

# The Importance of Choice and Definition for the Measurement of Child Poverty—the case of Vietnam

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**Abstract** Increased attention to childrens' special position within poverty measurement resulted in the development of various child poverty approaches in the last decade. Analysis shows that their development processes involve a similar set of steps and decisions, predominantly taken in the same sequence. However, it also becomes apparent that many of these decisions are made implicitly rather than explicitly, resulting in unclear and non-transparent underlying constructs. Consequently, child poverty approaches often lack a solid and robust foundation and are misinterpreted and misunderstood when used for analytical and policy purposes. This paper distills a generic construction process from the analysis of existing child poverty approaches, presenting a tool for clear and transparent development of such approaches. It is then applied to the case of Vietnam, using household survey data, to illustrate its practical use and develop a Vietnam-specific child poverty approach. Findings suggest that 37% of all children are poor, whilst observing a large rural-urban divide but no significant differences between boys and girls.

**Keywords** Child poverty · Child indicators · Poverty measurement · Vietnam

## 1 Introduction

In the last decade(s), it has been widely recognized that children deserve a child focused perspective in the development and poverty reduction process (e.g. CHIP 2004; Gordon et al. 2003a, 2003b; Minujin et al. 2005) and the need to treat them “[...] in their own right as individuals” (Redmond 2008 pp63, White and Masset 2002). Several reasons can be put forward for the importance of such a child-focused approach towards poverty (e.g. Gordon et al. 2003a, 2003b; Minujin et al. 2005; Waddington 2004). The dependence on parents, household and community for the

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distribution of basic needs puts children at a higher risk of poverty and makes their situation less transparent (e.g. White et al. 2003). Further, poverty often manifests itself as a vicious circle, causing children to be trapped in poverty from birth onwards (e.g. Corak 2006a; DWP 2002). Moreover, children have different basic needs than adults do (e.g. Waddington 2004). Child-focused poverty approaches are crucial to account for these issues and provide detailed information at the level of the individual child. A generally accepted definition and measurement method of child poverty is an important tool for both academics and policy makers. It does not only offer the opportunity to get an insight into the poverty status of children but also gives the possibility to formulate and monitor sound poverty reduction objectives, strategies and policies (e.g. Ben-Arieh 2000; Corak 2006b).

A number of approaches have been developed for the measurement and analysis of child poverty, each one of them tackling the issue from a different angle. Every poverty approach is the result of theoretical considerations and value judgments (Ravallion 1994), culminating into approaches that are different in concept, definition and method (Ruggeri Laderchi et al. 2003). An analysis of poverty approaches, and in specific child poverty approaches, suggests that their processes of development involve a similar set of steps and decisions, predominantly taken in the same sequence. However, it also becomes apparent that many of these decisions are made in an implicit rather than explicit manner. As a result, poverty approaches suffer from a lack of distinction between the different elements of the approaches (Noble et al. 2006) and the underlying constructs and considerations are not transparent (Ruggeri Laderchi et al. 2003). Consequently, poverty approaches lack a solid and robust base for poverty comparisons (Ravallion 1994) and the identification of a specific individual or group as being poor is misinterpreted or misunderstood (Alkire 2008, Ruggeri Laderchi et al. 2003). Clear and explicit discussion of purposes, concepts and decisions underlying the development of a poverty approach is necessary to avoid these pitfalls and to ensure robust poverty analysis (Ravallion 1994; Ruggeri Laderchi et al. 2003). A review of child poverty approaches suggests that the majority of these approaches suffer from one or more of these weaknesses. This paper distills a generic construction process from the analysis of child poverty approaches, presenting a useful tool to guide and ensure a clear and transparent development of such approaches. For the purposes of a practical illustration, the generic construction process is applied to the case of Vietnam.

Vietnam has experienced a period of outstanding rapid economic growth after the Doi Moi (renovation) reform policies came into place in the late 1980's, accompanied by a large reduction of poverty. Central planning made way for free-market oriented economic policies, bringing about great changes in the agricultural sector, private business and employment development, foreign trade and social sector policies, creating business and entrepreneurial opportunities for Vietnamese as well as foreigners. The reforms proved to be greatly beneficial for Vietnam's economic performance, with average economic growth rates of 6.9% from 1988 to 1994 and 7.4% from 1994 to 2000 (Glewwe 2004). Furthermore, monetary poverty was also reduced notably; from 58% in 1993 to 19.5% in 2004 (VASS 2006). These poverty figures can be decomposed by various demographic groups and are often presented by region, gender and ethnicity. However, representation per age group is

less common and, as a consequence, little is known about the state of child poverty. Until now, there have not been any comprehensive poverty analyses in Vietnam for children, presenting a gap in crucial knowledge required by policy makers and analysts. Applying the generic construction process to the case of Vietnam serves, on the one hand, to illustrate its use and, on the other hand, to fill the knowledge gap with respect to child poverty in Vietnam.

The paper is structured as follows: we firstly discuss the distilled generic construction process. Second, a selection of child poverty approaches is analyzed in terms of this process. Next, the methodology and data are shortly discussed. The generic construction process is then applied to the case of Vietnam, explicitly discussing the decision making processes at hand. Finally, we present empirical results on the basis of household survey data and draw a picture of child poverty in Vietnam.

