines would suggest that differential outcomes are a result of the ambiguous establishment of such lines rather than of monetary and multidimensional poverty being distinct experiences. Analysis of multidimensional child poverty across the income distribution does not provide evidence for such clustering in either Ethiopia or Vietnam. As indicated in Table 5, multidimensional poverty in Ethiopia fluctuates across deciles with rates decreasing across the first three deciles – from 34.9 to 33 per cent in 2009 – but then increasing with greater per capita consumption. This points towards positive mismatch (children being monetary but not multidimensionally poor) at the bottom of the distribution and negative mismatch (children being multidimensionally but not monetary poor) at the top of the distribution. In Vietnam, multidimensional poverty rates decline with increasing per capita expenditures. Nevertheless, in 2008 one in 12 children in the highest decile also experienced multidimensional poverty.

Qualitative findings shed further light on the role of measurement error. We consider the extent to which indicators for household wealth and child wellbeing as identified in community wealth and wellbeing exercises match indicators employed for the quantitative analysis. In Ethiopia, indicators defined by community members did not directly mirror those available in the quantitative data, particularly with respect to household wealth. The availability of livestock, land and labour was identified as relevant criteria as opposed to access to monetary resources, for example. Indicators for child wellbeing were more similar with a strong focus on going to school and working in or outside the home. In Vietnam, the identification of criteria for household wealth and child wellbeing by community members was more strongly in line with quantitative indicators available, including income and employment to denote household wealth and education, sanitation and shelter for child wellbeing.⁵

Individualistic Factors

Individual and Household Characteristics

The role of individual and household characteristics was investigated using multinomial regression models applied to three waves of data in both countries (see Tables 6, 7). Regression results point towards the significant role of household size, level of education and occupational status of the household head across time and place but indicate that the size and sign of the effect differ by wave and country. Experiences of poverty overlap or mismatch in preceding periods are strong predictors for poverty mismatch in the current period.

In Ethiopia, estimates indicate that household size is positively associated with positive mismatch in 2009. Education of the household head is also important, and this importance intensified over time. In 2009, living with a household head without any education considerably increased the likelihood of negative and positive mismatch. While living with a household head who had completed primary education or more is negatively associated with poverty mismatch

Table 5: Multidimensional poverty across income distribution (as denoted by consumption and expenditures)

	Ethiopia				Vietnam			
	1999	2004	2009	2004	2006	2004	2006	2008
	Multidimensionally poor (%)	Multidimensionally poor (%)	Multidimensionally poor (%)	Multidimensionally poor (%)	Multidimensionally poor (%)	Multidimensionally poor (%)	Multidimensionally poor (%)	Multidimensionally poor (%)
Deciles real per capita consumption/expenditures								
1	43.6	51.2	34.9	78.5	65.6	66.3		
2	41.6	46.8	32.9	58.6	53.6	49.4		
3	40.7	45.2	33.0	52.6	42.8	39.7		
4	45.1	49.1	35.4	46.3	37.0	29.1		
5	45.1	47.9	39.9	41.4	33.1	27.1		
6	46.3	56.9	36.0	37.1	29.1	25.1		
7	46.9	47.6	40.8	32.7	23.4	18.6		
8	39.5	48.9	38.2	30.1	19.9	14.3		
9	40.9	59.7	33.2	16.9	13.7	10.1		
10	40.7	49.2	43.8	7.5	5.3	6.7		

Source: Author's own calculations based on ERHS 1999, 2004, 2009 and VHLS 2004, 2006 and 2008.



