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Research Article

Aligning household decision-making with work and education: A comparative analysis of women's empowerment

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Aligning household decision-making with work and education: A comparative analysis of women's empowerment

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Abstract

BACKGROUND

Although women's empowerment is one of the key concepts in development, it has proven challenging to measure it. Empirical studies have tended to focus on a cause-and-effect analysis of empowerment and using composite measures to compare different national contexts. More recent works suggest new conceptual and methodological approaches to women's empowerment that better reflect contextual factors, intersectionality, and life course perspectives.

OBJECTIVE

We conduct cross-national comparative research on women's empowerment using a new approach: by examining how women's household decision-making power, education, and work – major components of empowerment – relate to each other across 28 low- and middle-income countries. Through this, we explore what the different relationships might imply for women's empowerment in different contexts and circumstances.

METHODS

We utilize latent class analysis, a person-centered approach, to identify an unobserved class membership structure that classifies women into typologies to account for the different contexts and multidimensionality of women's empowerment within and between countries.

RESULTS

We find substantial within-country differences in household decision-making power and how this aligns with women's education and work. Across countries, we find work and education are not always positively associated with each other or with decision-making

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power, which suggests a need to contextualize the associations within the different dimensions of women's empowerment.

CONTRIBUTION

Our analysis provides a nuanced examination of empowerment and reveals a spectrum of women differently situated in each country and across different countries, which is often obscured in previous research.

1. Introduction

Empowerment is widely understood as a process that involves women's control over resources and agency to facilitate their "achievements" (Kabeer 1999) – a transition from being disempowered to being empowered (Oxaal and Baden 1997; Rowlands 1995). Following this conceptualization, substantial empirical research in low- and middle-income countries (LMICs) has investigated the causal relations of empowerment, testing factors recognized as resources affecting ranges of achievements, such as fertility, reproductive health, and children's outcomes (Upadhyay et al. 2014; Pratley 2016; Santoso et al. 2019). For example, researchers typically treat women's education and work as causes (resources) of certain outcomes, including agency, and as either key independent variables or control variables measuring socioeconomic status. However, such cause-and-effect analyses largely exclude the possibility that education and work can be both achievements and outcomes of women's agency (Richardson 2018a). This is particularly important from the life course and intersectionality perspectives, which emphasize the need to consider varied timings and circumstances of education and work in relation to women's empowerment (Desai et al. 2022). Thus treating employment and education as either a basis or a consequence is as problematic as using them as full proxies of women's empowerment (Presser and Sen 2000; Malhotra, Schuler, and Boender 2002; Mason 2005).

Another challenge in women's empowerment research has been to account for empowerment across different geo-cultural and socioeconomic contexts (Riley 1999; Agarwala and Lynch 2006; Richardson 2018b). While substantial studies in LMICs have attempted to measure agency/autonomy in different dimensions, particularly in household decision-making (Biswas and Kabir 2004; Hanmer and Klugman 2016; Cheong, Yount, and Crandall 2017), they have primarily focused on a single country or multiple countries pooled together. When multiple countries have been compared, research has focused on those using scores, indexes (Jejeebhoy and Sathar 2001; Mason and Smith 2003; Alkire et al. 2013; Phan 2016; Ewerling et al. 2017), or comparable measures of empowerment developed by identifying consistent domains relevant to the

multiple countries (Asaolu et al. 2018; Miedema et al. 2018). Many other cross-national studies choose scale items deemed relevant to the local context in an arbitrary and ad hoc way (Donald et al. 2020). In this regard, previous research on women's empowerment often obscures how in various contexts, the unique compositions of multiple indicators work for a different range of women.

An emerging body of economics research utilizing microdata of LMICs has shown how different geo-historical legacies and institutional differences create heterogeneity in individual life course patterns and gender and family behaviors (Pesando 2019; Annan et al. 2021). Drawing on these works, in this article we measure how different domains or components of women's empowerment factors relate to each other within each country's context and how the specific relationships vary across countries, which remains unclear in the previous literature. For example, although there is no doubt that women's education and employment are linked, their exact association with each other and other factors depends on context. Education and work can act as enabling factors of empowerment (as opposed to being the direct cause) (Kishor 2000) or as outcomes of women's agency (the direction of which can be difficult to establish), but they may not always dovetail together. Therefore examining the potentially varied relationships between several key empowerment factors and comparing across national contexts can provide a useful novel approach, shifting from the current predominant focus on causal relations, composite measures, or comparable dimensions.

In this paper we use latent class analysis (LCA), a person-centered approach, to identify an unobserved class membership structure that classifies women into typologies that capture differences in household decision-making power and the varying degree of alignment between work and educational attainment within and across 28 LMICs. This allows us to examine subtypes of women with different compositions of these key indicators of empowerment without presuming a causal direction. This descriptive approach is conceptually and empirically different from the conventional variable-centered approach, which generally aims to sort out the relationships among education, work, and women's autonomy/decision-making as predictor and outcome variables. Due to the lack of longitudinal data and limitations in cross-sectional research designs, such analysis is often unable to account for unobserved heterogeneity and the dynamic relationships across these variables, thus resulting in mis-specified models and biased estimates. Our approach transcends the limitations of treating these variables as cause-and-effect indicators and accommodates the complex relationships among all these indicators. We argue that women's work, education, and autonomy are unique aspects of an underlying structure of women's empowerment, but the linkage across them is too complex to map out causally when only snapshot measurements are available. Instead, the LCA approach allows us to come up with a parsimonious structure to describe how

women's empowerment is reflected in these different combinations within and across national contexts.

Our analysis consists of three main parts. First we examine the patterns of relationships between women's education, work, and intrahousehold decision-making power throughout the 28 countries. To preview the results, we find a four-class membership structure suggesting tremendous within-country differences in the alignment of women's household decision-making with education and work in each of these countries. Second we aggregate countries into three distinct groups based on shared patterns of the relationship between the three components of empowerment to see between-country differences. For some countries, education is specifically associated with higher decision-making power; for others it is work or education that relates to women's high autonomy, but not both simultaneously; for others it is education and work together.

2. Education and employment as both resources and achievements in women's empowerment

Theoretically, scholars acknowledge that the factors of empowerment are “fuzzy,” “interrelated,” and “interactive” (Kabeer 1999; Malhotra, Schuler, and Boender 2002; Alsop, Bertelsen, and Holland. 2006). However, empirical research has largely failed to capture the intertwined nature of this process, as exemplified by the treatment of education and employment. In reviewing the earlier literature, Malholtra and Schuler (2005) observe that most studies examine how factors such as education or employment lead to women having more choices, options, control, or power over their life conditions. Similarly, in more recent work, women's education is included as a key empowerment indicator determining household decision-making power (Acharya et al. 2010), contraceptive use (Do and Kurimoto 2012; Larsson and Stanfors 2014), fertility (Samari 2019), child nutrition (Jones et al. 2019), utilization of health services (Pandey, Lama, and Lee 2012), and democratic activity (Wyndow, Li, and Mattes 2013). Scholars have likewise tested how employment affects child malnutrition (Burroway 2017; Cunningham et al. 2014), fertility (Behrman and Gonalons-Pons 2020), birth, and the survival of girls (Mukherjee 2013). Some authors include education and employment as full proxies of empowerment while others view them as its sources. Substantial research also includes one or both as sociodemographic variables controlled in the models (e.g., Roy and Chaudhuri 2008; Yaya et al. 2018; Ngenzebuke, De Rock, and Verwimp 2018, Samanta 2020). The dominant assumption in the literature is that education and employment are resources or a social status that individuals are equipped with; thus they are a causal source of empowerment outcomes, however defined.

In direct contrast is research that considers work and education as outcomes of empowerment. Laszlo and others (2020), in proposing a typology to measure women's economic empowerment, suggest a three-way classification of measures that includes direct measures, indirect measures, and constraints. They take human capital accumulation and education as outcomes of empowerment, not as empowerment per se. Pointing out the problems of conflating empowerment with outcomes, they recommend using education and employment as indirect outcome measures of empowerment determined by decision-making power and external structures, such as market forces.