## 2 Generic Construction Process

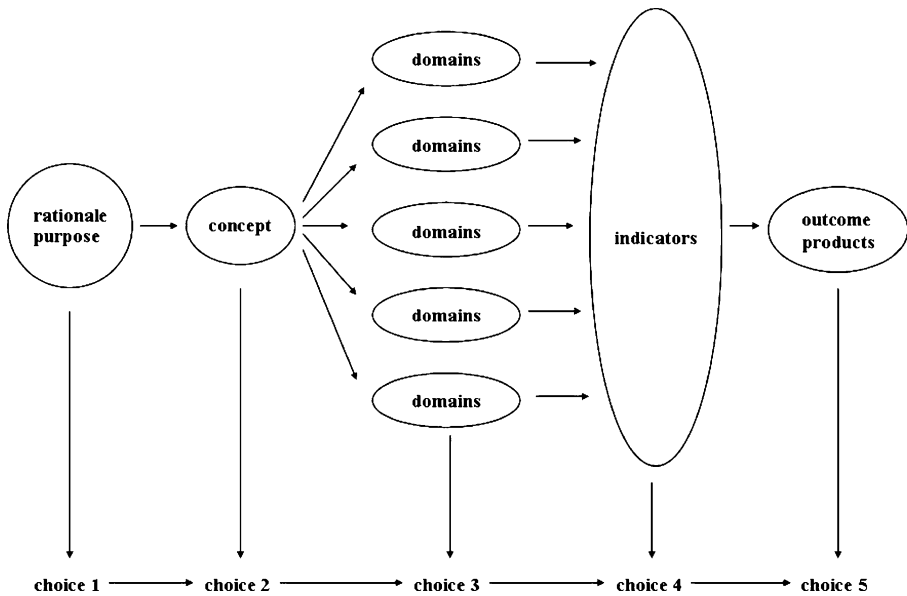
The generic construction process presented here is deduced from literature on a range of different child poverty approaches, that have either explicitly discussed or implicitly suggested their process of construction. The list of approaches included in the literature review was by no means exhaustive but does provide an insight into previous work and a valuable basis for discussion.<sup>1</sup> Further, for reasons mentioned in the introduction, we have chosen to focus on child poverty in particular. However, many of the elements discussed in this study also hold for general poverty measurement. Naturally, we also incorporate insights from general poverty measurement into our analysis.

The review of child poverty approaches suggests that all approaches generally follow the same steps towards their development, using the same building blocks. The various steps and their particular sequence are depicted in Fig. 1. Every step and building block is subject to a decision-making process and builds upon the choices made in the previous step. As a result, different choices made at each stage of the process culminate in different outcome products.

The identification of the underlying rationale and specific purposes of the child poverty approach presents the first choice in the overall process. A clarification of the rationale explains the underlying reasoning for the development of the approach. This is of great importance as it informs the values attached to such approaches, having far-reaching impact on the actual operationalization (Alkire 2008, 2002; Ravallion 1994). Robeyns (2005) provides an illustration of this importance in terms of the capabilities approach by arguing that the role attached to capabilities within the developed approach is crucial for the choice of the final set of capabilities. An explicit discussion of the approach's purpose clarifies what the approach will be used for. Ravallion (1994) was one of the many scholars to emphasize the importance of clarifying the poverty approach's purpose to be able to make solid poverty comparisons.

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<sup>1</sup> For the literature review of child poverty approaches, see Roelen and Gassmann (2008).



**Fig. 1** Generic Construction process of child poverty approaches

The second choice concerns the formulation of an overall concept, encompassing a definition of child poverty. Thorbecke (2008, pp4) states that “[...] Poverty has to be defined, or at least grasped conceptually, before it can be measured”, illustrating the importance of this building block in the generic construction process. Ruggeri Laderchi et al. (2003) reflect on a number of aspects that one encounters when formulating a concept of poverty, including the universality of the approach (should the approach fit multiple contexts or be tailor-made to a specific group?), the objectivity versus subjectivity of the approach (how to deal with value judgments?), the unit of analysis (should the focus be on households or individuals?) and dimensionality (choosing for a single or multidimensional method?). Logically, the choices with respect to these issues are in part a result of the rationale and purpose defined in the first building block of the process and have implications for the remaining choices.

The choices for domains and indicators are referred to as choices three and four in the generic process. The domains represent the different areas of development but also correspond with policy areas to enhance the approach’s usefulness for policymakers. Indicators are chosen to give a comprehensive representation of the development within the respective domains. Alkire (2002, pp182) argues that a “[...] fundamental reason for a serious account of dimensions is to give secure epistemological and empirical footing to the multidimensional objective of human development”. Further, the choice of domains and indicators is subject to assumptions and value judgments, which are to be made as explicit as possible (Alkire 2002, 2008; Robeyns 2005; Ruggeri Laderchi et al. 2003).

The final choice within the construction process refers to the approach’s outcome products or actual poverty figures. The choice with respect to this building block further underlines the interdependency of the various steps within the process.

Different purposes require different types of outcome products and in part guide the construction of the child poverty approach (Vandivere and McPhee 2008). While an advocacy purpose calls for an easily interpretable single summary measure (Moore et al. 2004), a policy input purpose requires more disaggregated and in-depth information (Ben-Arieh 2000). The choice with respect to concept will have great consequences for the method of aggregation in terms of single versus multidimensionality and unit of analysis.