Table 6: Multinomial regression Ethiopia 1999, 2004, 2009

	1999						2004						2009					
	Multinomial model		Multinomial model rural (with inclusion of community factors)		Multinomial model		Multinomial model rural (with inclusion of community factors)		Multinomial model		Multinomial model rural (with inclusion of community factors)		Multinomial model		Multinomial model rural (with inclusion of community factors)			
	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se		
Number of household members																		
Household head has no education				0.465* (0.173)	2.772* (1.127)													
Household head has primary education or more	0.294* (0.164)	0.401* (0.151)		0.342* (0.150)	3.427** (1.440)			2.862* (1.362)										
Household head does domestic work																		
Household head does manual work				0.014* (0.023)														
Household head does non-manual work		0.071* (0.077)		0.007*** (0.009)														
Number of members in bad health/immobile					0.905* (0.042)													
Child lives in Tigray	3.648** (1.803)			5.039** (3.043)														
Child lives in Oromia				2.187* (0.801)	0.589* (0.158)													
Child lives in SNNPR		7.270*** (2.639)		4.908*** (1.564)														
Child is multidimensionally + monetary poor in 1999 (AB)																		
Child is only multidimensionally poor in 1999 (A)																		
Child is only monetary poor in 1999 (B)																		
Child is multidimensionally + monetary poor in 2004 (AB)																		
Child is only multidimensionally poor in 2004 (A)																		

Table 6: *continued*

	1999			2004			2009		
	Multinomial model			Multinomial model			Multinomial model		
	A	B	(with inclusion of community factors)	A	B	(with inclusion of community factors)	A	B	(with inclusion of community factors)
	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se	b/se
Child is only monetary poor in 2004 (B)									
Distance to town in kilometres			0.672*** (0.062)			1.118* -0.058			2.340* (0.862)
Community has electricity			60.846*** (85.053)						
Community has piped water			0.003** (0.007)			0.200* -0.154			
Community has primary school			0.048*** (0.033)			35.629*** -33.264			0.057*** -0.038
Community has junior school									
Community has high school									
Community has government hospital			5.630** (3.720)			0.161** (0.111)			
Number of observations	511,000			594,000			568,000		536,000
P value	0.000	468,000		0.000	505,000		0.000	0.000	0.000
Pseudo R ²	0.139	0.215		0.129	0.207		0.216	0.270	0.270
BIC	1535.21	1461.650		1822.090	1614.769		1624.944	1596.610	1596.610

Note: Omitted categories are: child is male; household head is male; household head is married; household head has less than primary education; household head is farmer or does family work; child lives in Tigray; child is non-poor in 1999; child is non-poor in 2004.
 *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.
Source: Author's own calculations based on ERHS 1999, 2004, 2009.



Table 7: Multinomial regression Vietnam 2004, 2006, 2008

	2004						2006						2008					
	Multinomial model		Multinomial model rural inclusion of community factors		Multinomial model		Multinomial model rural inclusion of community factors		Multinomial model		Multinomial model rural inclusion of community factors		Multinomial model		Multinomial model rural inclusion of community factors			
	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se		
Child is female			1.657* (0.370)		1.727* (0.433)		1.607* (0.388)											
Age of child			0.918* (0.037)		0.179** (0.119)		1.153** (0.053)								1.214*** (0.066)			
Household head is widowed																		
Household head is separated																		
Household head has no education																		
Household head has secondary education		0.491** (0.115)																
Household head has post secondary education	0.366* (0.174)				0.168* (0.132)													
Household head is unemployed	6.039*** (2.707)		10.376*** (6.468)		11.038*** (7.405)		5.687*** (2.830)								12.540*** (8.019)			
Household head is a skilled professional																		
Child has other ethnicity																		
>49% of household members are children																		
Child lives in a rural area	3.658*** (1.147)	4.364*** (1.457)																
Child lives in Central Highlands		0.264* (0.148)																
Child lives in South East		0.156*** (0.073)																
Child lives in Mekong River Delta	4.403*** (1.819)	0.384* (0.172)	4.099** (1.829)	4.076** (1.929)	5.758** (3.141)	0.070* (0.080)	7.364** (4.929)	0.236* (0.174)	2.215* (0.797)	2.687** (1.080)	2.421* (1.013)	2.566* (1.011)	8.663** (5.976)					

