Expenditure Incidence Analysis: A Gender-Responsive Budgeting Tool for Educational Expenditure in Timor-Leste?

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ABSTRACT

Gender-disaggregated expenditure incidence analysis (EIA) is a tool for assessing the gender responsiveness of budgets and policies. However, to date there has been a limited take-up of gender-disaggregated EIA in policy and budget decision making. Using data from the 2007 Timor-Leste Living Standards Survey (TLLSS) and interviews and discussions with stakeholders, this paper conducts an EIA of expenditures on public schools and discusses the effectiveness of this analysis as an input into budget decision making. While gender-disaggregated EIA can assist in identifying gender gaps, its potential can only be fulfilled when combined with additional gender analysis and supported by a deep understanding of budget decision-making processes and the actors involved. The gender-disaggregated EIA of Timor-Leste’s educational spending confirmed its usefulness as an indicator of inequalities in educational expenditure. However, a range of political, cultural, and technical barriers constrains the use of gender-disaggregated EIA in policy and budget decision making.

KEYWORDS

Expenditure incidence analysis, gender-responsive budgeting, Timor-Leste, gender

JEL codes: H19, H89, I28

INTRODUCTION

Expenditure incidence analysis (EIA) assesses the distribution of expenditure on public services across different social groups. Initially coined “benefit incidence analysis,” the technique has its historical roots in the early 1970s in the World Bank, when optimism about the capacity of governments to intervene to eradicate poverty in developing countries created an impetus to measure who gains and who loses from public expenditure and tax policies (Thomas Selden and Michael Wasylenko 1992).
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Typically, EIA combines information on the cost of providing public services with evidence on who uses those services. The analysis can take many forms, from a simple comparison of the proportion of users of a funded service from different social groups to complex econometric analysis of demand functions for these services. Commonly a three-step methodology is applied, starting with the estimation of the amount spent per user on a particular public service, using data on recurrent public spending, including any revenue returns. The second step involves allocating the amount spent to households or individuals that are identified as users of the service. Data on users are typically obtained through a household survey. The third step involves aggregating individuals or households into subgroups to allow for comparison of how the public expenditure is distributed. The most common variable used for these groupings is income; other classifiers may include ethnicity, age, geographic location, and gender.

Since its inception the technique has been subject to significant technical refinements, including improvements to measurements of expenditures within households and disaggregation of public expenditure. There has also been an increasing focus on marginal expenditure incidence, reflecting a desire to monitor the impact of additional or new public expenditures (Selden and Wasylenko 1992; Stephen Younger 2003; Peter Glick, Rumki Saha, and Stephen Younger 2004). Importantly, over time there has also been some questioning of the terminology used, away from benefit incidence to expenditure incidence, reflecting the fact that the distribution of public expenditure does not equate to the distribution of the benefits that households and individuals receive (Lionel Demery 2002). Expenditure is only equal to benefit under very restrictive neoclassical welfare economics assumptions, which conceptualize the expenditure as the “price” or “cost” of the benefit and assume perfect equilibrium in which the benefit and “price” or “cost” are equalized. As a result, we adopt the concept of “expenditure incidence analysis” to indicate the components of spending that have the greatest impact on current income and consumption levels instead of the more restrictive “benefit incidence analysis,” and the term “spend per student” instead of “unit cost.”

Beginning in the 1990s with significant work by Lionel Demery, the potential for EIA to incorporate a gender perspective has been demonstrated. Demery (2002) conducted a gender-sensitive EIA of health spending in Ghana in 1992 and a similar analysis of education expenditure in Côte D’Ivoire in 1995. However, it is reasonable to assert that the importance of including gender as a social category has been neglected in most EIA studies that have been conducted to date. As Demery notes, the majority of EIA studies have overlooked gender “either as a cause of concern in itself, or as a means of interpreting the findings” (2002: 39). A survey of the gender-disaggregated EIA literature undertaken by Glick, Saha, and Younger (2004: 39–64) found a mere five systematic studies of gender differences in access
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to public services across income distributions, largely focused on developing
countries.\(^1\)

Diane Elson (1998) increased the focus on the importance of gender-
sensitive EIAs when she identified it as a technique for gender-responsive
budgeting (GRB). GRB is a device for gender mainstreaming and promoting
the goal of gender equality by paying attention to revenue raising and
spending of government finances (Rhonda Sharp 2001). It involves analyses
of the gender-differentiated impacts of government budgets and changes
in budgetary decision-making processes and priorities (Diane Elson and
Rhonda Sharp 2010). Gender-disaggregated EIA is thus a logical tool for
GRB, along with other analyses such as gender-aware policy appraisal,
gender-aware budget statements, and policy costings (Elson 1998; United
Nations Population Fund [UNFPA] and United Nations Development
Fund for Women [UNIFEM] 2006). However, the small number of
gender-disaggregated EIAs completed to date has also meant that,
thus far, it has played a limited role in the expanding body of GRB
initiatives.\(^2\)