The discussion of the various steps within the generic construction process shows that many poverty scholars have emphasized, in different contexts and forms, of clarifying different underlying elements of poverty approaches to arrive at sound poverty analysis.. Analysis of child poverty literature, however, suggests that the majority of child poverty approaches does not explicitly discuss or thoroughly explain choices made throughout their process of development. On the one hand, this could result in overlooking other, possibly more suitable, options and opportunities for the approach at hand. On the other hand, it creates confusion about why a specific group of children is identified as poor or not. Vandivere and McPhee (2008, pp10) point out that “[...] there is no reason to expect findings based on different index calculation methods to correspond, as each has been designed to address different questions about child well-being”. In their study on child well-being in the US, Vandivere and McPhee (2008) conclude that different types of approaches applied to the same data provide different results. They emphasize that these should be interpreted in reference to the approaches’ purposes and concepts to be meaningful (Vandivere and McPhee 2008). The generic construction process guides an explicit discussion of the specific questions a child poverty approach aims to tackle and the decision-making processes for answering them. It strengthens the approach under development and creates awareness about underlying choices, making the identification of specific groups of children as poor more transparent and understandable.

### 3 Choice and Definition in Existing Child Poverty Approaches

This section briefly explores the development processes and use of a small selection of existing child poverty approaches. It illustrates the caveats and possible implications for some approaches and provides some good practices for others.

The monetary approach is the most widely used poverty approach worldwide (Ruggeri Laderchi et al. 2003; Redmond 2008) but often done so with little consideration of underlying choices and definition. The approach conceptualizes child poverty as children living in low income<sup>2</sup> households (Vandivere and McPhee 2008). It is a one-dimensional poverty measure, incorporating income as the single indicator of well-being (Thorbecke 2008). The outcome products include incidence rates, counting the number of children in households with an income below a pre-defined threshold (Ravallion 1994), which are often extended to the poverty gap and severity measure (Ravallion 1994). Its fundamental underlying concept is based on

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<sup>2</sup> With the term income, we interchangeably mean monetary indicators including consumption and expenditures.

the assumption that individuals seek to maximize utility given the budget they have and income is able to measure that utility (Ruggeri Laderchi et al. 2003). However, the use of monetary measures, with regards to child poverty as well as general poverty, is often due to other reasons than the belief that income is the most appropriate method for capturing poverty. Income is often invoked because of the assumption that it appropriately proxies other aspects of poverty and well-being (Redmond 2008, Ruggeri Laderchi et al. 2003) in order to benefit from the strengths of the monetary approach, including the long-standing tradition (Redmond 2008) but also its intuition and easy interpretation. In terms of the generic construction process, this suggests that child poverty approaches based on the monetary method often suffer from implicit and tacit decision-making, especially with respect to purpose and concept. A comparative study of child poverty in industrialized country by Bradbury and Jäntti (2001), for example, shortly justifies the choice of a money-metric measure by claiming that “[...] money matters” (Bradbury and Jäntti 2001, pp5). Another study by Bradshaw (2000), placing child poverty in Britain in perspective to other countries, employs relative monetary measures without an explanation of why this would be the most appropriate measure. Failing to place the choice for approaches in context of the studies’ purpose and rationale, leaves the reader to guess about issues such as multidimensionality, absolute versus relative poverty and the unit of analysis. These are cross-cutting considerations in the development process of any (child) poverty approach (Vandivere and McPhee 2008) and vital for an understanding of the studies’ outcomes.

In contrast to these examples, Corak (2006b) does provide an explicit and clear line of reasoning to explain the use of a de facto monetary method for the measurement of child poverty in rich countries. Corak’s study uses the Convention of the Rights of the Child (CRC) as a starting point, thereby acknowledging that child poverty is a multifaceted problem. Six guiding principles, emphasizing feasibility aspects and practical constraints, however form the approach’s broad basis.<sup>3</sup> Consequently, the approach, its concept and choice of indicators are predominantly guided by data availability and practical operationalization and child poverty is defined as the proportion of children with equivalent incomes below the threshold of 50% of national median equivalent income (Corak 2006b). Hence, despite the approach being multidimensional in concept, it is one-dimensional in implementation (Roelen and Gassmann 2008). The explicit discussion of the choices at hand benefits the credibility of the study and enhances understanding and meaningful interpretation of the figures. It rightfully informs further analytical work, academic discussion but also practitioners and policy makers.

Another illustration of the importance to clarify rationale and purpose before developing and using a child poverty approach is the US Child and Youth Well-being Index (US CWI) by Land et al. (2001). The US CWI was designed for the purpose of considering changes in child well-being over time (Land et al. 2001, Vandivere and McPhee 2008). The construction of the index is based on the quality

<sup>3</sup> The six principles of Corak’s practical approach include the avoidance of unnecessary complexities, the use of a limited number of complementary indicators to income measures, the inclusion of social norms in the drawing of poverty lines, regular updating of indicators, the use of a fixed as well as moving poverty line and the building of public support for poverty reduction (Corak 2006b).

of life concept, including both objective as well as subjective measures of well-being in seven different domains.<sup>4</sup> Percentage changes from the base year are averaged over all indicators per domain and consequently domain indices are averaged to obtain the composite index score (Land et al. 2001). One of the great disadvantages of the US CWI measure is its limited provision of information as it only presents figures in reference to a base year, unable to provide insights into absolute or individual performance. Hence, it proves only useful for tracking the average performance of specific groups over time in reference to a base year. However, the main purpose of the development of this approach was exactly to answer this question and provide insight into these dynamics over time. In reference to the generic construction process, it can be said that Land et al. (2001) made a conscious decision for the first building block concerning rationale and purpose and consequently followed up on it throughout the remainder of the process. And by clearly postulating that standpoint throughout the development of the approach, the authors manage to take away concerns about the approach's limited use and answer exactly those questions they have set out to tackle.