Table 7: continued

	2004			2006			2008			
	Multinomial model		Multinomial model rural inclusion of community factors)	Multinomial model		Multinomial model rural inclusion of community factors)	Multinomial model		Multinomial model rural inclusion of community factors)	
	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	B b/se	A b/se	
Child is multidimensionally + monetary poor in 2004 (AB)			10.195*** (3.781)	29.214*** (11.537)	12.370*** (5.104)	26.417*** (11.703)	3.891*** (1.583)	6.808*** (2.906)	3.088* (1.438)	6.998*** (3.329)
Child is only multidimensionally poor in 2004 (A)			4.663***	4.477***			2.722**			
Child is only monetary poor in 2004 (B)			(1.334)	24.466*** (8.473)	(1.448)	20.378*** (7.516)	(0.886)	6.150*** (2.306)	4.018***	6.555*** (2.675)
Child is multidimensionally + monetary poor in 2006 (AB)			2.912** (1.105)		2.629* (1.100)		3.640**	9.380*** (4.155)	5.677***	11.306*** (5.467)
Child is only multidimensionally poor in 2006 (A)							4.911***			
Child is monetary only poor in 2006 (B)							(1.522)	3.885*** (1.264)	2.003	4.682*** (1.697)
Child lives in area where a disaster happened in 2004						2.399**				
Child lives in area with ECD centre					1.513 (0.414)	1.066 (0.306)			0.915 (0.267)	2.168** (0.647)
Number of observations	1068,000		858,000		879,000		1068,000		874,000	
P value	0.000		0.000		0.000		0.000		0.000	
Pseudo R ²	0.293		0.287		0.417		0.430		0.454	
BIC	2571.035		2231.498		1955.165		2089.016		1879.155	

Note: Reference values are: child is male; household head is male; household head has primary education; household head is unskilled worker; child is of Kinh/Chinese ethnicity; children aged <5 are present in the household; % of children in household is 25–39%; child lives in South Central Coast; child is non-poor in 2004; child is non-poor in 2006.
 ****p* < 0.01, ***p* < 0.05, **p* < 0.1.
Source: Author's own calculations based on VHLSS 2004, 2006 and 2008.

in 1999, it is positively associated with positive mismatch in 2004 and 2009. Household heads engaging in any kind of work – and particularly non-manual work – leads to lower chances of experiencing poverty mismatch, although findings are mixed across waves. Poverty status in preceding periods plays a significant role with children having experienced poverty overlap more likely to experience either positive or negative mismatch. Children’s individual characteristics of age and gender are not significant in any of the waves.

In Vietnam, being a girl is associated with negative mismatch in 2006 and positive mismatch in 2008. The likelihood of positive mismatch decreases with a child’s age in 2006, while the likelihood of negative mismatch increases with age in 2008. Living with a widowed household decreases a child’s likelihood of positive mismatch in 2006, while living with a separated household head is associated with negative mismatch in 2008. Education plays a minor role with educational attainment of the household head decreasing the likelihood of mismatch in 2004 and lack of education increasing the likelihood of mismatch in 2008. Unemployment was strongly associated with negative mismatch across all years, while living with a skilled professional decreases the likelihood of poverty mismatch in 2008. Being of an ethnic minority is strongly associated with poverty mismatch. Joint poverty is strongly associated with either form of mismatch in the current period. Experiences of respectively positive or negative mismatch in the preceding periods are significantly associated with such mismatch in the current period.

Children’s Time Use

Children’s time use was investigated using quantitative data in Ethiopia (no quantitative data are available in Vietnam) and on the basis of qualitative data in Ethiopia and Vietnam.