There has been a limited number of gender-disaggregated EIA studies
sponsored by GRB initiatives: in India (Ashok Lahiri, Lekha Chakraborty,
P. Bhattacharyya, Anuradha Bhasin, and Hiranya Mukhopadhyay 2002),
Pakistan (Muhammad Sabir 2002; see also the website: Government of
Pakistan Finance Division and United Nations Development Programme
[UNDP; n.d.]), Bangladesh (Barbara Evers and Kaniz Siddique 2006), and
Switzerland (Andrea Pfeifer and Peter Schwendener 2008). The Indian
initiative produced a three-page example of a gender-disaggregated EIA
for elementary education as part of a larger document, Gender Budgeting
in India. This brief Indian study was incorporated in the post-budget
analysis of how government budgets address the needs of women with the
intention to assist the parliament in its role in scrutinizing the budget
(Lahiri et al. 2002). Sabir’s (2002) EIA study of Pakistan’s education
discussed the policy implications of the gender biases in all levels of public
education expenditure in the country. As part of a gender-responsive
budget initiative, the Pakistan government in collaboration with UNDP
undertook EIA studies of the health and education sectors and then
held focus group discussions and workshops for different stakeholder
groups to disseminate the research findings (Nadeem Mahbub and Debbie
Budlender 2007; Rhonda Sharp, Diane Elson and Monica Costa 2010;
also see Government of Pakistan Finance Division and UNDP [n.d.]). The
Bangladesh study was the most ambitious of the three developing country
GRB exercises, with its gender-disaggregated EIA perceived as a first, and
necessary, step “in incorporating gender issues in the formulation of the
national budget of Bangladesh” (Evers and Siddique 2006: 2). The findings
of this study were presented to the Ministry of Finance in 2005 and led the
government to avow its commitment to incorporating poverty concerns and
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a gender perspective into the budget (Rhonda Sharp, Diane Elson, Monica Costa, Sanjuga Vas Dev, and Anuradha Mundkur 2009).

Importantly, the Bangladesh study focused on understanding the “real” incidence of public expenditure among men and women located in the same household (rather than simply assuming equal shares). This helped address an important shortcoming of approaches to EIAs that rely only on average costs or subsidies: the neglect of differences within households and the tendency to impute to individuals items of spending that might not be relevant (Demery 2002). Evers and Siddique used a survey of 3,445 households to trace which household members accessed government expenditure in rural and urban areas. This survey was complemented by a range of focus group discussions and interviews with service providers. Armed with the information thus collected, the authors provided a baseline study of gender issues implicit in public expenditures for twenty-one government bodies, including the education, health, agriculture, and public administration sectors, for the period between 1999 and 2003 (Evers and Siddique 2006).

Gender-disaggregated EIA has had a limited take-up in GRB work in developed economies. One exception is the work of Andrea Pfeifer and Peter Schwendener, which integrated a broader report on Gender-Responsive Budget Analysis in the Canton of Basel-Stadt. This study examines the way in which the income and expenditure of the Canton of Basel-Stadt in Switzerland is distributed among men and women across nationality and age. The authors refined the methodology, including a detailed analysis of elements of the expenditure (Pfeifer and Schwendener 2008).

While these initiatives suggest a positive role for EIA in GRB, some limitations of EIA have been highlighted in the extant literature. First, although EIA may give some measure of gaps in the distribution of public expenditure, it says little about the underlying determinants of government spending allocations or the patterns of household behavior that may contribute to the observed gaps. As a result, it provides little input to identify solutions to the problems it measures (Demery 2002). A better approach to achieving increased economic and social equality may be to assemble information on the distributional consequences of very specific expenditures that can be promoted or discouraged (Glick, Saha, and Younger 2004). Marginal expenditure incidence analysis can play a role here. Demand analyses that explore how the use of government-funded services is affected by factors such as service quality, location, family income, and gender (such as provision of separate toilets in schools) can also improve the usefulness of EIA analysis (Glick, Saha, and Younger 2004). We pursue this approach in our own EIA.

Second, and of particular importance to the discussion in the remainder of this paper, is the issue of evidence of engagement between gender-disaggregated EIA studies and policy. To date, explanations have yet to be
forthcoming of how and under what conditions EIA studies can effectively contribute to a political strategy for positive budget and policy change. Producing a gender-disaggregated EIA is not enough to bring about gender-responsive policy and budget changes, as policy and budget decision-making processes are structured by a “continuous interplay of discourse, political interests and the agency of multiple actors” (James Keeley and Ian Scoones 1999: 33). This suggests that greater efforts need to be directed to understanding the links between research and policy, which will, in turn, require attending to the political context and the institutional structures; the credibility of the sources of information and the strategies adopted to communicate findings; and, finally, the identity of key players, their roles, and the links between them (Emma Crewe and John Young 2002).

A related literature suggests that institutions with a mandate to focus on gender equality will have an impact on the ability of a gender-disaggregated EIA to contribute to positive policy change, whether in parliament, government, civil society, or international agencies. As Anne-Marie Goetz (1994) notes, these institutions can play a critical role in shifting emphasis from generalized development information about women’s needs to evidence that defines inequality and gaps between men and women, in other words, “feminist knowledge.” Their potential role in bringing gender data and analysis to the realm of policymaking has been illustrated in the Australian context where women’s machinery in government provided significant impetus for the women’s budgets of the national government and published budget documents that used a variety of printed and agency gender-disaggregated data. Through these initiatives, awareness was raised about the importance of gender-disaggregated data in policy and budgetary analysis (Rhonda Sharp and Diane Elson 2008).

However, the role of institutions in shaping the link between research and policymaking is a complex interaction between past and new institutional norms and practices. Fiona Mackay’s (2009) research into institutional reform in the Scottish parliament indicated that any effort to lock gender equality norms into “new” institutions will be constrained by old gender norms and the existing ways of engaging in the political realm. Thus, understanding these residual norms and the characteristics of the political environment and its key actors is an essential component of ensuring the success of feminist research and policy.