Other child poverty approaches that follow the line of reasoning of the generic construction process in their development, albeit explicit or more implicit, are the Bristol deprivation approach by Gordon et al. (2003a, 2003b), the EU Child Well-being Index (EU CWI) by Bradshaw et al. (2006) and the CEE/CIS Child Well-being Index (CEE/CIS CWI) by Richardson et al. (2008). All approaches share a multidimensional nature and country-comparative focus and have described decision-making processes at different steps throughout their development in different degrees of detail. For example, while Gordon et al. (2003a, 2003b) are quite explicit in their choice for domains and indicators and their specific cut-offs, using the “continuum of deprivation”, this discussion is limited with respect to the CEE/CIS CWI of Richardson et al. (2008). Using the generic construction process would assist those developing a child poverty approach to avoid any caveats in their discussion on concepts and definitions of various building blocks. With respect to these cases, the process could now assist those analyzing or applying the approaches to be aware of and fill potential gaps.

#### 4 Methodology and Data

In the remainder of this paper, the practical use of the generic construction process is illustrated through the development of a child poverty approach for Vietnam. Decision making processes at every step of the process are explicitly discussed, ensuring a clear and transparent development of the Vietnam-specific approach. Consequently, household survey data is employed for the calculation of child poverty figures. We use the Multiple Indicator Cluster Survey (MICS) from 2006. This household survey provides child as well as household specific information for a number of indicators as specified in the theoretical framework. The Vietnam MICS is based on the standardized MICS surveys as technically supported by UNICEF.

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<sup>4</sup> The seven domains included in the US CWI are material well-being, health, safety, productive activity, place in community, intimacy and emotional well-being (Land et al. 2001).

The first and second round was conducted in 1995 and 2000, while the third round was completed in 2006. The survey contains a range of questions especially focused on education, health, reproductive health, HIV/AIDS and is separated into a questionnaire for households, women of reproductive age and children under five. Regions were identified as the main sampling domains and the sample was selected in two stages, based on enumeration areas from the census (GSO 2007). The sample consists of a total number of 8.356 households with 36.573 individuals out of which 10.874 are children up to 16years of age

## 5 Development of a Vietnam-Specific Approach

In this section, the generic construction process is applied to the case of child poverty in Vietnam. We follow the line of reasoning of the construction process, discuss each step in detail and illustrate its practical implementation.

### 5.1 Choice One – Rationale and Purpose<sup>5</sup>

The acknowledgement by policy makers and practitioners in Vietnam that a measurement tool is needed to provide comprehensive and clear information about child poverty in Vietnam provided the rationale for this approach. Currently, poor and vulnerable children in Vietnam are identified along different categories and overall referred to as Children under Special Circumstances. The identification of poor and vulnerable children along these categories is not meant as a monitoring and evaluation tool but rather as a means of targeting. According to the Law on Child Protection, Care and Education in Vietnam (Socialist Republic of Vietnam 2004), children under special circumstances are divided into 9 different categories for which various programmes and benefit schemes are in place.<sup>6</sup> Due to policy design, targeting and evaluation taking place along the lines of this categorization, no overall definition and measurement has been used in Vietnam to capture the issue of child poverty. However, the use of this type of categorization does not draw a comprehensive picture of the current situation that children are in. For the assessment of children's outcomes, one has to take stock of the state of affairs in various domains of children's lives and focus on multiple dimensions. Currently the outcomes for children in Vietnam are not clearly visualized and a wide gap exists in the poverty profiling and information provision for policy development and evaluation.

The identified purpose of the approach in Vietnam is two-fold. On the one hand, it should serve as an advocacy tool to raise public awareness on the issue of children's well-being in Vietnam. On the other hand, the approach's outcome

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<sup>5</sup> The identification of the rationale and purpose of the child poverty approach in Vietnam is the result of extensive discussions and interviews with UNICEF Vietnam and the Ministry of Labour, Invalids and Social Affairs (MOLISA) in Vietnam.

<sup>6</sup> The 9 categories of Children under Special Circumstances are orphaned children, disabled children, home-less children, drug addicted children, sexually abused children, child laborers, children that have committed crimes, poor children and HIV/AIDS affected children (Socialist Republic of Vietnam, 2004).

products should feed into the policy design and monitoring process at primarily the regional level. The two purposes require different methodologies and outcome products (Moore et al. 2004; Vandivere and McPhee 2008). Bearing in mind that these purposes are formulated for the specific case of Vietnam, the approach will also have a Vietnam-specific character, fitting the standards of that particular society. As the child poverty approach is developed within the societal and cultural context of Vietnam and as such, can not be directly transferred to other countries.