In Ethiopia, children in higher income quintiles engaged in a greater number of hours worked in household production. This finding is corroborated by qualitative data in which adults and children indicate that children in wealthier households are usually more involved in herding livestock, contributing to family production or doing domestic chores. This may go at the expense of studying at home or going to school: *Sometimes children in rich households are obliged to work in farm activities rather than going to school* [female caregiver, Geblen, Ethiopia]. A gendered effect appears at work with qualitative data suggesting that children living in male-headed households more likely to work and experience negative mismatch. A gender effect is also at play on behalf of children: girls were more likely to undertake domestic chores and boys to work on the family farm and herding livestock.

Qualitative data from Vietnam do not provide strong evidence for direct contributions of children to productive activities but do point to the existence of substitution effects. Many parents were observed to be working far away from home, often leaving their children in the care of and therefore to care for elderly and disabled household members: *I stopped my study 2 years ago at grade 5. I help my sister to take of her children at home* [girl child, An Giang, Vietnam].

Awareness and Attitudes

Qualitative findings indicate that general awareness and attitudes regarding child wellbeing have greatly improved in recent years, particularly in Ethiopia. Parents and social workers indicate how government campaigns and extension services have instilled the importance of education, immunisation, pre- and antenatal care and family planning, as indicated by a woman from Limeat: *People’s general attitudes towards raising and caring for children have significantly changed over time. For example, most mothers follow up pre and anti-natal care, follow vaccinations, most parents send their kids to school on time, reduced underage marriages*



and love and attention for children increased [woman, Limeat, Ethiopia]. These findings were corroborated in reference to the balance between schooling and work with respondents attaching great value to education and prioritising school over work as education is considered crucial for securing future livelihoods.

Some respondents in Vietnam suggested that wealth and personal attention to children may be inversely related, with households experiencing monetary poverty placing greater emphasis on children's education and future opportunities as well as mitigating the effects of limited economic resources: *We are poor but we try to let our children study properly because we do not want our children to feel disadvantaged compared to other children* [female caregiver, Dong Thap, Vietnam].

Structural Factors

Access to Services

Qualitative findings in Ethiopia indicate that availability of services such as access to schools, health posts and safe drinking water is important in driving poverty mismatch. It can ensure children's wellbeing even if children live in monetary poor households. By the same token, the absence of such infrastructure can lead to negative mismatch – multidimensional child poverty even if a child is living in a household with greater wealth, as illustrated by a social worker from Harresaw: *The wellbeing situation of children in this community has generally improved over time because infrastructure like health posts, and primary education are established near to our community. Nevertheless, there are still some critical problems affecting children like long distance to get to school above grade 4 and lack of potable water* [social worker, Harresaw, Harresaw].

In Vietnam, regression estimates do not point towards a significant role for services and infrastructure in influencing poverty status in explaining poverty mismatch, largely due to widespread availability of services and therefore little variance in the data (Baulch and Dat, 2011). Qualitative findings strongly indicate that government social protection programmes play a positive role in securing children's needs despite household poverty, leading to positive mismatch. The most frequently mentioned policy was the 'poverty certificate' or 'poverty book' policy, which applies to monetary poor households and gives access to support such as tuition fee waivers, health insurance and commune support: *My child saw other children having poor household certificate and he asked me why we did not have one. People with such a certificate receive a great amount of support whereas we don't receive any* [female caregiver, Dong Thap, Vietnam]. Respondents also pointed to the importance of having legal documentation for accessing such services and how the access of such documentation can lead to negative mismatch: *I have never gone to school because my family lives in a rental house that means we are temporary residents, so I cannot have legal documents, like birth certificate for school application* [child, An Giang, Vietnam].

Socioeconomic Context

Wider socioeconomic conditions were found to be an important driver for explaining poverty mismatch in both countries. Using geographical location as a proxy, regression estimates in Ethiopia and Vietnam suggest that area of residence is strongly associated with the likelihood of experiencing mismatch. In Ethiopia, living in Tigray or SNNP regions increases the likelihood to experiencing poverty mismatch in comparison to living in Amhara region with effects being largest for negative mismatch. In Vietnam, living in Mekong River Delta

increases the likelihood of negative mismatch but decreases the likelihood of positive mismatch.