In the remainder of this paper, we pursue these themes with the aim of uncovering the challenges involved in using gender-disaggregated EIA to influence policies and budgets in a gender-sensitive way. We ask: How can the potential of gender-disaggregated EIA, as a tool for GRB, be realized? While others have demonstrated that gender can be a category in EIA, we examine the institutional barriers to using it as a political strategy for positive change. We do this by first reporting the results of a gender-disaggregated EIA that was applied to the education sector in the newest Asia-Pacific
country of Timor-Leste. We then describe our experiences of a sustained engagement with decision makers in Timor-Leste and gender specialists on their reaction to the findings of the EIA that we conducted. We conclude that the potential of EIA as a tool for GRB can be realized only when it is part of a package of techniques that offer options for policymakers. As a political enterprise, achieving an effective gender-disaggregated EIA demands a deep understanding of the actors and the complex processes that underpin budget and policy decision making.

GENDER-DISAGGREGATED PUBLIC EXPENDITURE ANALYSIS IN THE EDUCATION SECTOR IN TIMOR-LESTE

Timor-Leste is the newest country in the Asia-Pacific region. It gained independence in 2002, following centuries of Portuguese colonization, twenty-four years of Indonesian occupation, and close to two years of United Nations administration. Since then the Timorese have had to face significant political instability and social and humanitarian crisis, including the 2008 attempted assassination of president and Nobel Prize winner, José Ramos Horta. Despite these difficulties, a raft of gender-focused institutions and norms have emerged in Timor-Leste over the past decade, including women’s policy machinery in government and parliamentary institutions with a gender mandate. With a political mandate to coordinate and oversee gender equality and women’s empowerment policy, the women’s policy machinery – the Secretaria Estado da Promoção da Igualdade (Secretary of State for Promotion of Equality; SEPI) – has led the establishment of a gender mainstreaming structure across ministries, including a gender unit within the Department of Policy, Planning and Development in the Ministry of Education and Culture. As a result of these efforts, gender equality has been interwoven into the *Basic Law of the Education System* as a guiding principle (Monica Costa, Rhonda Sharp, and Diane Elson 2009).

Understandably, GRB work is a recent enterprise in Timor-Leste. However, it has already both evoked robust political engagement and featured an array of technical expertise. The institutional framework of GRB in Timor-Leste can be traced to a 2008 gender statement introduced in the budget papers and furthered in an agreement between representatives of government, parliament, and the women’s movement signed on the occasion of celebrations for International Women’s Day 2008. By July 2009, the national parliament provided further impetus to GRB by approving a resolution that frames GRB, allocating roles to all critical actors engaged in this enterprise including the parliament, the Ministry of Finance, line ministries and women’s machinery in government, nongovernmental organizations (NGOs), and the international community (Costa, Sharp, and Austen 2009).
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To date, the women’s movement, gender-based institutions in parliament and in government, and international agencies with a strong gender commitment have all engaged in making the government accountable for its gender equality commitments (Costa, Sharp, and Austen 2009). Recently significant political pressure from feminist activists, both inside and outside government, resulted in an increase in the 2011 budget allocation for the implementation of the law against domestic violence (Idelta Rodrigues 2011). The media has also at times reported GRB work, exposing it to a broader audience (Costa, Sharp, and Elson 2009).

In this context, we began a research project to support positive policy and budgeting changes in Timor-Leste. The project involved, initially, a gender-disaggregated EIA focused on the education sector to address the patent lack of gender analysis to guide GRB efforts in the country. Another reason that we developed the gender-disaggregated EIA was to explore the conditions under which gender analyses of this type could be employed for policy and budget decision making. Thus, we followed our gender-disaggregated EIA with a process of engagement with relevant actors in the Timor-Leste budgetary processes around education to examine its potential to bring about gender-sensitive changes in budgets and policies.

The choice of the education sector for our gender-disaggregated EIA was based, first, on principles of social justice and adherence to human rights, recognizing the positive impact of education on girls’ life opportunities and choices (Fiona Leach 2003). A 2009 analysis of the impact of education gender gaps on growth confirmed that gender inequality in education in the Middle East, North Africa, and South Asia continues to hamper growth, albeit by decreasing amounts (Stephan Klasen and Francesca Lamanna 2009). Giving priority to education services has also gained consensus among the Timorese (Costa, Sharp, and Austen 2009). In particular, the link between women’s limited economic empowerment and their poor access to, and performance in, formal education has been widely accepted by critical actors, including the Timor-Leste government (Timor-Leste SEPI 2007). These concerns have permeated through to the education policy, which has adopted gender equality as a broad principle, including in the Basic Law of the Education System, and which has been reaffirmed in the 2011–30 National Education Strategic Plan. The Ministry of Education and Culture (MoEC)’s Education Statistical Yearbook 2008/2009 (Timor-Leste MoEC 2011) provides a range of gender parity indicators, corroborating that girls remain underrepresented in the education system, with an overall nine girls for every ten boys enrolled. The proportion of girls completing the nine years of basic education, at 24 percent, is also lower than the 31 percent achieved by boys (Costa, Sharp, and Austen 2009; Timor-Leste MoEC 2011). Further discrimination against women persists in policies and practices, including
the restrictions on school attendance by pregnant or married girls (Afonso Soares and Muriel Lauvigne 2009).