This less common perception of education and work as “achievements” in the process of empowerment has analytical value. For instance, in many LMICs, even the possibility of secondary education is a precarious and deeply gendered process. In these countries, adolescent girls who pursue education often fight against dominant discourses that devalue women's education at both household and wider societal levels (King and Hill 1993; Mensch, Bruce, and Greene 1998; Herz, Herz, and Sperling. 2004; Tembon and Fort 2008). As Chege and Sifuna (2006) note in their study on Kenya, girls' education is determined by both the family's socioeconomic status and sociocultural factors, such as sexist attitudes and gender-discriminatory norms. Girls who strive to continue education in such circumstances exert a certain level of agency or obtain a significant achievement in resisting alternatives, such as early marriage and motherhood (Male and Wodon 2018).

Increased attention has been paid to the agency of adolescent girls in LMICs who manage to achieve education, despite gendered social norms and challenging life circumstances (Harper et al. 2018). For instance, in Nepal, married girls often negotiate with their in-laws to remain at school (Samuels and Ghimire 2018). Even urban migration, a path increasingly common among adolescent females in the Global South (Temin et al. 2013), is often undertaken to improve work opportunities and gain access to the schooling available in towns and cities (Montgomery et al. 2016). Here, education exemplifies a form of achievement, being a product of one's motivation and ambition, and a specific outcome to be negotiated within familial and wider social structures. The same can be said of work. Women's engagement in nondomestic work can be framed as an “achieved” outcome of agency and resources, particularly when prevailing gender norms restrict the possibility. If empowerment is the ability to make “strategic life choices” (Kabeer 1999), the decisions an individual makes on education and employment are undoubtedly among the most crucial.

Considering life course paradigms also helps in this conceptualization of women's empowerment and its various components as being both determinants and outcomes. Life course perspectives view women's empowerment as a lifelong process manifested in different ways along timelines, which enables us to identify interdependent pathways in different life domains, such as work or family (Desai et al. 2022). In this paper, in the

absence of longitudinal data to map out the sequences of different events, we take a holistic approach by assigning education and work not as resources or achievements but rather as components within the wider process of empowerment that spans the life course. Richardson (2018a) recommends not using indirect measures such as education and employment as empowerment measures because of the ambiguity of these factors' role as resources or achievements and also because these "resources" might facilitate women gaining more agency but do not ensure it (Kabeer 1999). Yet there exists merit in using these indirect variables, as our intention is not to construct empowerment measures with them but to broadly see how women's education, employment, and agency (decision-making power) relate to each other across different contexts. Our analytical approach intends to look at precisely the varied possibilities of these factors facilitating or not facilitating agency in different contexts.

3. Women's empowerment in different national contexts

Scholars have emphasized the importance of local social context in measuring women's empowerment (Mason and Smith 2003; Malholtra and Schuler 2005; Mosedale 2005). For instance, women might have high decision-making power regarding household purchases but not regarding the use of their husbands' earnings, and the degree to which women have control over such elements may differ. Furthermore, women's high decision-making power or employment might reflect their primary encumbrance as financial providers at the expense of relative patriarchal familial freedom and thus might indicate economic burden instead of agency. Education and employment are context-specific, not only as potentially interlinked components of individual empowerment but also as representative of status, macroeconomic conditions, laws, policies, and social/cultural norms. While the UN's Millennium Development Goals and Sustainable Development Goals explicitly denote female education and employment as yardsticks to gauge a country's progress toward gender equality, these factors in themselves cannot ensure empowerment, as they are conditioned by local contexts (Kabeer 2005).

While education and employment are shown to have generally positive associations with empowerment, how they relate to each other and to other indicators of agency can differ from country to country. For example, do women with more education possess more household decision-making power or those women who work, or both? In countries where rapid educational expansion has occurred, education may not be so closely tied to decision-making power if there is low variance to begin with. Equally, in countries where women's education level is generally low, decision-making power could be related closely to work, but it could also be that education facilitates women's household influence. How the relationship between education, work, and intrahousehold decision-

making plays out for women and how this differs across national contexts are questions requiring empirical investigation.

A common strategy to empirically compare women's empowerment levels cross-nationally is the use of scores, scales, or indexes (Jejeebhoy and Sathar 2001; Mason and Smith 2003; Alkire et al. 2013; Phan 2016; Ewerling et al. 2017). Evidently, the interpretation of an index or scale in cross-national research should be undertaken cautiously, as empowerment in one context may have a different meaning elsewhere (Malholtra and Schuler 2005). Additionally, while composite measures are useful in combining different dimensions of empowerment that can signal overall national differences, they do not adequately capture within-group differences (Richardson 2018a; Yount, Peterman, and Cheong 2018). Average scores obscure the different ranges of positions for women within a single country and the precise compositions of indicators that represent their circumstances, as a group of women might have a mixture of the indicators of empowerment. Identifying different types of women and their respective proportionality within the wider context is necessary, since in reality women are differently situated given the intersections of class, ethnicity, and other social categories at play (Crenshaw 1991; Collins 2015). Considering this, we instead attempt to capture the *patterns* of inter-relationship among the key indicators of empowerment. We examine how these indicators relate to each other through different types (profiles) and scrutinize their differences both within and between countries. While we compare nationally, the basis of this comparison is in the patterns of different types of individual women across countries. Through this, we test whether some shared patterns – common types of women's positioning – emerge and what these might imply for understanding women's empowerment.

4. Data

For the latent class analysis, we use Demographic and Health Surveys (DHS), nationally representative household surveys that include several indicators of women's autonomy, education, and work. We use extracts from IPUMS DHS, which adds consistent variables across countries to the original DHS data (Boyle, King, and Sobek 2020). After identifying decision-making power indicators, we selected five that are included in most countries' recent year datasets (2010 or later). The final samples are Afghanistan, Angola, Benin, Burkina Faso, Burundi, Congo DR, Cote d'Ivoire, Egypt, Ethiopia, Ghana, India, Jordan, Kenya, Lesotho, Malawi, Mali, Myanmar, Namibia, Nepal, Niger, Nigeria, Pakistan, Rwanda, Senegal, Tanzania, Uganda, Zambia, and Zimbabwe (22 are in Africa; 6 are in Asia). The sample in each country-year is typically a stratified random sample of women 15 to 49 years old. We limited our samples to currently married women and

analyzed each country separately, incorporating its own sample weights instead of pooled data. We used five indicators of household decision-making, one for education, and one for work consistently across the samples.

The four out of five indicators of household decision-making power are based on the following questions: “Who usually makes decisions about (has the final say on): major household purchases; visits to your family, friends, or relatives; how your husband’s/partner’s earnings will be used; and health care for yourself?” Respondents chose from (1) respondent, (2) husband/partner, (3) respondent and husband/partner jointly, and (4) someone else. The other indicator of household decision-making is based on this question: “Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is getting permission to go to the doctor a big problem or not?” Respondents chose either (1) big problem or (2) not a big problem. If one perceives getting permission to go to the doctor as a big problem, it is likely that she would not have much power to control her own body and health. These indicators are largely comparable with minor wording changes. We created dichotomous variables for the first four indicators: 1 = woman alone or together, and 0 = husband or others. The indicator for getting permission was dichotomized as 1 = not a big problem, and 0 = a big problem. We tested alternative specifications for the dichotomous variables as 1 = woman alone, and 0 = women and husband together or decision taken by others. We opted for the prior specification, as only a small proportion of women make decisions alone in most countries and following our rationale that women who have taken a joint decision should be considered separately from those without any decision-making power.