Qualitative findings in Vietnam indicate that the absence of stable jobs was considered an important barrier to securing a stable situation for children, both in terms of income and other areas of wellbeing. The difficult reality for parents having to work long hours away from home leads to sometimes leaving children in the care of others with potential adverse effects on child wellbeing: *“Household poverty means that we do not have stable job, which results in unstable income”* [female adult, Dong Thap, Vietnam]. In Ethiopia, lack of economic opportunities beyond agricultural activities was mentioned as posing barriers to both adults and children in their attempts to improve monetary and non-monetary outcomes.

Cultural Norms and Values

Although was not explicitly incorporated in fieldwork scripts, the role of cultural norms and practices emerged in discussions around what constitutes and contributes to child wellbeing. In both countries, looking clean and well-clothed was deemed important by both adults and children for gaining respect from family and community members. While the availability of clothing and soap was linked to the availability of monetary resources, hygienic practices were considered to be informed by caregivers’ attitudes.

In Vietnam, living up to societal norms and standards was deemed particularly important. Adult respondents referred to the importance of obeying parents and teachers, of studying hard and not being lazy and dressing appropriately. Various respondents pointed towards a direct mismatch between the emphasis on this component of child wellbeing and availability of monetary resources with wealthier parents being unable to spend adequate time with children to instil those values: *A well-off family can have a lot money for children but if parents just pay attention to their business and have less time to take care of their children, those children surely do not feel happy and in many cases, those children will be easily deprived* [teacher, An Giang, Vietnam].

Another recurrent element in Vietnam referred to children’s responsibilities towards caring for elderly and disabled adults in the households, particularly when parents work in areas far from home: *Parents advise me that I should not go out too much and help my paternal grandparents* [child, An Giang, Vietnam]. Children appeared to take pride in care responsibilities, yet there were also signs that they undermined the opportunity to take part in school, study or leisure activities.

In Ethiopia, findings indicate that engaging in domestic chores or working on the household farm is a positive attribute for children: *“I don’t send my children to work for other households but I believe children should work at home in household production”* [Male caregiver, Harresaw, Ethiopia]. While the role of work in child wellbeing has to be considered with caution (as discussed above), children’s responses in this study suggest that the balance often tips in such a way that child wellbeing may be undermined: *I can say my wellbeing is good and bad. It is good because I am in school. My wellbeing is bad because I am working at home when I return from school* [girl child, Harresaw, Ethiopia].

Discussion

While the empirical mismatch between monetary and multidimensional child poverty has been widely established, explanations for that mismatch have not been investigated in a systematic way. The analysis in this paper begins to fill this knowledge gap.



Differential poverty outcomes can be explained by but not be fully attributed to measurement error. Multidimensional child poverty occurs across the income distribution across time in both countries using different indicators for multidimensional poverty. The association between monetary and multidimensional child poverty is stronger in Vietnam due to the set of indicators underpinning the measure of multidimensional poverty (Roelen, 2017). Community members across all fieldwork sites indicated household wealth and material child wellbeing to be distinct concepts with their own criteria. All communities also identified households with inconsistent situations regarding wealth and child wellbeing.

Individualistic factors are important for explaining poverty mismatch, but they are highly context-specific and need to be interpreted in relation to the community, time period and specific poverty measure under consideration. The positive association between household size and positive mismatch in Ethiopia, for example, needs to be understood against the backdrop of school attendance and hours in household production constituting indicators of the multidimensional child poverty measure in Ethiopia. Greater household size may lessen the need for children to withdraw from school or work many hours in household production without it going at the expense of household income, resulting in positive mismatch.