**Gender-disaggregated EIA: The education sector in Timor-Leste**

Our gender-disaggregated EIA of the education sector in Timor-Leste first used data from the 2007 Timor-Leste Living Standards Survey (TLLSS) to compare the school attendance rates of boys and girls in a range of sociodemographic groups. The TLLSS collects information on household and individual characteristics on themes such as demographics, housing conditions, access to facilities (including transport, postal, and veterinary services), durable goods for household consumption (for example, household appliances and vehicles), educational outcomes and access to services, health status and performance of the health system, employment conditions and the labor market, social capital (including reach of existing groups and networks), and self-reported perceptions of own welfare (including adequacy of household income, satisfaction of basic needs, food security, and a comparison with the household’s living conditions in 2001). Launched on March 27, 2006, the 2007 TLLSS achieved a cross-sectional sample of 4,500 households, 2 percent of the total households, over a period of significant political and humanitarian crisis. It had started in 2001 with a modest 1,800 households, 1 percent of the population. Half of the 2001 sample was randomly selected and re-interviewed in 2007 to assess changes in living conditions. The government of Timor-Leste implemented this survey with multi-donor financial support managed by the World Bank.3

Following the approach pioneered by Demery (2002), we matched data from the TLLSS on the school attendance of boys and girls with data on actual levels of current education expenditure from the *Annual Financial Report and Accounts Fiscal Year 2006/7* (Timor-Leste Ministry of Finance, National Directorate of Treasury 2007). This includes minor capital expenditure (such as school maintenance) but not capital expenditure on new schools, as this did not provide benefits for those attending school in 2006–7. We identify the share of educational actual expenditure (“the spend”) for the same year (2006–7) on groups of boys and girls, for each level of education and location (rural/urban).4 Thus, the dollar expenditure for each social group was measured as their share of total school attendance at the specified level of schooling, multiplied by the total budget allocation for the relevant level of schooling.

EIA is grounded on the broad assumption that per capita spending is the same for each user at a given level of public spending. This assumption fits the case of Timor-Leste, given that the budget papers indicate that the government pays all public school teachers centrally and provides only small grants to individual schools, which was a constant per capita sum for each
given level of schooling. Also, there were no gender specific budget items (funding for items that only boys or girls use) that would require adjusting the per capita spend. It is possible that the spend on teachers’ pay per pupil differs between rural and urban areas, if the latter enjoy a higher teacher–pupil ratio and/or more highly qualified teachers who are paid more. Similarly, it is possible that boys-only schools may have higher quality teachers compared to girls-only schools. However, we were unable to adjust for this as no data on these factors were available to us. Differences in per capita spend as a result of these factors could understate the rural–urban and gender gaps.

This initial stage in the gender-disaggregated EIA produced some “headline” indicators of gender inequality in public spending on education. As shown in Figure 1, expenditure shares in 2006–7 favored boys by approximately 52.5 to 47.5 percent across all levels of schooling (primary, pre-secondary, and secondary), indicating that total education expenditure on boys was about US$ 0.8 million higher than that on girls.

The initial gender-disaggregated EIA also uncovered disparities in the education expenditures affecting rural girls and boys. As the data in Figure 2 reveal, relatively low school attendance rates in rural areas causes rural girls’ and boys’ share of public expenditure – 25.8 and 27.2 percent, respectively – to fall below their share in the population of primary school-age children in Timor-Leste.

The initial EIA revealed more substantial gender differences at the pre-secondary school level. Highlighting a problem of low school attendance by pre-secondary-aged girls in rural areas, the data in Figure 3 show that rural girls’ share of education expenditure, at 20.4 percent, is lower, by more than six percentage points, than their share of the relevant population (26.8 percent).

The disadvantage of rural girls is more pronounced at secondary level. This is well displayed in Figure 4, which shows that, while both boys and girls in rural areas get a relatively small share of total expenditures on secondary schooling, the expenditure share of rural girls is particularly small – at only 12 percent, compared to 16.7 percent for rural boys. These expenditure
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**Figure 2** Shares of school expenditure and total population of boys and girls, by location (primary school; children ages 6–11 years)

**Figure 3** Shares of school expenditure and total population of boys and girls, by location (pre-secondary school; children ages 12–14 years)

**Figure 4** Shares of school expenditure and total population of boys and girls, by location (secondary school; children ages 15–17 years)
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shares fall well short of the groups’ population share at 25.3 percent for boys and 22.2 percent for girls.

In sum, while the initial gender-disaggregated EIA was quite simple, it helped identify some important differences in shares of educational expenditure going to urban and rural girls and boys. While based on attendance data, it used these data in a new way to highlight the fact that the benefits of government spending on education were not equally distributed, with rural girls in particular poorly served by spending on pre-secondary and secondary schooling. The measures generated by the analysis had the potential to become “headline” indicators of the gender gaps in education spending and contribute to GRB by providing a preliminary evidence base for arguments that challenge a discourse of gender “neutrality” in education budgets. The analysis also illustrated the critical potential of the TLLSS data for the GRB enterprise in Timor-Leste.

As a second step in the gender-disaggregated EIA of the Timor-Leste education budget, we attempted to furnish additional data on the determinants of school attendance with a focus on girls as their attendance was relatively low. As noted previously, a deficiency of basic EIAs is that they provide limited guidance on policies that might address identified inequalities. In the current case these relate to inequalities in school attendance by girls and boys of different ages and in different regions of Timor-Leste.