## 5.2 Choice Two – Concept

The identified rationale and purpose emphasize children's outcomes and a wider perspective of child poverty. The approach focuses on the outcomes rather than individual capabilities or characteristics that might lead to the increased poverty risk. Along the lines of theories of distributive justice and equality, the Vietnam child poverty approach is outcome- rather than opportunity based<sup>7</sup> (Robeyns 2003). In other words, we focus on achievements (or non-achievements) rather than the capabilities to reach the achievements, thereby departing from Sen's multidimensional capability approach (Thorbecke 2008) or Roemer's concept of equality of opportunity (Roemer 2000). As children's capabilities are difficult to observe and the materialization of their capabilities largely dependent on others in their direct environment (White et al. 2003), a measure of capabilities of opportunities is deemed inadequate to reflect child poverty. Furthermore, the approach should go beyond the use of a single poverty dimension but rather take a multidimensional perspective to include different dimensions of poverty. In support of the multidimensional standpoint, the Vietnam approach is based on the CRC and the basic needs approach as used in Vietnam. The CRC has served as a basis and input for many legal and policy documents internationally (Redmond 2008) as well as on country-level. In Vietnam, the CRC was ratified in 1990 and influenced the Law on Protection, Care and Education of Children (Socialist Republic of Vietnam 2004). The CRC builds on four themes, being survival, protection, development and participation and identifies basic rights for children within these areas (UNHCHR 1989). The basic needs approach in Vietnam identifies eight groups of basic needs: food, shelter, clothes, health, education, water, sanitation and social exclusion.<sup>8</sup> The basic needs approach also holds firm ground in underlying rationale for policy design.<sup>9</sup> The needs defined under the basic needs approach and rights formulated under the CRC are largely overlapping and point to the same areas of development for children. Although they do not directly provide a definition or concept (Redmond 2008), they complement and reinforce each other as underlying lines of thought for child poverty. As a result, the child poverty concept underlying this

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<sup>7</sup> According to Robeyns (2003), Sen's capability approach can be characterized as an opportunity-based theory.

<sup>8</sup> See Streeten (1984) for a discussion on the adjustment and interpretation of the basic needs approach within a specific social and cultural context.

<sup>9</sup> The use of the basic needs concept as a basis for policy making in Vietnam became apparent from interviews and discussions with policy officers from the Ministry of Labour, Invalids and Social Affairs (MOLISA) in Vietnam.

approach is multidimensional, based on non-monetary measures and adjusted to Vietnam's cultural and social context. Although the term poverty is often used in reference to merely income indicators, we employ it here to have a broader meaning encompassing a more comprehensive set of deprivations. Other terms commonly found in the literature to acknowledge the use of a broader set of indicators beyond the monetary dimension, such as well-being (see Bradshaw et al. 2006; Land et al. 2001; Vandivere and McPhee 2008), are considered inappropriate to intuitively reflect the negative formulation of the approach for Vietnam. The concept used in this study focuses on what children lack rather than what they have and the term poverty is commonly associated with the lack of needs. Finally, we choose to identify children as individuals under the age of 16 years because this is the official definition according to the Law on the Protection, Care and Education of Children in Vietnam (Socialist Republic of Vietnam 2004).

### 5.3 Choice Three – Domains

Alkire (2008) and Biggeri (2007) identified various methods for the selection of domains for multidimensional poverty measurement purposes. A first selection method is the assessment of available data. This method is a predominantly practical one as domains are selected regardless of its use and validity within the conceptual framework. Selection based on expert opinions or assumptions is a second method often employed, building upon informed guesses based on convention, theory or ideology. A third method is public consensus, including lists of issues and domains that have received legitimacy through widespread acknowledgement of the importance of these issues.<sup>10</sup> Participatory assessments are a fourth method to identify those domains and indicators that present poverty best according to the views of various stakeholders. Finally, one can base a selection on empirical evidence about people's values with respect to poverty and well-being. All these methods have advantages and disadvantages to its use and alone do not suffice as a valid selection method (Alkire 2008). Robeyns (2006) proposes four procedural criteria that should be taken into account throughout the selection process to promote its objectivity. These criteria consist of explicit formulation of the selected domains and indicators, a methodological justification, the two stage ideal—feasible process and, finally, exhaustion and non-reduction. From these criteria, we deduct our own guidelines with which the chosen dimensions should comply. On the one hand, they should fit into our conceptual framework of child poverty and the societal context of Vietnam, representing child poverty in Vietnam as inclusive as possible. On the other hand, they should also be practical and feasible, thereby ensuring that the tool can be used to serve its purposes.

A combination of Alkire's (2008) and Biggeri's (2007) methods has been used in the selection process of the domains for our child poverty approach, taking into account the Robeyn's (2006) procedural criteria and own guidelines. The method of assumptions and expert opinion inspired a first set of domains and indicators,

<sup>10</sup> Examples of consensus-based lists of domains are the Convention of the Rights of the Child, the ILO Conventions on the Minimum Age and Worst Forms of Child Labor and the Millennium Development Goals (Biggeri 2007).

complemented by those identified on the basis of public consensus. Next, participatory processes were employed to account for the views of stakeholders and key-informants, thereby ensuring the incorporation of the Vietnamese context. A final selection mechanism at work during the identification process for domains was the assessment of existing data and data availability. The methods of assumption, expert opinion and public consensus put forward a list of domains including income, education, health, nutrition, transport, communication, subjective well-being, safety, shelter and water and sanitation, social inclusion and protection. The interviews with key-informants and an in-depth assessment of available data provided a reduced and final list of 8 domains, presented in Table 1. The income dimension was left out of consideration because it was considered a means to an end rather than an end in itself and did not fit the pre-defined purpose and concept of the approach. The issues of communication, safety and transport were not considered dimensions properly reflecting the poverty status of Vietnamese children and did not fit the country's context. The dimension referring to children's subjective well-being and nutrition had to be left out of consideration due to lack of data.