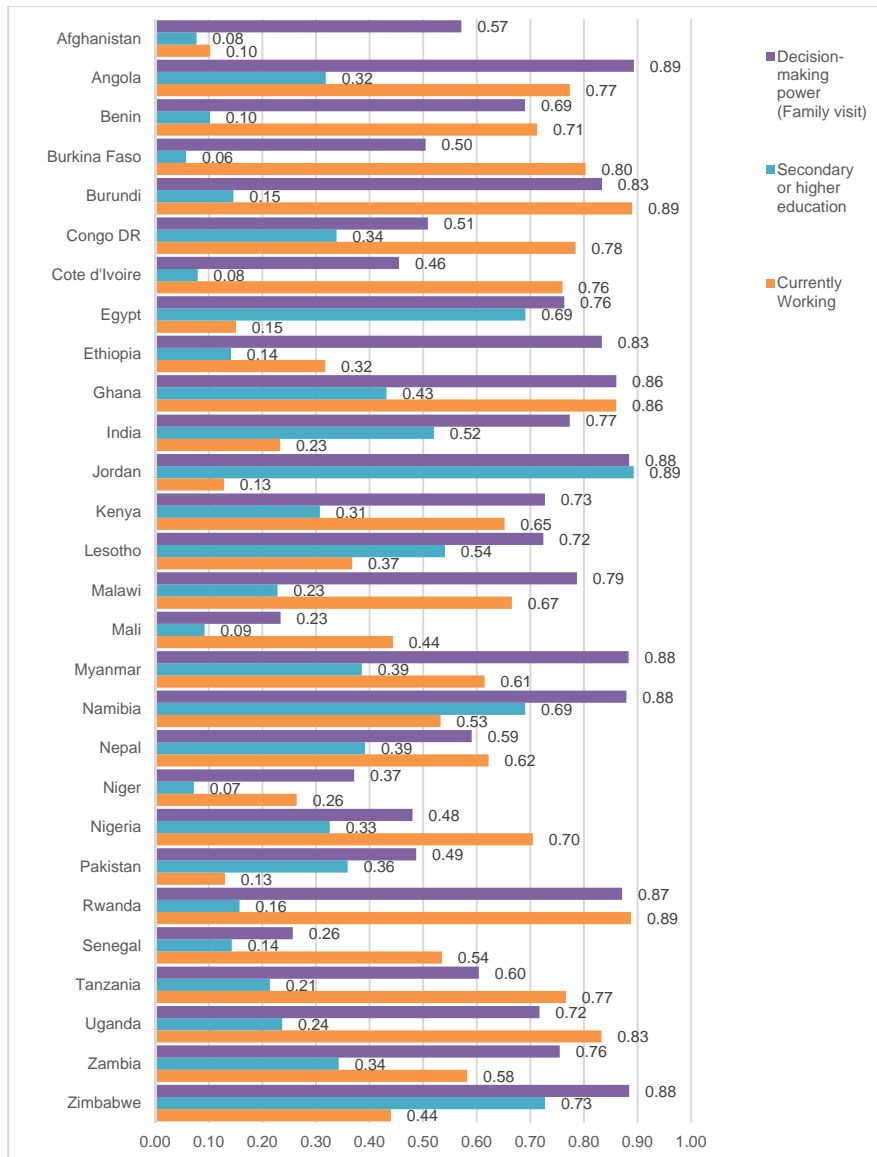
Our work variable is based on the question “Aside from your own housework, have you done any work in the last seven days?” Respondents chose from (1) yes or (2) no, which we recoded into 1 = yes; 0 = no. We created an alternative dichotomous variable measuring paid work as 1 = working and paid in cash/kind, and 0 = working but unpaid or not working, but the overall results using the paid work variable were consistent with the results using our work variable (results not shown). Another reason for choosing a work variable instead of a paid work variable is because the latter complicates our interpretation. In DHS some respondents who were not currently working (within the past seven days) responded that they were being paid, as the question also includes payment from previous employment. This means that women who are currently working but are unpaid, those who are currently not working and are unpaid, and those who are not working but were paid in previous employment are treated as the same group.

Our education variable is constructed from the question “What is the highest level of school you attended?,” which was recoded into 1 = secondary or higher, and 0 = lower than secondary (primary or no education). Previous work analyzing the pooled DHS data of 58 LMICs has found secondary or higher education to have important threshold effects

for women's empowerment (Hanmer and Klugman 2016). Also, changing the education cutoff point, from 1 = having some education, and 0 = no education to 1 = tertiary education, and 0 = secondary education or lower, did not change the overall results but made interpretations less intuitive. Figure 1 displays the summary description of the selected main dichotomous variables across countries. (See Table A-1 for the full descriptive statistics of all seven variables.) We include one indicator of decision-making power (having a final say in family visits), having secondary or higher education, and currently working.

As Figure 1 shows, there are clear differences across countries in terms of decision-making power, with women in some countries having much greater power than others. In Mali, the decision-making indicator is only 0.23, whereas in Angola, Myanmar, and Zimbabwe it ranges between 0.82 and 0.83. For each country, there is overall high consistency across the five variables of household decision-making, with some exceptions (see Table A-1). For example, in Mali, the proportions of decision-making indicators range from 0.14 to 0.70. Across countries, women mostly do not consider getting permission to go to doctor to be a big problem (one of our decision-making indicators). For this reason, in some countries where levels of other decision-making indicators are generally low, we find gaps between this indicator and other decision-making indicators. In Senegal, for example, it is 0.92 for the variable of permission to go to the doctor, whereas the other decision-making indicators range between 0.17 and 0.26 (see Table A-1). Both the work and education variables differ, with some countries recording only 10% of women currently working and the highest countries recording 89%. Countries greatly vary in women's education, ranging from 8% to 89% of women having secondary education. For the work variable in particular, differences in the definition of work, timing of the survey (applicable to seasonal workers), and other social factors, such as religion, might have influenced the substantial variations. (For example, Muslim countries score low.)

Figure 1: The main dichotomous variables (decision-making power in family visits, secondary or higher education, and currently working) by country



5. Method

In this study we ask: How do women's education, employment, and household decision-making relate to each other in 28 LMICs and how does this relationship differ across these countries? We employ LCA to identify individual women by discrete profiles based on education, work, and household decision-making. LCA enables us to reflect that these components of empowerment are related and interactional, without causal assumptions. Compared with variable-centered approaches used in most research, where scales or variables are used to measure the degree of empowerment, LCA is a person-centered approach, where individuals are viewed as falling into one of a few different types of empowerment, defined by unique patterns (Magnusson 1998). This is consistent with literature that perceives women's empowerment as multidimensional and the understanding that women may be empowered in one area or domain of life but not others (Hashemi, Schuler, and Riley 1996, Kishor 2000; Mason 2005; Moghadam and Senftova 2005). LCA statistically allows that individuals have different combinations of these empowerment components rather than neatly fitting into a continuum from low to high (Pearce, Foster, and Hardie 2013). It allows for the fact that while some people may score consistently low, medium, or high across the indicators, others might mix levels of low, medium, and high, depending on the indicator. Classifying types offers a chance to see variance in individuals' lives and, when compared cross-nationally, gives insights into how the patterns and distribution diverge across different national contexts. Additionally, in LCA we can observe how women are divided into different types in a single country, capturing within-country differences.

LCA has another advantage over other cluster analytical approaches, such as confirmatory factor analysis (CFA), which is based on strong theoretical and distributional assumptions. The latent class in LCA explains the association among the observed variables with little restriction on scaling of the variables (Vermunt and Magidson 2002). CFA and other techniques do a better job in identifying and encompassing the potentially long lists of indicators found to be correlated to empowerment measures (see Agarwala and Lynch 2006; Hanmer and Klugman 2016; Asaolu et al. 2018; Miedema et al. 2018), but the correct theoretical conceptualization and specification of the relationship among the variables is essential to model estimation. Given the complex relationships across these variables and that identification of the models is often difficult with cross-sectional data, misspecification can lead to serious errors in estimation. In cross-national analyses, it is particularly problematic to assume that the same theoretical relationship can apply in all contexts. On the other hand, LCA is a data-driven approach to class enumeration, showing potential unique profiles that may or may not be identifiable by researchers a priori (Pearce, Foster, and Hardie 2013) and thus can accommodate different circumstances in different contexts.

The basic LCA model estimates two parameters: latent class membership probabilities (γ) and item response probabilities (ρ). The latent class membership probabilities describe the distributions of classes of the latent construct. All the classes are mutually exclusive and exhaustive, adding up to a probability of 1. The best model in terms of the number of latent class memberships is determined by computing a model with only a single latent class first and then adding more classes one by one. The item response probabilities estimate the association between each observed variable and each latent class. They range from 0 to 1, with a value closer to 0 suggesting no association between the variable and the latent class, and a number closer to 1 suggesting the highest possible association between them. Our analytical strategy is to identify the defining characteristics of each class separate from other classes, through the item response probabilities for each country, and then to examine how the patterns of the classes differ from country to country. We believe this is superior to the approach of pooling all the data together from different countries and producing a single underlying class membership structure. That alternative approach is bound to produce a less parsimonious and intuitive membership structure that is less equipped to differentiate within-country and cross-country differences.