The second stage in our analysis involved the application of 2007 TLLSS data to a probit regression model that related the likelihood of a girl’s attendance at school to a range of her household and personal circumstances. Previous studies of the attendance of girls at school in developing country contexts have highlighted the importance of parental education (Pirmin Fessler and Alyssa Schneebaum 2012); of the role of cost and distance; and of the impact of competing demands on girls’ time due to responsibilities created by the presence of a younger sibling or ill family member (for an overview, see Glick, Saha, and Younger [2004]: 51–8). We included measures of each of these factors in our model, together with measures of household location (which is shown by the stage 1 results to be important to attendance) and the household’s level of food consumption relative to relevant poverty line measures. The models of the likelihood of school attendance were estimated separately for girls within each of the three school age groups described above, to take account of the likelihood that the factors affecting the chance of attendance are different for younger and older girls. The sample used in the analysis was weighted by the sample weights provided in the TLLSS. The models were estimated using Stata. The details of the results of stage 2 of the EIA of Timor-Leste’s education budget are summarized in Table 1. Key items in the table are the marginal effects of the independent variables (shown in column 2). This data show how the chance of school attendance in the survey period varies between girls...
### Table 1 Probability of attending school, Timor-Leste school-age girls (2007)

<table>
<thead>
<tr>
<th></th>
<th>Marginal effect</th>
<th>Std. error</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary age girls (ages 6–11 years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girl's age</td>
<td>0.173***</td>
<td>0.01</td>
</tr>
<tr>
<td>Lives in an urban location</td>
<td>0.126***</td>
<td>0.033</td>
</tr>
<tr>
<td>Household food consumption is above the food poverty line</td>
<td>0.01</td>
<td>0.038</td>
</tr>
<tr>
<td>Number of adults in household who attended school</td>
<td>0.069***</td>
<td>0.013</td>
</tr>
<tr>
<td>Number of infants in household</td>
<td>0.023</td>
<td>0.03</td>
</tr>
<tr>
<td>Number of adults in household with poor health</td>
<td>-0.046**</td>
<td>0.02</td>
</tr>
<tr>
<td>Girl's own health is poor</td>
<td>0.064*</td>
<td>0.039</td>
</tr>
<tr>
<td>Only Tetum is spoken in household</td>
<td>0.197***</td>
<td>0.051</td>
</tr>
<tr>
<td><strong>Pre-secondary age girls (ages 12–14 years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girl's age</td>
<td>-0.031*</td>
<td>0.017</td>
</tr>
<tr>
<td>Lives in an urban location</td>
<td>0.043</td>
<td>0.027</td>
</tr>
<tr>
<td>Household food consumption is above the food poverty line</td>
<td>0.137***</td>
<td>0.037</td>
</tr>
<tr>
<td>Number of adults in household who attended school</td>
<td>0.055***</td>
<td>0.012</td>
</tr>
<tr>
<td>Number of infants in household</td>
<td>0.009</td>
<td>0.029</td>
</tr>
<tr>
<td>Number of adults in household with poor health</td>
<td>0.034*</td>
<td>0.018</td>
</tr>
<tr>
<td>Girl's own health is poor</td>
<td>-0.031</td>
<td>0.049</td>
</tr>
<tr>
<td>Only Tetum is spoken in household</td>
<td>0.042</td>
<td>0.045</td>
</tr>
<tr>
<td><strong>Secondary age girls (ages 15–17 years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girl's age</td>
<td>-0.102***</td>
<td>0.023</td>
</tr>
<tr>
<td>Lives in an urban location</td>
<td>0.089**</td>
<td>0.039</td>
</tr>
<tr>
<td>Household food consumption is above the food poverty line</td>
<td>0.008</td>
<td>0.046</td>
</tr>
<tr>
<td>Number of adults in household who attended school</td>
<td>0.071***</td>
<td>0.016</td>
</tr>
<tr>
<td>Number of infants in household</td>
<td>0.032</td>
<td>0.042</td>
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<tr>
<td>Only Tetum is spoken in household</td>
<td>0.017</td>
<td>0.06</td>
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</tbody>
</table>

Notes: Primary, 2,054; pre-secondary, 893; secondary, 816; all, 3,763. Log likelihood: primary, 1079.9; pre-secondary, 360.4; secondary, 426.1; all, 2,122.9. Attendance rates: primary, 55.2%; pre-secondary, 83.5%; secondary, 73.2%; all, 65.7%.

***, **, and * denote statistical significance at the 1, 5, and 10 percent levels, respectively.

Depending on their individual and household characteristics. For example, in Table 1 the marginal effect of age is 0.173 in the group of primary school-age girls. This indicates that, when the other factors in the model are at average levels, the probability of school attendance increases by 17.3 percentage points with each additional year of age.

The data in Table 1 reveal that the educational background of adults in the household was a key determinant of a girl’s chances of attending school in 2007. Among primary school girls, the chance of attending school increased
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by 6.9 percentage points with each additional adult in the household with some school experience. Among pre-secondary age girls, this effect was 5.5 percentage points. Among secondary school-age girls it was 7.1 percentage points. This result is in accordance with international research showing that the mother’s education levels, in particular, have a positive impact on their children’s education (M. Anne Hill and Elizabeth M. King 1995). Given that illiteracy remains a significant problem for adult women in Timor-Leste – with 54 percent of all adult women, and 61.1 percent of women in rural communities, unable to read or write – the results suggest that a possible policy initiative for education budgets in Timor-Leste is the promotion of adult education and/or increased support for children who live in households where adults are illiterate.