#### 5.4 Choice Four – Indicators

The selection process of indicators was conducted using a combination of the same selection methods as used for the selection of domains. The criteria for indicators, however, are laid down more specifically. The two stage ideal-feasible process (Robeyns 2006) was used throughout the process of identification and selection of indicators. Ideal indicators, on the basis of assumptions, expert opinions, public consensus and participatory data, were immediately screened against the following feasibility criteria. Firstly, the indicators should ideally be child-specific. The importance of a child-centric analysis with respect to poverty has also been emphasized in other approaches (Bradshaw et al. 2006; Gordon et al. 2003a, 2003b; Noble et al. 2006; Richardson et al. 2008). Nevertheless, it is unavoidable to measure certain indicators related to shelter, water and sanitation at the household level as data is only collected at the household level (Gordon et al. 2003a, 2003b). Secondly, indicators should be easily observable and thereby measurable (Moore et al. 2004). This implies that indicators about quality of services, for example, are difficult to include in our list of indicators unless we can formulate a clearly measurable standard for such quality. Thirdly, indicators should be easily interpretable. The indicators serve the goal to provide information about a certain aspect of child poverty and to feed into the policy making and monitoring process. To be able to use indicators to this end, they should be easily interpretable in an

**Table 1** Selected domains

1	Education
2	Health
3	Shelter
4	Water and Sanitation
5	Labor
6	Leisure
7	Social Inclusion and Protection

unambiguous way (Moore et al. 2004). Fourthly, indicators should be factual. Hence, they should measure facts rather than subjective opinions and have the same meaning over time as well as different groups within the overall reference population (Gordon et al 2003b). Fifthly, the indicators should adhere to the values and norms of the specific society in order to be meaningful (Thorbecke 2008). Thus, the indicators chosen should fit the Vietnamese context and are as such culture and society-specific. Finally, the indicators should be decomposable by gender, age, location and ethnicity (Noble et al. 2006). Based on these criteria as well as the selection mechanisms by Alkire (2008) and Biggeri (2007), one or more suitable indicators were selected for the case of Vietnam, presented in Table 2.

With respect to education, ideal outcome indicators at the individual level would have been numeracy or literacy rates. However, these are difficult to observe and not available from current data. We use the net enrollment rate per level of schooling and primary school completion rates as a proxy instead. Immunization rates are considered appropriate indicators of access to and provision of health care, measured at the level of the individual child. Due to limited data, no more indicators could be added in this domain. Three indicators were defined within the shelter domain, which are thought to adequately reflect the living conditions of Vietnamese children. Another indicator that was considered within this domain was the number of people sharing a bedroom. However, this was deemed not to be appropriate within the Vietnamese context as it is customary to share bedrooms. The shelter indicators, as well as the water and sanitation indicators, are measured at the household level. The categories of safe drinking water and hygienic sanitation facilities were informed by

**Table 2** Indicators of the Vietnam child poverty approach based on MICS 2006 data

### 1. Education

- 1a children in age 5 not attending pre-school as a percentage of all children in age 5
- 1b children in age 6–10 not attending primary school as a percentage of all children in age 6–10
- 1c children in age 11–15 not attending lower secondary school as a percentage of all children in age 11–15
- 2 children in age 11–15 that have not completed primary education as a percentage of all children 11–15

### 2. Health

- 1 children in age 2–4 that have not received full immunization as a percentage of all children in age 2–4

### 3. Shelter

- 1 children living in a dwelling without electricity as a percentage of all children in age 0–15
- 2 children living in a dwelling without a proper roof as a percentage of all children in age 0–15
- 3 children living in a dwelling without a proper floor as a percentage of all children age 0–15

### 4. Water and sanitation

- 1 children living in a dwelling without a hygienic sanitation facility as a percentage of all children in age 0–15
- 2 children not drinking safe drinking water as a percentage of all children in age 0–15

### 5. Child labor

- 1 children age 5–14 having worked for an employer, in household production or self-employer in the last 12 months as a percentage of all children in age 5–14

### 6. Leisure

- 1 children in age 0–4 not having store bought or home-made toys worth as a percentage of all children age 0–4
- 2 children in age 0–4 not having at least one children's or picture book as a percentage of all children age 0–4

### 7. Social inclusion and protection

- 1 children in age 0–4 not having a birth registration as a percentage of all children age 0–4

international and national standards on water and sanitation issues. The formulation of the child labor indicator was primarily based on the national Law on Protection, Care and Education of Children, stipulating that children under 16 are not allowed to work. Other indicators referring to working conditions or number of hours worked were considered superfluous in this context. The choice of indicators within leisure and social inclusion and protection domains were mainly guided by data availability. Little information was available and the chosen indicators are considered a proxy at the individual level of the dimensions they try to shed light on. Birth registration, for example, is an important pre-condition in Vietnam for access to social services for children such as education and participation in social programs. The overall set of indicators is considered an adequate and appropriate to represent child poverty in Vietnam.<sup>11</sup> They do not adhere to all criteria but as Richardson et al. (2008, pp3) indicate “[...] in indicator development the perfect is too often the enemy of the good”.

