Brief

What can time use tell us about lifting female labour participation in Indonesia?

Measuring time use, care and women's agency

I.   Key findings

Work in Indonesia strongly follows gender lines

- Men spend 1.5 times more time on paid employment than women. Women spend 2.8 times more time on unpaid domestic and care work than men.

- Most agree that men should provide for the family and women are responsible for domestic and care work. However, both men and women with more education are more open to women working for pay.

Women's unpaid care work restricts participation in paid work

- Women work longer hours than men when accounting for unpaid domestic and care work (11.6 hours a day for women; 9.2 hours for men).

- Women with young children spend twice as much time as men (2.2 hours) on supervisory care (being on-call, usually in close proximity) – a task that tends to be undercounted in time use surveys.

- More hours in unpaid domestic and care work reduces opportunities for females to participate in the labour force. Hours spent on supervisory care has the largest negative effect.

- Women have more agency than men in deciding what time to spend on household and caregiving activities, but less agency in deciding what time to allocate toward work for pay.

Women are interested in paid work if constraints are lifted

- Women (and men) would attend more hours of hypothetical training to enhance their employability if care were available (e.g. spouse can take care of the children).

- Negotiation between spouses increased the preferred number of hours both women and men would devote to such training.

Previous attempts to collect time use data in Indonesia have been challenging.

Statistics Indonesia (BPS) trialled time use surveys three times between 1998 and 2005.

Varying levels of education and literacy, informal and seasonal work, complex family arrangements and traditional gender roles complicate data collection on time use in emerging economies.

Further, the surveys often do not capture the full extent of unpaid care work (especially if people are multi-tasking).

Careful survey design and technological advances can help.

In late 2022, partners trialled a new light diary tool (pre-coded) being developed by the International Labour Organization (ILO), together with a novel survey of attitudes and a field experiment, to shed light on time use and women's agency.

The pilot was conducted in urban areas with plans to extend to rural sites.

II. Context

Despite significant changes to the Indonesian economy over the past three decades and increasing access to education for girls, there has been limited change in Indonesia's female labour force participation. In August 2022, Indonesia's labour participation rate was 52% for women, compared with 83% for men. Women's labour participation in Indonesia declines significantly following marriage and childbirth.

When women do join the labour force, they are over-represented in informal and low-quality jobs, face the glass ceiling when it comes to formal sector jobs and are subject to gender wage gaps across the board.[i]

The Covid-19 pandemic exacerbated gender inequality in labour participation because it increased women's care and domestic responsibilities and pushed women of reproductive age out of employment. Younger (15–19) and older (55+) women had to take up low-quality jobs to cope with financial precarity.[ii]

Inequality in time use is associated with lower participation in the paid labour market,[iii] less access to formal employment and decent work, and less involvement in the wider public sphere.[iv]

Therefore, it is important to understand time use patterns to tackle gender equality issues and female labour force participation. However, on their own, time use surveys do not reveal the extent to which women and men can make choices about how to use their time and act on their decisions, without being constrained by socio-cultural and economic barriers (agency). This means other methods are necessary to complement time use surveys.

III. Approach

From October to November 2022, three methods were trialled to unpack 'time use and agency': 1) light time use survey; 2) attitudinal survey; 3) experiment in the field.

Time use survey

A light diary tool developed by ILO was trialled to assess how men and women allocate their time, based on international standards.

Independent time use surveys, usually in diary format where a person fills out a detailed record of the day's activities, have been the preferred survey approach to generate data on unpaid work. But a full-time use survey is complex and costly.

This study piloted one of several time use modules being developed by the ILO for attachment to national socio-economic surveys.[v] The version chosen by the partners for trialling had the best coverage of time use, allowing for multiple parallel activities to be recorded for each fixed 15 minute 'episode' of the diary day. The focus was on creating a comprehensive record of unpaid domestic and care activities and responsibilities, including supervisory care.