The data in Table 1 also reveal a positive correlation between school attendance and the use of Tetum, Timor-Leste’s national language. In 2007, the chance of girls attending primary school was 19.7 percentage points higher among girls living in households where Tetum is spoken than among girls with other language backgrounds. These results indicate that girls from other language backgrounds are at particular risk of poor school attendance – suggesting that they should be the focus of dedicated educational programs.

The results of the second-stage analysis highlight the problems of school attendance by older girls. We estimate that among secondary school-age girls, each additional year of age causes the probability of attendance to fall by 10.2 percentage points. This could reflect a number of factors, including the influence of some community leaders and education administrators at the district level who apparently prevent pregnant young women and victims of sexual abuse from returning to school (Timor-Leste National Commission for Research and Development [NCRD] 2008). The Plan of Actions East Timor Women 2008–2012 has already argued that these young women need to be encouraged to return to school (Rede Feto, OPMT, OMT, PAS, Aloha Foundation, APSC-TL, CAUCUS, FKSH, FMF, and Sta. Bakhita 2008). However, while there have been significant efforts to engage children in education through, for example, a school meals program, thus far there have not been specific initiatives to address the pressures that these girls face.

Other data in Table 1 confirm the findings of the stage 1 inquiry. For example, urban location is shown to significantly enhance the chances of school attendance, indicating the need for policy action on barriers that may face rural girls in particular – such as distance from school (with the construction of boarding facilities) and poor quality and safety of school facilities (including classrooms, toilets, and clean water supply; Rede Feto, OPMT, OMT, PAS et al. 2008).

Finally, the data in Table 1 show a key link between the attendance of girls in pre-secondary schooling and poverty. The chances of school attendance of
a girl living in a household whose consumption level was below the poverty line was shown to be 13.7 percentage points lower than her counterpart living in a household with a consumption level above the poverty line. Among primary and secondary school-age girls, however, this difference was of small magnitude and not statistically significant in 2007. While these data convey mixed messages on the role of poverty in determining overall school attendance, efforts that address the issues of poverty and food scarcity through the provision of assistance for school uniforms and other educational costs are likely to be positive for girls’ education chances. Cultural stereotypes (of men as the breadwinner and the most able to improve the economic outcomes of the family) are further possible targets of policy action (Timor-Leste NCRD 2008).

THE POTENTIAL OF GENDER-SENSITIVE PUBLIC EXPENDITURE ANALYSIS FOR GRB

To examine the potential of a gender-disaggregated EIA for GRB, we used the results of the stage 1 and 2 investigations in an important additional way: as the basis for an analysis of barriers to the incorporation of gender-disaggregated EIA into the budgetary process. To achieve this, we drew on evidence from twenty-nine semi-structured interviews (nine men and twenty women) and a focus group discussion with a variety of stakeholders in the education budgetary process, including key actors in MoEC, women’s machinery in government, parliament, and civil society. Through these interviews and the focus group, which were conducted in Dili in 2008 and 2009, we explored perceptions of the credibility of the data and analysis used in our EIA, the budgetary and policy decision-making environment relevant to achieving improved gender equity in education, and the role performed by key players. Our ultimate aim was to understand the circumstances in which a gender-disaggregated EIA could bring about policy and budgeting decisions and processes that were more gender-sensitive.

There were reasons to expect that a gender-disaggregated EIA would be well received by the stakeholders in the education policy and budgetary process. The MoEC focus group participants indicated that decision makers in the MoEC and other departments had a record of actively encouraging research with the potential to guide the government’s resources, achieve its policy commitments, and help close the gap between planning and accountability. A male senior official in the MoEC expressed a desire to continue with this work. He acknowledged that the lack of quality data impacts on the delivery of education services to families and communities, observing that it is “one of our limitations, knowledge … [we need to] improve our quality of services by having accurate data.”
A female member of parliament (MP) who participated in our interviews expressed a similar sentiment when she observed that the current budget format fails to deliver information to make the executives accountable for their gender equality commitments:

Sometimes [female MPs] are a bit frustrated that we don’t have the data to be able to do it. The documents that we receive at the moment are all descriptive … there’s no way of knowing that the money actually did go towards that and it produced these sorts of results.

However, despite the fact that many participants saw a need for gender-disaggregated data to guide and monitor budget processes, their reaction to our gender-disaggregated EIA was not enthusiastic. Their poor perception of the credibility of the data we used in our analysis was an important issue. Our study made use of the data collected on school attendance in the TLLSS. However, key actors in the MoEC expressed a clear preference for using their own administrative data (the Education Management Information System [EMIS] data) to inform budget decisions. A male senior decision maker in the MoEC put it simply: “the data [that we use] so far … is just EMIS.” This preference is understandable, as the MoEC has control over EMIS data and had invested heavily in the development of EMIS. However, EMIS did not have a capacity to measure socioeconomic factors relevant to school attendance, and its focus on enrollment (rather than attendance) caused it to overestimate school participation.

It is interesting to note that other public officials who we interviewed also resisted, at times actively, the use of the TLLSS data. Their arguments centered first on the fact that the 2007 survey was rolled out around the time of the 2006 political and humanitarian crisis, creating questions about its accuracy. Other participants observed that the survey data reflected the performance of the previous government. Thus, they perceived that the data had limited use for current education policy. Officials that we interviewed in the Statistics Department, located within the Ministry of Finance and involved with collecting the TLLSS data, had apparently encountered similar resistance to the data. They expressed their frustration with the limited interest in the TLLSS and other large survey exercises. These exercises were seen as technical and usually the initiative of international organizations.