### 5.5 Choice Five – Outcome Products

As previously indicated, the outcome products of this approach are to serve the advocacy and policy input purposes. An outcome product that is suitable for the advocacy purpose, that complies with the feasibility criteria and can serve as a communication vehicle is a child poverty incidence rate. An incidence rate makes child poverty visible in an understandable manner and is accessible for the general public due to its intuitive strength. It is an aggregate of the individual indicator and thus is genuinely child-specific and adjusted to the societal context. Further, at a lower level of aggregation and decomposition<sup>12</sup>, the individual indicators can be used for detailed policy design and analysis. Further, a regional composite child poverty index can be constructed to complement the child poverty rate and serve the purpose of policy input. Such an index can be formed by combining indicators into domain indices and single-number indices across regions. Vandivere and McPhee (2008) refer to this method as the standard score method. The method can be used for relative regional comparisons by the ranking of regions. A disadvantage of a composite index is its lack of intuitive explanatory power. The index score is a result of statistical calculations and transformations and does not represent a cardinal value that can be intuitively explained (Micklewright 2001). However, when used in combination with the child poverty rate, the two methods can complement information and provide more detailed insights. Ranking on the basis of index scores might encourage policy makers in relatively poor performing regions to give the issue of child poverty greater emphasis. To avoid confusion with widely used terms such as poverty and deprivation, the terminology of the various measures and outcome products developed within the child poverty approach for Vietnam refer to vulnerability and vulnerability to poverty.

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<sup>11</sup> For a more elaborate discussion of each individual indicator, please refer to Roelen, Gassmann and de Neubourg (2006).

<sup>12</sup> Lower levels of aggregation refer to individual and domain indicators, while lower levels of decomposition refer to indicators per demographic group.

Inherent to the choice of outcome products is the choice of a methodology for the operationalization of the defined concept (Noble et al. 2006). The individual indicators used for the Vietnam-specific child poverty approach are dichotomous, indicating whether a child is below or above a pre-determined threshold. We refer to the percentage of children falling below the specified threshold per indicator as the *indicator vulnerability rate*. *Domain vulnerability* is in turn determined by the rate of children that do not meet the specified threshold of one or more indicators within that domain. The construction of the aggregate child poverty figure is based on the dual intersection cutoff point, identifying a child as poor when it is vulnerable in at least two domains (Alkire and Foster 2008). This type of poverty line proved robust and prevented the poverty rate to be inflated by single indicators, as is the case when using the union approach (Alkire and Foster 2008). This dual cutoff identification strategy is also employed by Gordon et al. (2003a, 2003b) in the Bristol deprivation approach and referred to as the absolute poverty. In this study, we refer to the *Child Vulnerability to Poverty Rate (CVPR)*.

The second outcome product is referred to as the *Child Vulnerability to Poverty Index (CVPI)*, which can also be considered a squared domain severity index. All individual indicators are included in the calculation of the overall index, thereby incorporating all those issues identified as valid and important for the measurement of child poverty in Vietnam. Domain scores are calculated by averaging the indicator vulnerability rates. Using squared domain scores as a subsequent weighting scheme gives the index a “severity” element as higher vulnerability scores are given a larger weight. It was deemed appropriate to apply a scheme that would highlight worse situations for children and give those greater weights rather than assigning weights on the basis of a prioritization of domains, which would be subject to a large degree of subjectivity and value judgment. Applying the “severity” scheme to domain scores rather than indicator scores implies full compensability within domains but not between domains. Within one domain, a bad performance on one indicator can be offset with a good performance on another indicator. Full compensability between domains is abandoned when using squared domain scores. A high poverty rate in, for example, health can not be offset by a low poverty rate in water and sanitation. This is thought to properly reflect the actual situation of children as poverty in one domain can not just simply be compensated by affluence in another. The overall index is then calculated by averaging the weighted domain scores. The normalization of indicators on the basis of a target reference value of 0% provides an overall index score that assesses the regional performance towards an absolute, desirable level that is stable over time. The regional index scores and consequent ranking is not dependent on the relative performance of regions in comparison to the best-performing region or average regional performance, which are not a stable reference point over time. Further, applying this scheme to domain scores rather than indicator scores implies full compensability within domains but not between domains. Within one domain, a bad performance on one indicator can be offset with a good performance on another indicator. Full compensability between domains is abandoned when using squared domain scores, meaning that a high vulnerability rate in, for example, health can not be offset by a low vulnerability rate in water and sanitation. This is thought to properly reflect the actual situation of children as vulnerability in one domain can not just simply be compensated by affluence in

**Table 3** Child vulnerability to poverty rate

	MICS, <i>n</i> =10874
	<i>Child Vulnerability to Poverty Rate</i>
<i>Total</i>	36.65
<i>Male</i>	36.86
<i>Female</i>	35.42
<i>Urban</i>	12.04 <sup>a</sup>
<i>Rural</i>	43.40
<i>Red River Delta</i>	11.26 <sup>a</sup>
<i>North East</i>	58.76
<i>North West</i>	77.65
<i>North Central Coast</i>	30.95
<i>South Central Coast</i>	28.79
<i>Central Highlands</i>	40.53
<i>South East</i>	22.63
<i>Mekong River Delta</i>	59.95
<i>0–2</i>	51.12 <sup>a</sup>
<i>3–4</i>	52.04
<i>5</i>	28.08
<i>6–10</i>	27.30
<i>11–14</i>	35.05
<i>15</i>	36.14

<sup>a</sup><0.001, significance level chi-squared group equality of means

another. Index scores are calculated for the eight regions of Vietnam for the purposes of geographical comparisons.