Supervisory care refers to the time a person is "available and in close proximity to provide active care for a child or a dependant adult should the need arise".[vi] It is often overlooked in time use statistics as it is not considered an activity but a responsibility for the welfare of dependants. Measuring it is challenging as it is often carried out in conjunction with other activities, particularly domestic work, but also leisure – making it hard to quantify. However, considering supervisory care is essential as it restricts caregivers' time and affects their ability to pursue education or paid work. It also limits the type of work they can take up and/or their productivity.[vii]

The survey approach is termed 'light' because it records respondents' time use against a set of pre-coded activities (in this case a list of 41 activities), rather than taking open responses (recorded verbatim in the respondents' own words). Additional module items recorded contextual information for each activity (location, co-presence, beneficiary, remuneration). A separate recovery section probed for unreported or under-reported supervisory care time.

A total of 226 randomly selected couples, or 452 individuals, in Greater Jakarta and Greater Surabaya participated in the survey.

Within each site, three cities and two sub-districts were selected randomly. The days of the week when each two-parent household would be interviewed were also selected randomly. Information on how the couples spent their day was collected directly from each spouse (no proxy reporting).

The survey was conducted by face-to-face interviews using a computer-assisted personal interview (CAPI) tool developed in CSPro software, the same approach used for Indonesia's national census.

Survey of attitudes

The same 226 couples were each asked questions separately to reveal 'agency over time use' according to four different dimensions, adapted from Sinharoy et al. (2021)[viii]:

- **Critical consciousness:** Awareness that men and women may have unequal time allocations, preferences and time poverty. As an example: How strongly do you agree/disagree with the statement: 'women can work, even as the main earners'?

- **Self-efficacy:** Confidence in one's ability to make decisions about how to spend one's time. As an example: How strongly do you agree/disagree that you can change your daily schedule?

- **Voice:** The ability to talk about time use. As an example: How strongly do you agree/disagree that you can ask a household member to take care of a child or another family member?

- **Decision-making:** The extent to which one can decide the amount of time to spend on activities ▶▶

- according to one's own aspirations. As an example: Who decides how much time you spend on paid work?

Survey responses were collated and analysed across the dimensions on a scale of 1 to 5 (differentiated by sex), with a higher score indicating more agency.

Hypothetical experiment

The 226 couples also participated in a 'lab-in-the-field' experiment to test how much time women and men would allocate to attend a hypothetical training program to improve their income earning potential.

A lab-in-the-field experiment combines a standardised lab methodology with a field experiment conducted in a natural setting. While the attitudinal survey questions to understand men's and women's agency over time use are adapted from the work of Sinharoy et al. (2021), the lab-in-the-field experiment is a novel approach developed specifically for this study.

The objective of the experiment was to understand how people's time allocations may change or adjust when information is private, public or negotiated, and couples were randomly assigned to three treatment groups:

- Private: each spouse decides the time allocation for training on their own.
- Public: each spouse reveals the time allocation for training to the other.
- Negotiated: spouses negotiate time allocation for training with one another.

Each person was then asked to respond to four vignettes (or stories) posing the following questions:

- How many hours of training would you attend if your spouse was at work all day?
- How many hours would you attend if your spouse was at home?
- How many hours should a neighbour attend?
- How many hours should your spouse attend?

The logic of the experiment is to compare the hours reported given the different social vignette to which each couple is assigned, to indirectly measure voice and decision-making as well as predict behaviour in the face of economic opportunity.
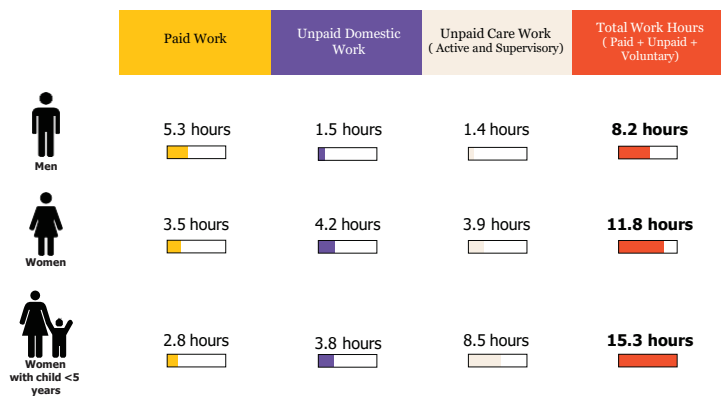
IV. Key results

This section presents headline results from the three methods. More detailed findings are available in the report.