A further source of resistance to the results from the gender-disaggregated EIA (stages 1 and 2) was the lack of familiarity of senior officials with this methodology. Gender specialists we interviewed on their reactions to findings from the first stage of the gender-disaggregated EIA argued that it needed to be complemented by an investigation of what sorts of policies could address the gender gaps we uncovered. The second-stage analysis responded to this call. However, this created further problems for the MoEC officials, who needed to be able to draw upon higher levels of technical
expertise to be able to fully engage with the outputs of the probit regression analysis. A female senior figure who we interviewed commented on the “very limited capacity and analytical ability within the civil service.” A female MP described efforts of the women’s caucus in parliament that aimed to address this lack of capacity:

but we [women in parliament] tried to explain to them [ministers]. And in this budget we have also submitted a proposal to the Prime Minister asking for at least an adviser to the minister and sufficient training for the gender focal point in the ministries.

Additional challenges with the use of gender-disaggregated EIA to influence budget outcomes relate to the timing of the budget process. The prevailing rules of the budget in Timor-Leste offer only a limited number of entry points to influence decisions and processes. Reflecting on this, a senior official in the MoEC who we interviewed observed that if analysis is present as the ministry is debating new budget measures, new proposals can find their way into the budget. However, the results of EIAs presented outside this relatively short time frame may have a limited impact. It must also be kept in mind that the willingness to incorporate new data into the budget decision-making process is typically small. A senior male official in the MoEC described the budget process and information inputs in the following terms: the budget draws on “last year’s data on teachers, staff, students, schools,” often using the previous year’s budget submissions plus any changes in numbers highlighted by their administrative (EMIS) data.

Also important is the fact that some decision makers resist translating gender equality into detailed policy and budget allocations. As a female public figure observed,

Timor has been fairly responsive to gender issues and I think has taken them to heart, but that’s not to say that I think we don’t need to keep pushing because … it could easily drop off the radar.

The way in which MoEC engaged with gender-disaggregated EIA further illustrates this point. The researchers worked with members of the MoEC gender-equity unit to organize a presentation at a timely stage in the budget decision-making cycle. They aimed to communicate to the most senior MoEC decision makers the findings of the gender-disaggregated EIA, the probit regression analysis, and the implications of these findings for gender equity in educational outcomes. The latter included an analysis of relevant programs that the government was already funding at some level that had been identified as factors in the lower attendance of girls (see Table 1). But the presentation of this study’s findings lost much of its political status when leading decision makers in the ministry were unable to attend. This lack of
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political backing significantly curtailed the analysis' potential to influence the budget. It was evident to our research team that only those in the gender unit in the MoEC felt they had a responsibility to address the gender issues raised in our EIA.

The gender-focused institutions in the MoEC demonstrate the importance of gender units to the promotion of GRB. The ministry’s gender unit has played a critical role in promoting gender equality issues in the policy and budgeting process. It was influential in feeding information on gender inequality and gaps to decision makers in the MoEC; and it contributed to the prominence of gender analysis in the first administrative data annual yearbook (Timor-Leste MoEC 2011). However, the apparent success of the gender unit may have caused other units and officials to neglect gender issues. A male senior official in MoEC, for example, described the issues of gender equality and mainstreaming as being outside of his mandate. Contrary to this were the ministry’s efforts to improve indicators on equal opportunities by seeking to recruit a woman vice-director general with gender expertise.

One of the limitations of this gender-disaggregated EIA was the narrow engagement of the women’s movement. Without them using this analysis to pressure for positive change, gender-disaggregated analysis failed to transform into feminist knowledge. Its role may be enhanced under the new National Education Commission, which provides advice to the minister and involves civil society. A male senior public servant pointed to the monitoring and evaluation stages as a budget entry point for the women’s movement and NGOs. He went on to say that the women’s movement and NGOs have a role to play in identifying and documenting inequality. Others have noted that civil society and the women’s movement need to strengthen their technical capacity and improve the use of gender-disaggregated data and tools for analysis to effectively influence policy and budgeting processes (Monica Costa 2010).

CONCLUSION

The contribution of this case study to literature on feminist economics, and GRB more specifically, is to add to the limited examples of gender-disaggregated EIA and to provide an understanding of its potential to inform gender-responsive policy and budget decision making. It demonstrates that gender analysis cannot stand alone, but must be supported by a strategy to be integrated into the budget decision-making processes so that it influences policies and their funding. In doing so, it emphasizes that GRB is as much a political process as it is a technical exercise, and its integration into decision-making processes is critical for GRB to reach its potential in practice (Rhonda Sharp and Ray Broomhill 2002).
The approach adopted was innovative for the direct use of an analytical technique to engage in the policy process, bringing supply and demand for research together. This analysis shows that the way in which gender-disaggregated analysis is integrated into policy and budget decisions and processes is framed by the credibility of the sources of information and the strategies adopted to communicate findings, the political context, and the institutional structures and the identity of key players, their roles and the links between them. Ownership of, and access to, information sources matter. Officials preferred their administrative data, but data this kind of are not without problems. There is an incentive for schools to overreport children’s attendance when their grants depend on the numbers attending school. However, our access to administrative data was limited; and we found that the use of the household survey data enabled us to produce a gender-disaggregated EIA and to use it to engage with actors outside, as well as inside, government. While the reaction of officials to the analysis based on a large household survey dataset that they did not control was far from enthusiastic, we believe that this exercise demonstrates to those inside government that combining survey and administrative data makes for a richer analysis. We uncovered a range of political, cultural, and technical barriers constraining the use of gender-disaggregated EIA to influence policies and budgets in a gender-sensitive way. These findings need to be brought to the forefront of the debate on evidence-based aid, which has sponsored an expansion of sophisticated statistical techniques and large investments in data collection.