5.1 Latent class analysis – results for individual countries

We ran latent class models for each country. Table 1 displays the comparison of goodness-of-fit statistics, taking Kenya as a typical example. The model with two classes fits better than the one-class model. The three- and four-class models show improved fits compared to the two-class model. Although technically Akaike information criteria (AIC) and Bayesian information criteria (BIC) are lower (suggesting a better fit) in the five- and six-class models than in the four-class one, the values of chi-squares and degrees of freedom signal that they do not improve as much as the statistical improvements of moving from the three-class model to the four-class one.

Table 1: Comparison of goodness-of-fit of basic latent class models (Kenya as an example)

No. of Classes	Likelihood ratio G^2	Degree of freedom	AIC	BIC
1	-29804.09	7	59622.17	55319.45
2	-27847.3	15	55724.6	55829.66
3	-27758.54	23	55563.07	55724.17
4	-27697.82	30	55455.63	55665.76
5	-27650.53	39	55379.06	55652.23
6	-27612.73	47	55319.45	55648.66

Note: Boldface type indicates the selected model.

Substantively, we found that the four-class model had clear distinctive class types and patterns while the five-class or more models had two or more classes without clear distinction. In the five-class models for Kenya and most other countries, two classes did not show major difference, with only a slight change in one specific indicator, suggesting that one latent class has basically split in two. In other words, for most countries, adding an extra class did not provide any meaningful new patterns in terms of the relationship between the indicators. The results of the goodness-of-fit tests for the entire 28 countries (see supplementary 1) show a tendency similar to that for Kenya, offering evidence that comparing four-class models across countries is both statistically and analytically sufficient. We acknowledge the limitation of consistently using the four-class models, as a few countries are better represented by three-, five-, or six-class models. Yet applying different class models would make our comparative analysis less intuitive and considerably more challenging to interpret. Following Collins and Lanza (2009) in aiming to select the best model based on parsimony and interpretability, we therefore adopt a four-class model as most suitable for our analysis of cross-country comparison.

Table 2 displays the item response probabilities, taking Kenya as an example. The item response probabilities report the probability of giving a particular response to the question, given membership in a latent class. In Kenya and the rest of the countries, we consistently find that four classes are largely organized from a class of women with the least household decision-making power to those with high household decision-making power, with varying degrees and combinations of education and work. In Kenya, Class 1 can be identified as women with the lowest chances of having decision-making power; Class 2 as women with moderate chances of having decision-making power; and Classes 3 and 4 as those with very high chances of having a say in intrahousehold decisions. While both Classes 3 and 4 consist of women with high decision-making power, their work and education vary: those in Class 4 have higher chances of having work and education than those in Class 3. Roughly two-thirds of the countries have a class structure similar to that of Kenya, wherein women in Classes 3 and 4 show a nearly 1.0 probability of having a say in household decisions. The rest of the countries, approximately one-third, have only one class of women (Class 4) with such high decision-making power, while Classes 1, 2, and 3 have lower decision-making power.

Table 2: Item response probabilities of LCA (Kenya as an example)

		<i>Kenya</i>
Class 1	Decision-making in household expenditures	0.07
	Decision-making in family visits	0.20
	<i>low autonomy</i>	0.14
	<i>low work</i>	0.15
	<i>low education</i>	0.89
		Currently in work
	Secondary or higher education	0.19
Class 2	Household expenditures	0.60
	Family visits	0.65
	<i>moderate autonomy</i>	0.39
	<i>Moderate-high work</i>	0.78
	<i>moderate education</i>	0.91
		Currently in work
	Secondary or higher education	0.34
Class 3	Household expenditures	1.00
	Family visits	0.78
	<i>high autonomy</i>	1.00
	<i>moderate work</i>	0.88
	<i>moderate education</i>	0.92
		Permission to go to doctor not a problem
	Currently in work	0.59
	Secondary or higher education	0.32
Class 4	Household expenditures	0.96
	Family visits	1.00
	<i>high autonomy</i>	0.71
	<i>high work</i>	0.98
	<i>high education</i>	1.00
		Permission to go to doctor not a problem
	Currently in work	0.82
	Secondary or higher education	0.51

Overall, our four household decision-making indicators generally do not show much divergence within each class. Women have either low, moderate, or high decision-making power rather than having some combination of high autonomy in one household decision and low autonomy in others. Women who are least likely to decide on household purchases tend to also have not much say in other decisions, such as those concerning health care, husband’s earnings, and family visits. Similar patterns occur for those with high and moderate decision-making power. Across countries, classes of household decision-making levels, except for the permission to go to the doctor indicator (with relatively less variance across classes), can be identified as low (median 0–0.2 of item response probabilities), moderate (median 0.4–0.7), and high (median 0.9–1).

This categorization of classes as low, middle, and high decision-making power is also relative. In some countries, such as Lesotho, even women with the lowest levels of decision-making power (Class 1) have a 20% to 60% chance of having a final say in

household decisions, compared with nearly no chance of having a say for this class type in most other countries. Compared with the clear patterns of each class as low, moderate, or high in terms of decision-making power, work and education show much greater patterns of divergence. For example, while all countries have one or two classes with high decision-making power, some countries in these classes have high education and low employment while others have low education and high employment or both high education and high employment.

5.2 Grouping of countries based on latent class analysis

To understand whether similar patterns of class types can be witnessed across countries, we labeled each class with its pattern of distinctive combination. For instance, with Kenya, we labeled Class 1 as “low autonomy, low work, low education”; Class 2 as “moderate autonomy, moderate work, moderate education”; Class 3 as “high autonomy, moderate work, moderate education”; and Class 4 as “high autonomy, high work, high education.” This labeling of low, moderate, and high for indicators is relative, determined within each country’s context. We labeled Class 4 in Kenya as high education although the probability of having more than a secondary education there is 0.51. Class 4’s education is considered high in a comparative sense, as the item response probabilities of education in other classes range from 0.19 (low) to 0.34 (moderate). We take this approach to categorize types that account for the national context of the specific country.

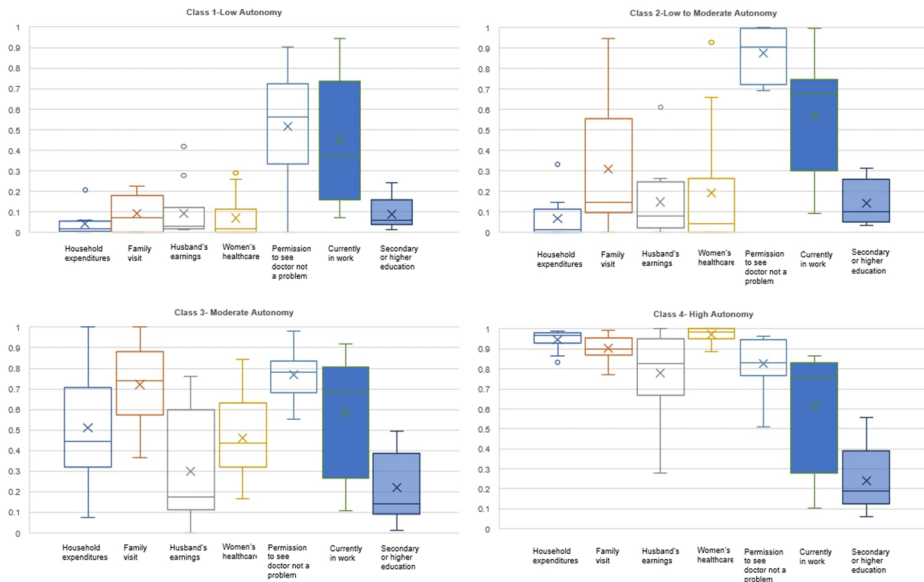
Upon scrutinizing the patterns and labeling each class accordingly, we identified three distinctive country groups with shared combinations of class types, as follows:

- Group I: Afghanistan, Burkina Faso, Congo DR, Cote d’Ivoire, Mali, Niger, Nigeria, Pakistan, Senegal, and Tanzania. (Class 1, “low autonomy”; Class 2, “low–moderate autonomy”; Class 3, “moderate autonomy”; Class 4, “high autonomy”)
- Group II: Angola, Benin, Burundi, India, Malawi, Myanmar, Nepal, Rwanda, Uganda, and Zambia (Class 1, “low autonomy”; Class 2, “moderate autonomy”; Class 3, “high autonomy, high work, low education”; Class 4, “high autonomy, low work, high education”)
- Group III: Ghana, Egypt, Ethiopia, Jordan, Kenya, Lesotho, Namibia, and Zimbabwe (Class 1, “low autonomy”; Class 2, “moderate autonomy”; Class 3, “high autonomy, low work, moderate education”; Class 4, “high autonomy, high work, high education”)

To visualize how the countries differ, we present the three groups’ unique patterns in the distribution of item response probabilities in each class in the boxplots (Figures

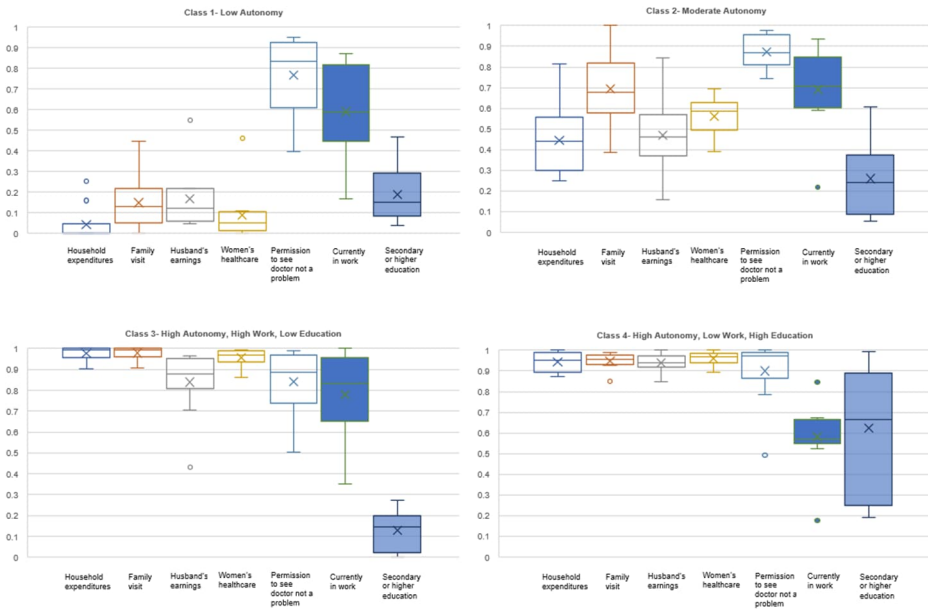
2a–2c). The bar graph (Figure 3) shows class membership proportions for each country by the three groups.

Figure 2a: Item response probabilities of LCA (Group I)



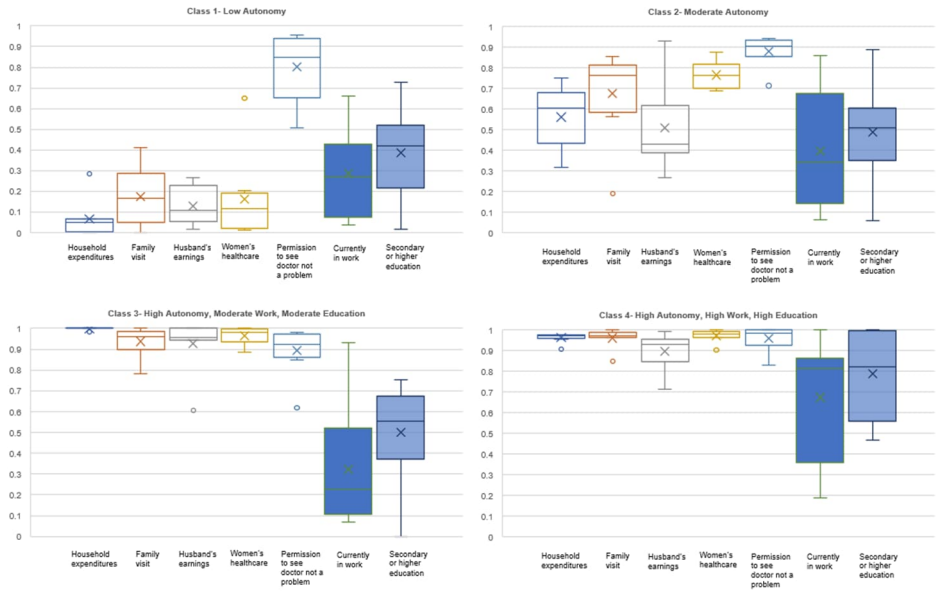
Note: Group I countries are Afghanistan, Burkina Faso, Congo DR, Cote d'Ivoire, Mali, Niger, Nigeria, Pakistan, Senegal, and Tanzania.

Figure 2b: Item response probabilities of LCA (Group II)



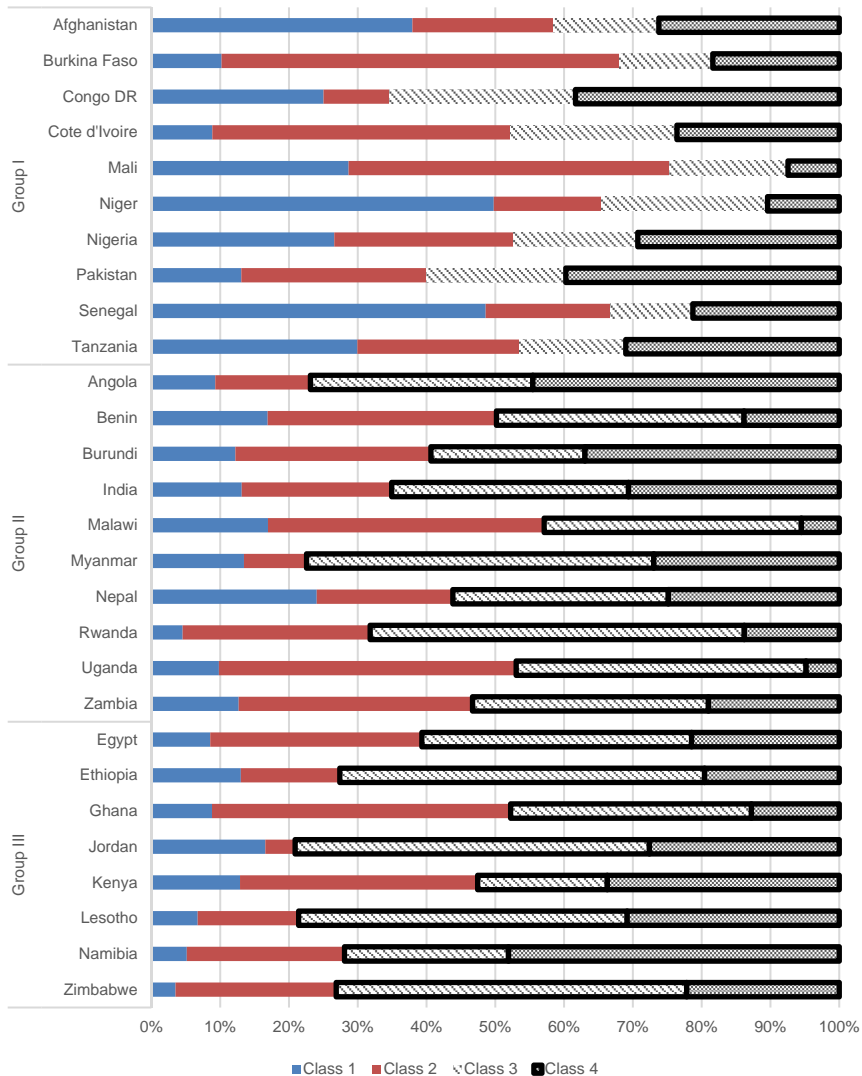
Note: Group II countries are Angola, Benin, Burundi, India, Malawi, Myanmar, Nepal, Rwanda, Uganda, and Zambia.