Findings in both countries provide evidence for households' delicate balancing act between household wealth and child wellbeing in explaining both positive and negative poverty mismatch, thereby adding to the debate about the need for a nuanced consideration of the balance between children's schooling and work. Parents and children offered insights into both the virtues and challenges of combining school and work, corroborating other research in rural Ethiopia on patterns of children's work (Abebe, 2007) and elsewhere (Boyden and Crivello, 2012). The role of gender in this balancing act, particularly in Ethiopia has also been observed in other research. Cockburn and Dostie (2007), for example, suggest that female heads might give greater priority to schooling or that there are fewer possibilities for children to engage in productive work in female-headed households. The issue of migration as part of this balancing act in Vietnam has also been subject of research. But while Cuong and Linh (2013) find effects of parental migration on children's time use to be negligible, we find that children's time allocation was considerably impacted through reductions in time spent on studying or leisure.

Qualitative findings in this study add to the literature indicating that families and parenting are crucial in mediating the effect of monetary poverty (Engle, 2012). Depending on awareness and attitudes, parents can secure child wellbeing even when the household has few monetary resources but also contribute to poor child wellbeing despite the availability of monetary resources. At the same time, we should warn against placing the undue responsibility on parents in improving children's outcomes at the expense of addressing structural causes of constraints on providing parental care and subsequent child illbeing, including poverty, inequality and lack of access to services (Richter and Naicker, 2013). For example, we do not find evidence that higher levels of parental education are always associated with positive mismatch or lower poverty mismatch, as found elsewhere (Ballón *et al*, 2016). Analysis in both Ethiopia and Vietnam illuminates how lack of access to services – either because they are unavailable or due to other access barriers – can lead to negative mismatch.

Finally, results also hold clear implications with respect to mobility out of different forms of poverty. Poverty status in preceding periods were strong predictors of experiencing some form of poverty in the next period, despite the two-year time gap in Vietnam and five-year gap in Ethiopia. Notwithstanding the overall achievements in poverty reduction in both countries, an escape from all forms of poverty remains a strong feat once trapped in one or multiple forms of poverty.

Conclusion

While the empirical evidence on differential outcomes of monetary and multidimensional child poverty is steadily expanding, few studies have considered underlying explanations in a comprehensive and systematic manner. This article breaks new ground by integrating large-scale longitudinal quantitative data with primary collected qualitative data from multiple stakeholders in low- and middle-income country contexts. Findings hold strong implications for the measurement of child poverty and for policies aiming to reduce child poverty in all its forms.

Firstly, monetary and multidimensional approaches to poverty measurement capture different phenomena and reflect different realities for children and their families. A comprehensive use of measures grounded in both monetary and non-monetary indicators of poverty is crucial for identifying all groups of children experiencing one or more forms of deprivation. It follows that targeting of policy efforts needs to be based on mechanisms that move beyond (proxy) means-testing and include broader assessments of poverty and deprivation. Secondly, individualistic factors such as education and occupation of the household head are strongly associated with poverty mismatch, but also specific to time and place. Structural factors such as parental education, availability of infrastructure, access to services and social protection can secure multidimensional wellbeing for children regardless of household wealth. A mix of policy interventions aimed at addressing household-level and structural barriers is necessary for tackling all forms of child poverty. It follows that a policy response aiming to improve the lives of all children need to move beyond a ‘one-size-fits-all’ strategy and take into account the complex interaction of factors that drive differential poverty experiences, including the role of parents and parenting, the balance between work and wellbeing and access to services.

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Notes

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2. Data have been made available by the Government Statistical Office (GSO) in Hanoi, Vietnam with support from UNICEF Vietnam.
3. The inclusion of community indicators in the rural model has little explanatory power due to lack of variation; primary schools are available in all areas and the inclusion of road accessible to auto and secondary school does not improve fit of the model.
4. A more elaborate discussion of the measures for monetary and multidimensional child poverty and empirical findings can be found in Roelen (2017).



5. A more elaborate discussion of the comparison between quantitative and qualitative indicators used for reflecting multidimensional child poverty and child wellbeing, respectively, can be found in Roelen (2017).

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