Our application of gender-disaggregated EIA to the education sector confirms its usefulness as a “headline” indicator of a broad inequality in enjoyment of public spending. The analysis of determinants of school attendance of girls, made possible by the household survey data, provides useful information for a strategy to address gender inequality. However, this exercise drew attention to challenges in communicating the gender-disaggregated EIA and limits in policymakers’ technical knowledge that would allow them to “own” the findings. We concluded that a sustained interaction between academia and decision makers is critical to bring analysis and a strategy for change closer. Framed this way, the EIA should be used as part of a package of analytical tools to provide policymakers with an understanding of the causes of the problem identified and a range of policy options, including an assessment of existing policies and their funding. Our study showed that, in light of the budgetary reforms introduced, timing is increasingly critical if gender analysis is to provide impetus for allocation of expenditure to reduce the barriers that keep rural girls from school.

In addition, we have demonstrated here that gender issues in policy tend to reflect the gender politics and the perspectives of those who use the information; with an uneven bureaucratic and political commitment toward gender equality, the disadvantage of rural girls in Timor-Leste may
fail to become a budget priority in the immediate future. While there is a policy reform agenda in the new nation of Timor-Leste, the institutional commitment to gender equality has to navigate between new gender norms and the old gender order. Opportunities presented by new institutions and norms around gender and budgetary processes are nested within traditional gender politics and ways of prioritizing and allocating resources (Monica Costa, Marian Sawer, and Rhonda Sharp 2012). In a context marked by conflict and poor governance and development performance, the women’s movement has decided to invest their meager resources and political capital in pursuit of a policy agenda and legislation to combat domestic violence and the increase of women’s representation in the political and administrative structures. Through this approach, some expect, benefits will spread to other sectors – including education.

While gender-disaggregated EIA tends to focus on engaging with government officials, the GRB literature provides mounting evidence that pressure from parliament and civil society is critical for gender and women’s issues to find their way into budget decision making. Timor-Leste’s cross-party women’s caucus in parliament, formally established in 2006, has been instrumental in the institutionalization of gender equality and gender-responsive budgeting initiatives, including supporting increased funding for the women’s machinery of government and measures against domestic violence (Costa, Sawer, and Sharp 2012). Finally, our analysis showed that, while international organizations and academics can play an important role in designing the scaffolding for the use of statistical data to guide policy and budgeting decisions, this should not be done in isolation from policymakers, civil society, and MPs, and we should be wary of what these exercises can realistically achieve. Without a deeper understanding of the critical actors, institutions, and dynamics that underpin budget changes, gender-disaggregated EIA may fail to translate into improvements in education opportunities for women and girls in Timor-Leste.

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NOTES

1 These studies cover education and health expenditures in developing countries, including South America and Africa (Glick, Saha, and Younger 2004).
2 There are also a small number of studies of the incidence of taxation on the income of households disaggregated according to their gender characteristics. Analysis for Argentina, India, Mexico, Ghana, Morocco, and South Africa is provided in Caren Grown and Imraan Valodia (2010). A more detailed analysis of the incidence of indirect taxes in South Africa is provided by Daniela M. Casale (2012). Tax incidence analysis has rarely been used in GRB initiatives, with the exception of South Africa and UK.
3 The authors thank the Statistics Department at the Ministry of Finance for access to the 2001 and 2007 Timor-Leste Living Standards Surveys. Our thanks to the Ministry of Education and SEPI for collaborating on this project.
4 Finer breakdowns by region could be pursued but not by type of school as this data is not available. We do not report on gender differences by region because the factors influencing regional differences in Timor-Leste are complex and are not directly relevant to the themes of this paper. Furthermore, our analysis is based on attendance rates, which are akin to participation rates.
5 In Timor-Leste, primary school age is 6–11 years, pre-secondary school age is 12–14 years, and secondary school age is 15–17 years. The datasets used did not distinguish between single- and mixed-sex schools. This information is now available in the Education Management Information System, but reliable data for the period of this study (2006–7) was not available.
6 The TLLSS does contain a measure of total household food consumption in dollars; but using this measure would not allow us to directly assess the effects of poverty on school attendance, nor would it enable us to take into account regional variations in consumption norms.
7 There is a considerable literature on the positive impact of maternal education on children’s health and education. For a summary of literature prior to 1995, see Hill and King (1995). More recent studies include Deon Filmer (2006), who shows that educating women has a greater impact on children’s schooling than educating men across a wide range of developing countries; Tahir Andrabi, Jishnu Das, and Asim Khwaja (2009), who show that mother’s education has a positive impact on children’s education in Pakistan; and Jann Lay and Anne Sophie Robilliard (2009), who show that mother’s educational attainment has a strong positive impact on child mortality in Sub-Saharan Africa.

REFERENCES


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