Chart 1 summarises results from the time use survey indicating that men spend 1.5 times more time on paid employment than women. Women spend 2.8 times more time on unpaid domestic work than men.

Women work longer hours than men if unpaid domestic work is considered (11.8 hours a day for women; 8.2 hours for men).

Women with young children spend twice as much time

Chart 1

	Paid Work	Unpaid Domestic Work	Unpaid Care Work (Active and Supervisory)	Total Work Hours (Paid + Unpaid + Voluntary)
Men	5.3 hours	1.5 hours	1.4 hours	**8.2 hours**
Women	3.5 hours	4.2 hours	3.9 hours	**11.8 hours**
Women with child <5 years	2.8 hours	3.8 hours	8.5 hours	**15.3 hours**

as men (2.2 hours) on supervisory care.

The differences between men, women and women with children under five years old are statistically significant (p = 0.000).

Further analysis, using both a probit and linear probability model, suggests there is a negative relationship between the amount of unpaid work and the probability of employment for both women and men (see Chart 2, which maps the probability of labour force participation for both men and women at different levels of unpaid work, 0–8 hours).

On average, an increase in 1 hour of unpaid work decreases the probability of employment by 3% for men and 4% for women, noting women typically have a higher baseline of unpaid work than men. At low levels of unpaid work, the probability of engaging in paid work is similar for both genders (the 'whiskers' in Chart 2 overlap), but as the amount of unpaid work increases, the probability of engaging in paid work drops more quickly for women than men, becoming significantly lower (the 'whiskers' do not overlap in Chart 2).

It is possible that some reverse causality could be at play. For example, individuals who are already out of the paid labour market may have more time available to engage in unpaid work. However, given the study finds a consistent negative relationship between unpaid work and employment for both women and men, the direction of causality is likely from unpaid work to employment, rather than the other way around.

Disaggregating the analyses by type of unpaid work helps to shed light on the specific caregiving responsibilities most likely to be impacting women's labour force participation. Our analysis suggests supervisory care has the largest negative effect compared with other unpaid activities[1]. Each additional hour of supervisory care that female respondents provide is associated with a 7% decline in their probability of engaging in paid work, compared with 4.8% for men – thus the negative impact for women is more significant.

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[1] These include domestic work, active care, leisure, community and religious activities, volunteering and other unpaid work, travel and waiting.
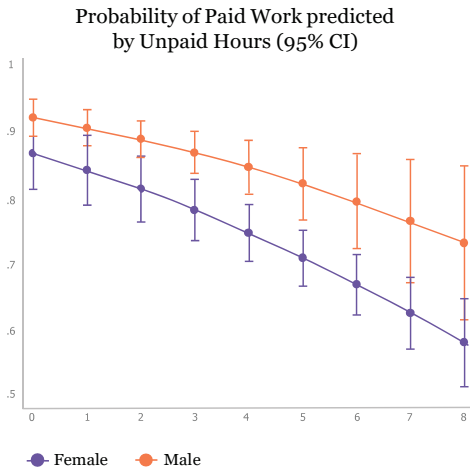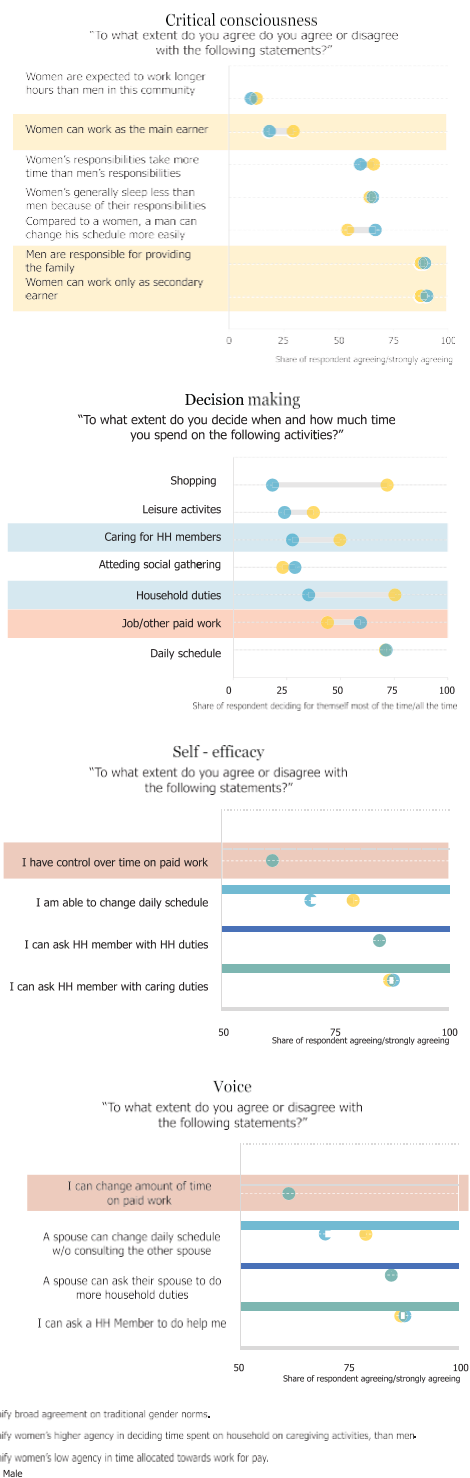
Chart 2