Figure 2c: Item response probabilities of LCA (Group III)



Note: Group III countries are Egypt, Ethiopia, Ghana, Jordan, Kenya, Lesotho, Namibia, and Zimbabwe.

Figure 3: Class membership proportions for each country by group



Note: The sections of bars outlined in bold black indicate the classes of women with high household decision-making power. For Group I, these are Class 1 (low autonomy), Class 2 (low–moderate autonomy), Class 3 (moderate autonomy), and Class 4 (high autonomy). For Groups II and III, these are Class 1 (low autonomy), Class 2 (moderate autonomy), Class 3 (high autonomy), and Class 4 (high autonomy).

Comparing the boxplots (Figures 2a–2c) shows the distinctive characteristics that the countries in each group share. The first country group that emerged (Group I) was the group that showed more classes with lower household decision-making power (see Figure 2a). These countries commonly had only one class of women with high autonomy and three classes with low or moderate autonomy. This deviates from most other countries, which consist of two classes with high autonomy, one with moderate autonomy, and one with low autonomy. Overall, the women’s work level in Group I is high regardless of the class membership. For Group I, apart from the class with the lowest household autonomy (Class 1), there is not much difference in the chance of work between Classes 2, 3, and 4 (around median 0.7). Despite similar chances of women working in Classes 2 and 4, there exist gaps in their decision-making power. This suggests that women’s work is not always positively associated with autonomy in these countries.

Yet education seems more relevant here. All the countries in Group I show definite differences in the probabilities of education, where women in Class 4 (about 25% of women) have higher chances of education than those in Class 1 (see Figure 2a). The probabilities of currently working are mixed, with Class 4 having higher chances of working than Class 1 in some countries and lower chances in other countries. There is no difference in working between Class 1 and Class 4 in yet other countries. According to Figure 3, countries of Group I, compared with Groups II and III, have higher percentages of women with lower household autonomy (Classes 1 and 2), and lower proportions of women having high autonomy. (Black bold outlines around the bars in Figure 3 highlight those with high autonomy.)

The rest of the countries are divided into Groups II and III, based on discrete patterns of item response probabilities (see Figures 2b–2c). The biggest difference between Groups II and III is how work and education indicators relate to household decision-making power indicators for those with high autonomy. Although both groups have Classes 3 and 4 as including women with high autonomy (with response probabilities nearing 1), for Group II, either high work or high education is associated with high autonomy but not both simultaneously (see Figure 2b). In other words, women with higher autonomy (Classes 3 and 4) either have high work and low education or low work and high education. On the other hand, in Group III countries, women with higher autonomy (Classes 3 and 4) are divided into women with lower chances of working and having an education and those with higher work and education, respectively (see Figure 2c). Thus work and education go hand in hand here, and Group III is the only country group with both high work and high education in absolute terms.

In Group II, women with lower autonomy (Classes 1 and 2) have overall high employment levels, while education levels are low (Figure 2b). They even have a higher chance of working compared with those with much higher decision-making power (Class

4). For Group II, Class 3 (with high autonomy) is distinctive in its high chance of working (median above 0.8) and very low probability of secondary education (median 0.15). The chances of secondary or more education for Class 3 are even lower than for those with lower autonomy, Classes 1 and 2 (see Figure 2b). On the other hand, Class 4, the other class with high autonomy, has the lowest chance of working among all classes (around 0.55), while its education is unambiguously the highest (median nearly 0.7 compared with 0.2 or less for other classes). The results for Class 4 in Group II signify that in these countries some women are discouraged from working as a way of preserving “purity” or status (Chen 1995; Field, Jayachandran, and Pande 2010). On the other hand, that women in Class 3 have high decision-making power seems to be associated with their high engagement in work, despite their having low education.

For Group III, work seems to play a smaller role for household autonomy than education, as women in Class 3 (high autonomy) have low levels of work (Figure 2c). But women’s education is generally higher compared with the last two groups. Even women in Class 1 with very low autonomy have higher education. This demonstrates that what education can help someone achieve should be contextualized. While the education level is higher in general, the work level is lower among women in Group III. Class 4 is the only class within which women have a high employment level. In terms of class membership distribution, no clear distinction is found between Groups II and III (see Figure 3).

In summary, the results of different alignments between women’s decision-making power, education, and work across the three country groups underscore the importance of national context, in which women’s empowerment can take place through different dynamics. Group I consists of countries where a larger percentage of women have low household autonomy and generally higher work involvement and where an increase in women’s education rather than work is associated with higher decision-making power. Group II consists of countries where an increase in either work or education is associated with women’s higher decision-making power but not both simultaneously. Group III is made of nations where an increase in both work and education together is associated with women’s higher decision-making power; it is the only group where there is a class of women with all the indicators scoring high. Also in Group III, education seems to be more strongly associated with high autonomy than with work.

This suggests that the association of education and employment with women’s decision-making power is not always positive. In Group I countries, with generally a much larger proportion of women with lower autonomy than the other groups, women’s work is not necessarily positively associated with their autonomy, but even a small increase in women’s education is aligned with their higher autonomy. However, Group II shows that education is not a cure-all either. For some women, high decision-making power is associated with very little education but higher employment.

Such divergence cannot be attributed solely to the economic status of the country. For example, Groups I and II are similar in their average GNIs (results not shown), but without a superior GNI, Group II countries are better off in terms of their higher proportions of women with decision-making power and higher levels of education (see Table A-2). We lean toward the argument that different patterns are derived from a possible heterogeneity in institutional settings, cultural expectations, and values attached to education and work for women across countries as well as for different groups intersectionally positioned within each country (Pesando 2019; Annan et al. 2021). Socioeconomic status, ethnicity, religion, age, urban/rural residence, mode of production/reproduction, and even family settings within each country can shape the positions of women and their lived experiences, impacting a wider level of gender equality and the socially complex process of empowerment (Jayachandran 2015; Buvinic, O'Donnell, and Bourgault 2020). Our analysis exposing how women's education and work differently align with their decision-making power within and across countries clearly demonstrates this point.

6. Discussion and conclusion

We compared the relationship between women's education, work, and household decision-making power across 28 LMICs to provide a new analytical approach to women's empowerment. By analyzing DHS data through latent class analysis, we captured different patterns of the relationships between key interrelated empowerment components and how these patterns vary for different groups of women in a single country and between countries.

This study contributes significantly to the literature on women's empowerment by providing a nuanced examination of the association between women's household decision-making power, education, and work. We found huge within-country differences in household decision-making power and how this aligns with education and work. Women within one country can be clearly separated from each other in their different levels of household autonomy, with some having consistently high autonomy while others have little say in household decisions. Many others fall in between. Identifying how categories such as class, ethnicity, and religion specifically contribute to this distribution is beyond the scope of this paper, but our results highlight the range of women who have differing levels of autonomy in combination with their varying degrees of education and work, information obscured in previous research. Our results also show that in relation to the decision-making power indicators available in DHS, women across countries are generally categorized as having overall low, moderate, or high autonomy

across various decisions rather than having a great say in one decision but no say in others.

How education and work align with autonomy is shown to be inconsistent even within the same country. In some countries, such as India (Group II), women with high decision-making power have either high work or high education but not high work and high education simultaneously. Different scenarios can be suggested in explaining this. For instance, women from higher socioeconomic backgrounds (as indicated by high educational levels) in India are discouraged from work as the social status of the family increases but also due to a lack of employment opportunities (Das and Desai 2003); in this case not working is more positively associated with higher decision-making power. In other circumstances in the same country, women without much education can achieve high decision-making power through their independent economic labor. We can speculate that this divergence occurs in countries where national educational expansion is in a transitional period and has not fully reached certain communities, such as rural areas, or where there is a shortage of jobs that educated women can take without risking their status or transgressing sociocultural norms (Chatterjee, Desai, and Vanneman 2018).