## 6 Empirical Results

This section presents the child poverty estimates for Vietnam on the basis of the Child Vulnerability to Poverty methodology and MICS data. Table 3 shows the incidence rates decomposed by gender, area (urban versus rural areas), region and age group. Findings suggest that child vulnerability to poverty rate is 37%. There is no significant difference between boys and girls but we can observe a great urban-rural divide. Approximately one out of ten children living in urban areas are identified as being vulnerable to poverty, while this figure is four times higher for children living in rural areas. Further, the poverty figures display great differences between regions. Vulnerability to poverty is lowest in the Red River Delta and South East regions, ranging from 11 to 23%, and highest in the North East and North West regions with figures ranging from 59 to 78%.<sup>13</sup> With respect to age groups, we

<sup>13</sup> The Red River Delta and South East regions respectively include the capital Hanoi and Ho Chi Minh City. The North West and North East regions are mountainous regions in the north of Vietnam.

observe high rates of vulnerability for the youngest children, in age brackets 0–2 and 3–4, and the oldest children at age 15. These results, however, should be interpreted with caution. Not all indicators are observable for all children. For example, 7 indicators are observable for children in age bracket 6–10 while 9 indicators are observable for those in age bracket 3–4. Hence, the latter group by definition has more chance to be included in the vulnerability figures.

The results for the composite CVPI and the underlying domain indices are presented in Table 4, providing detailed information about regional performances. Table 4 presents the composite CVPI score as well as rankings based on the overall CVPI and domain scores. Regional rankings for the good performing regions, Red River Delta and South East, and poor performing rankings, North East and North West prove to be rather consistent over the range of domains. In accordance with the domain rankings, the ranking positions of these regions for the CVPI are respectively the first and second place and the seventh and eighth place. The middle rankings, however, vary depending on the domain. The North Central Coast region, for example, holds rankings positions 2 to 7 depending on the specific domain. With respect to the composite CVPI, it holds the fourth position. Further, when comparing regional rankings on the basis of the CVPI with the CVPR results in Table 3, it can be observed that rankings are similar among the higher ranks but different among the lower ranks. While the Mekong River Delta ranks one but last using the CVPR method, it holds ranking position 5 for the CVPI. The Central Highlands and North East hold a lower rank when using CVPI compared to CVPR, further indicating that the choice of methodology can have strong implications for the final poverty estimates.

The empirical findings from both the CVPR as well as CVPI are valuable for advocacy and policy input in Vietnam. Due to the intuitive nature of the CVPR and its recognition of issues relevant for children in Vietnam, it is an appealing tool to create awareness about child poverty in the country. The outcomes are understandable and meaningful for the general public as well as for more informed stakeholders. Further, due to the explicit discussion of underlying concepts and constructs, the findings can be presented with full transparency and information. The same holds for the CVPI. In combination with the CVPR, the index estimates

**Table 4** Regional rankings (= based on indicator distance from 0% as reference value)

	<i>CVPI score</i>	<i>CVPI</i>	<i>Education</i>	<i>Health</i>	<i>Shelter</i>	<i>Water and Sanitation</i>	<i>Labor</i>	<i>Leisure</i>	<i>Social Inclusion and Protection</i>
<i>Red River Delta</i>	0.028	1	1	1	1	1	5	1	1
<i>South East</i>	0.036	2	4	2	2	2	2	2	2
<i>South Central Coast</i>	0.048	3	3	3	3	4	3	3	4
<i>North Central Coast</i>	0.089	4	2	5	4	3	6	7	3
<i>Mekong River Delta</i>	0.098	5	6	4	6	7	4	4	6
<i>Central Highlands</i>	0.107	6	7	6	5	6	1	5	7
<i>North East</i>	0.164	7	5	7	7	5	7	8	5
<i>North West</i>	0.201	8	8	8	8	8	8	6	8

provide valuable input for especially policy makers at the regional level. The CVPI provides an insight into regional performance while the CVPR can complement this with detailed information at the individual level of the child. The opportunities and limitations of both tools are clear due to the structured development guided by the generic construction process. This clarity ensures that the tools are adequately used for the appropriate purposes in the proper context.

## 7 Conclusion

This paper argues and illustrates the importance of making conscious and explicit choices and decisions when developing or using a child poverty approach. Many scholars have voiced, in different contexts and forms, the strong links between different underlying elements of poverty approaches and the importance of acknowledging them to arrive at sound poverty analysis. Nevertheless, many child poverty studies, either focusing on the development or application of a child poverty approach, fail to explicitly discuss definitions and concepts. As a result, approaches might overlook other, possibly more suitable, options and opportunities in their development or create confusion about why a specific group of children is identified as poor or not. This paper proposes a generic construction process that serves as guide for those wishing to develop or apply any child poverty approach, responding to researchers that call for more transparency and acknowledgement of underlying concepts. The process contributes to unambiguous and solid foundations of child poverty approaches and avoids misunderstandings and—interpretations when used for analytical or policy purposes.

The application to the case of Vietnam illustrates that the generic construction process ensures a consistent and structured development of a child poverty approach as it guides you through the various steps in a logical sequence. As each step builds on the previous, one is forced to be explicit in each one of them and to make a solid decision. This does not only benefit the actual development of the approach but also the consequent use in analytical or policy terms. The clear and transparent discussion assists scholars, practitioners and policy makers in choosing the appropriate approach for their intentions and to adequately interpret the results and findings. In Vietnam, one can now benefit from child poverty estimations that are geared to the specific cultural and social context, multidimensional and child-focused to create awareness about the issue of child poverty and inform policies towards the reduction of child poverty.

This study focuses primarily on child poverty measurement but further research is required to explore the use of the generic construction process in other contexts. For the time being, we strongly encourage the development and implementation of any type of poverty approach to take place in an explicit and transparent manner.

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