The distinctive patterns formed through the relationship between decision-making power, work, and education also demonstrate between-country differences. The countries in Group I possess substantial proportions of women with low household autonomy. In Group I countries, more than half of the women have little say in household decision-making, whereas in Groups II and III, the opposite applies, as more than half of the women within each country have very high autonomy. Women in Group I countries tend to have higher work involvement regardless of their autonomy levels, suggesting that work does not necessarily act as an enabler of decision-making power or outcomes of higher autonomy in these countries. While the average educational level is low, for women in Group I countries, education rather than work seems associated with higher decision-making power. Groups II and III similarly possess a greater percentage of women with higher decision-making power than Group I, but what distinguishes the two groups is how women's autonomy is aligned with work and education. In Group II, decision-making power is associated with either work or education but not both simultaneously, whereas in Group III, education and work are more likely to go hand in hand. In short, women's work does not translate directly into autonomy; nor does education. Our study suggests that education and work should be carefully contextualized, as their potential role or implication in women's autonomy is not identical across national contexts.

It is possible that our measure of work status is unable to fully capture the process of empowerment, as we have only a snapshot based on cross-sectional data. Researchers have argued that it is not employment per se but terms and conditions of employment that

matter most for women's empowerment (see Burroway 2017; Anderson and Eswaran 2009; and Kabeer, Mahmud, and Tasneem 2011). Paid work itself is not an ensured route to empowerment given the disproportionate burden of domestic work and bad working conditions suffered by women (Kabeer 2005). Interestingly, our analyses that included the variable of paid work did not alter the results of class patterns for most countries, demonstrating both the enabling and disabling potential of paid work for autonomy. This supports the literature in that women's work or paid work is not necessarily related to higher intrahousehold decision-making power.

Our study has important implications for the literature on women's empowerment in LMICs. It strongly suggests the need to contextualize women's education and work in relation to household decision-making power. We argue that further innovative methodological approaches are needed to fully account for women's different circumstances and the pathways that can lead to empowerment. For example, given that different social categories are in operation in each context, empirically identifying specific mechanisms would enhance our understanding of the various groups and intersectional inequalities at play. We also believe that future work on women's empowerment should focus on capturing the differences across time periods and regional locales more explicitly to better account for variations within the same country and structural factors that have influenced changes in empowerment patterns over the course of development. The use of longitudinal data and life course analyses would facilitate a more nuanced approach to women's empowerment.

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Appendix

Table A-1: Description of the seven main dichotomous variables

Country	Data year	Decision-making power within household				Work	Education	Sample N	
		Household expenditure	Family visit	Husband's earnings	Woman's health care	Permission to go to doctor not a problem	Currently in work		Secondary or higher
<i>Afghanistan</i>	2015	0.47	0.57	0.38	0.49	0.43	0.10	0.08	24,936
<i>Angola</i>	2015	0.85	0.89	0.70	0.72	0.65	0.77	0.32	1,582
<i>Benin</i>	2011	0.57	0.69	0.36	0.64	0.66	0.71	0.10	9,127
<i>Burkina Faso</i>	2010	0.20	0.50	0.06	0.24	0.78	0.80	0.06	12,634
<i>Burundi</i>	2016	0.71	0.83	0.68	0.75	0.95	0.89	0.15	7,123
<i>Congo DR</i>	2013	0.57	0.51	0.56	0.46	0.65	0.78	0.34	9,051
<i>Cote d'Ivoire</i>	2012	0.36	0.46	0.24	0.32	0.74	0.76	0.08	4,214
<i>Egypt</i>	2014	0.67	0.76	0.83	0.83	0.93	0.15	0.69	19,798
<i>Ethiopia</i>	2016	0.78	0.83	0.76	0.81	0.71	0.32	0.14	9,403
<i>Ghana</i>	2014	0.74	0.86	0.47	0.79	0.94	0.86	0.43	4,165
<i>India</i>	2015	0.76	0.77	0.74	0.77	0.84	0.23	0.52	82,595
<i>Jordan</i>	2017	0.81	0.88	0.78	0.91	0.89	0.13	0.89	13,377
<i>Kenya</i>	2014	0.71	0.73	0.57	0.77	0.92	0.65	0.31	8,139
<i>Lesotho</i>	2014	0.90	0.72	0.89	0.91	0.97	0.37	0.54	2,789
<i>Malawi</i>	2016	0.57	0.79	0.57	0.68	0.86	0.67	0.23	14,351
<i>Mali</i>	2012	0.19	0.23	0.14	0.16	0.70	0.44	0.09	8,477
<i>Myanmar</i>	2015	0.77	0.88	0.89	0.84	0.95	0.61	0.39	7,502
<i>Namibia</i>	2013	0.86	0.88	0.75	0.89	0.95	0.53	0.69	1,891
<i>Nepal</i>	2016	0.59	0.59	0.66	0.61	0.76	0.62	0.39	8,422
<i>Niger</i>	2012	0.21	0.37	0.20	0.22	0.78	0.26	0.07	9,203
<i>Nigeria</i>	2013	0.38	0.48	0.28	0.39	0.88	0.70	0.33	25,660
<i>Pakistan</i>	2017	0.44	0.49	0.46	0.50	0.76	0.13	0.36	13,160
<i>Rwanda</i>	2014	0.76	0.87	0.78	0.84	0.98	0.89	0.16	4,513
<i>Senegal</i>	2017	0.20	0.26	0.17	0.22	0.92	0.54	0.14	10,249
<i>Tanzania</i>	2015	0.44	0.60	0.59	0.73	0.90	0.77	0.21	6,062
<i>Uganda</i>	2016	0.68	0.72	0.55	0.73	0.95	0.83	0.24	5,672
<i>Zambia</i>	2013	0.66	0.76	0.68	0.74	0.97	0.58	0.34	9,049
<i>Zimbabwe</i>	2015	0.88	0.88	0.86	0.86	0.94	0.44	0.73	5,373

Notes: Dichotomous variables: for the first four indicators, 1 = woman alone or together, and 0 = husband or others; for permission to go to doctor, 1 = not a big problem, and 0 = a big problem. Values unweighted. The sample sizes of Pakistan and Namibia changed for LCA (Pakistan = 10,815; Namibia = 1,599 after sample weights).

Table A-2: Item response probabilities of LCA for individual countries (by country group)

		GROUP I									
		Afghanistan	Burkina Faso	Congo DR	Cote d'Ivoire	Mali	Niger	Nigeria	Pakistan	Senegal	Tanzania
<i>Class 1</i>	Household expenditure	0.04	0.02	0.06	0.21	0.02	0.00	0.00	0.01	0.01	0.05
	Family visit	0.17	0.00	0.00	0.00	0.13	0.21	0.04	0.06	0.08	0.23
	Husband's earnings	0.04	0.02	0.05	0.42	0.02	0.01	0.01	0.02	0.07	0.28
	Woman's health care	0.02	0.02	0.03	0.26	0.00	0.00	0.00	0.07	0.02	0.29
	Permission to go to doctor not a problem	0.36	0.26	0.58	0.54	0.36	0.70	0.65	0.00	0.90	0.80
	Currently in work	0.07	0.94	0.78	0.72	0.27	0.18	0.46	0.10	0.29	0.71
	Secondary or higher education	0.04	0.02	0.24	0.07	0.03	0.04	0.06	0.18	0.15	0.08
<i>Class 2</i>	Household expenditure	0.15	0.02	0.33	0.05	0.00	0.00	0.00	0.01	0.10	0.00
	Family visit	0.54	0.45	0.95	0.14	0.04	0.00	0.16	0.11	0.11	0.58
	Husband's earnings	0.26	0.02	0.00	0.02	0.11	0.24	0.06	0.05	0.12	0.61
	Woman's health care	0.66	0.00	0.13	0.00	0.03	0.05	0.00	0.03	0.08	0.93
	Permission to go to doctor not a problem	0.70	0.90	0.69	0.73	0.87	1.00	1.00	1.00	0.95	0.91
	Currently in work	0.22	0.71	0.73	0.69	0.48	0.33	0.67	0.09	1.00	0.79
	Secondary or higher education	0.12	0.04	0.29	0.05	0.08	0.06	0.25	0.31	0.03	0.18
<i>Class 3</i>	Household expenditure	1.00	0.21	0.61	0.43	0.56	0.41	0.46	0.35	0.08	1.00
	Family visit	0.93	0.86	0.37	0.81	0.61	0.77	0.68	0.48	1.00	0.70
	Husband's earnings	0.15	0.00	0.76	0.15	0.19	0.15	0.32	0.56	0.00	0.71
	Woman's health care	0.66	0.50	0.26	0.37	0.34	0.39	0.48	0.62	0.16	0.84
	Permission to go to doctor not a problem	0.55	0.70	0.63	0.76	0.77	0.82	0.89	0.81	0.98	0.79
	Currently in work	0.11	0.92	0.78	0.81	0.53	0.28	0.80	0.22	0.60	0.81
	Secondary or higher education	0.10	0.01	0.49	0.13	0.14	0.07	0.39	0.38	0.33	0.14
<i>Class 4</i>	Household expenditure	0.97	0.83	0.95	0.97	0.99	0.95	0.97	0.99	0.87	0.98
	Family visit	0.98	0.77	0.89	0.91	0.88	0.93	0.99	0.95	0.84	0.88
	Husband's earnings	1.00	0.28	0.91	0.75	0.69	1.00	0.65	0.93	0.67	0.90
	Woman's health care	1.00	0.89	0.95	0.98	1.00	1.00	0.99	0.97	0.95	1.00
	Permission to go to doctor not a problem	0.51	0.84	0.77	0.79	0.76	0.83	0.96	0.90	0.96	0.94
	Currently in work	0.10	0.82	0.77	0.86	0.73	0.30	0.87	0.21	0.70	0.82
	Secondary or higher education	0.13	0.15	0.39	0.16	0.11	0.06	0.56	0.41	0.22	0.23

Table A-2: (Continued)

		GROUP II									
		Angola	Benin	Burundi	India	Malawi	Myanmar	Nepal	Rwanda	Uganda	Zambia
Class 1	Household expenditure	0.25	0.00	0.00	0.00	0.01	0.00	0.16	0.01	0.00	0.00
	Family visit	0.21	0.07	0.12	0.03	0.16	0.45	0.14	0.00	0.06	0.25
	Husband's earnings	0.22	0.06	0.11	0.05	0.08	0.55	0.22	0.21	0.13	0.05
	Woman's health care	0.11	0.00	0.05	0.03	0.05	0.46	0.02	0.10	0.00	0.06
	Permission to go to doctor not a problem	0.40	0.50	0.92	0.73	0.80	0.92	0.64	0.95	0.87	0.94
	Currently in work	0.80	0.45	0.87	0.17	0.53	0.59	0.58	0.87	0.61	0.43
	Secondary or higher education	0.17	0.09	0.04	0.47	0.11	0.34	0.28	0.07	0.18	0.13
Class 2	Household expenditure	0.63	0.25	0.43	0.53	0.31	0.81	0.25	0.34	0.44	0.45
	Family visit	1.00	0.60	0.80	0.58	0.82	0.83	0.38	0.72	0.57	0.63
	Husband's earnings	0.16	0.19	0.45	0.48	0.44	0.84	0.65	0.54	0.43	0.52
	Woman's health care	0.42	0.53	0.52	0.55	0.62	0.39	0.70	0.64	0.62	0.62
	Permission to go to doctor not a problem	0.85	0.74	0.94	0.82	0.83	0.88	0.76	0.97	0.95	0.97
	Currently in work	0.78	0.72	0.88	0.22	0.69	0.66	0.59	0.93	0.84	0.61
	Secondary or higher education	0.32	0.09	0.08	0.53	0.18	0.24	0.60	0.05	0.24	0.26
Class 3	Household expenditure	1.00	1.00	0.97	0.99	1.00	0.87	0.90	0.98	1.00	0.99
	Family visit	1.00	0.98	1.00	0.99	0.99	0.96	0.91	0.99	1.00	0.96
	Husband's earnings	0.93	0.43	0.85	0.93	0.85	0.96	0.87	0.90	0.70	0.95
	Woman's health care	0.94	0.93	0.99	0.98	0.96	0.95	0.86	0.97	0.97	0.99
	Permission to go to doctor not a problem	0.50	0.72	0.93	0.89	0.86	1.00	0.75	0.99	0.97	0.97
	Currently in work	0.95	0.88	1.00	0.18	0.72	0.57	0.68	0.98	0.89	0.57
	Secondary or higher education	0.00	0.14	0.03	0.86	0.19	0.55	0.00	0.16	0.27	0.16
Class 4	Household expenditure	0.97	0.98	1.00	0.99	0.89	0.92	0.92	0.89	1.00	0.93
	Family visit	0.96	0.96	0.99	0.96	0.96	1.00	0.93	0.97	0.85	0.93
	Husband's earnings	0.85	1.00	0.94	0.95	0.96	0.96	0.87	0.94	1.00	0.94
	Woman's health care	0.90	1.00	0.98	0.98	0.96	0.99	0.90	0.98	1.00	0.95
	Permission to go to doctor not a problem	0.79	0.49	0.98	0.80	0.97	0.92	0.92	0.99	0.99	0.98
	Currently in work	0.66	0.56	0.84	0.35	0.66	0.78	0.56	0.44	0.67	0.52
	Secondary or higher education	0.72	0.19	0.23	0.23	1.00	0.11	0.86	0.26	0.61	0.98

Table A-2: (Continued)

		GROUP III							
		Egypt	Ethiopia	Ghana	Jordan	Kenya	Lesotho	Namibia	Zimbabwe
<i>Class 1</i>	Household expenditure	0.01	0.06	0.05	0.00	0.07	0.28	0.00	0.06
	Family visit	0.09	0.19	0.32	0.03	0.20	0.41	0.14	0.00
	Husband's earnings	0.06	0.12	0.09	0.02	0.14	0.26	0.05	0.26
	Woman's health care	0.02	0.01	0.08	0.20	0.15	0.65	0.04	0.15
	Permission to go to doctor not a problem	0.79	0.51	0.96	0.61	0.89	0.95	0.92	0.80
	Currently in work	0.05	0.19	0.66	0.04	0.43	0.17	0.43	0.35
	Secondary or higher education	0.45	0.02	0.31	0.73	0.19	0.39	0.54	0.47
<i>Class 2</i>	Household expenditure	0.32	0.42	0.62	0.46	0.60	0.75	0.70	0.62
	Family visit	0.56	0.77	0.86	0.77	0.65	0.19	0.83	0.76
	Husband's earnings	0.60	0.43	0.27	0.40	0.39	0.93	0.43	0.63
	Woman's health care	0.77	0.76	0.69	0.83	0.78	0.69	0.88	0.73
	Permission to go to doctor not a problem	0.92	0.71	0.94	0.85	0.91	0.94	0.90	0.87
	Currently in work	0.10	0.27	0.86	0.06	0.75	0.29	0.44	0.39
	Secondary or higher education	0.61	0.06	0.50	0.89	0.34	0.39	0.59	0.52
<i>Class 3</i>	Household expenditure	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00
	Family visit	0.96	0.96	1.00	0.99	0.78	0.88	0.96	0.96
	Husband's earnings	0.96	0.96	0.61	0.96	1.00	0.94	1.00	1.00
	Woman's health care	0.99	0.97	1.00	1.00	0.88	0.97	0.99	0.92
	Permission to go to doctor not a problem	0.93	0.62	0.97	0.85	0.92	0.98	0.91	0.96
	Currently in work	0.13	0.24	0.93	0.07	0.59	0.10	0.21	0.31
	Secondary or higher education	0.59	0.00	0.52	0.75	0.32	0.55	0.56	0.70
<i>Class 4</i>	Household expenditure	0.91	0.98	0.97	0.98	0.96	0.98	0.98	0.97
	Family visit	0.96	0.98	0.97	0.99	1.00	0.85	0.97	0.98
	Husband's earnings	0.95	0.96	1.00	0.95	0.71	0.92	0.85	0.85
	Woman's health care	0.98	0.96	1.00	0.99	0.98	0.97	0.99	0.91
	Permission to go to doctor not a problem	1.00	0.83	0.92	0.98	1.00	0.96	0.99	1.00
	Currently in work	0.29	0.57	0.85	0.19	0.82	1.00	0.87	0.81
	Secondary or higher education	0.99	0.47	0.71	1.00	0.51	0.71	1.00	0.94