Probability of Paid Work predicted by Unpaid Hours (95% CI)

— Female   — Male

Chart 3

Critical consciousness
"To what extent do you agree or disagree with the following statements?"

Decision making
"To what extent do you decide when and how much time you spend on the following activities?"

Self - efficacy
"To what extent do you agree or disagree with the following statements?"

Voice
"To what extent do you agree or disagree with the following statements?"

Finding that signify broad agreement on traditional gender norms.

Finding that signify women's higher agency in deciding time spent on household on caregiving activities, than men.

Finding that signify women's low agency in time allocated towards work for pay.

● Female   ● Male

Chart 3[2] shows results from the attitudinal survey and reveals broad agreement that men should provide for the family and women are responsible for household work (highlighted in yellow). Women have more agency than men in deciding what time to spend on household and caregiving activities (highlighted in blue), but less agency in deciding what time to allocate toward work for pay (highlighted in red).

We also employed multivariate regression analysis to examine how different levels of agency were correlated with time use decisions.

$$TimeUse_i = \beta_0 + \sum_{z=1}^{5} CategoryScore\ \alpha_z \\ + \beta_2 Education_i + \beta_3 Age_i \\ + \beta_4 Disability_i \\ + \beta_5 HHSize_i + \epsilon_i\ (1)$$

In equation (1), we are interested in how time use decisions are associated with:

- Levels of agency, as represented by the scores of each of the five different types of agencies (α_z, where z is critical consciousness on role and time, self-efficacy, decision-making, and voice).

- Education, either primary, secondary, or tertiary education (β_2).

- Other control variables such as age of the respondent (β_3), disability status (β_4), and household size (β_5).

We find that higher levels of agency in decision-making and voice both result in higher participation in paid work for women, and that women overall and more educated men and women are more open to women undertaking paid work.

From the field experiment we learned that the level of communication matters between spouses. We found that the number of training hours a woman reported she would attend, and the number of hours her husband thought she should attend, were much closer if they were able to discuss the matter. This also holds for men.

V.   Conclusions

Why do women participate less in the formal labour market than men?

There are significant gaps and imbalances in the way that paid and unpaid work are distributed between men and women in Indonesia. When we account for this work, it becomes clear that women, especially those with young children, work longer hours than men, leaving them with limited time to work for pay.

Attitudinal barriers compound women's challenges. Most agree that men should provide for the family and that women are responsible for household work.

Women also exhibit less agency when it comes to deciding to work for pay. This likely reflects the fact that ▶▶

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[2] Responses from the 'voice' attitudinal questions are very similar to that of 'self-efficacy'. More detailed findings are available in the main report.

women have either internalised the view that household and caregiving activities are their responsibility or have less access to alternative care arrangements.

Although more women are aware and readier to engage in paid work, male attitudes do not match women's willingness.

However, the field experiment reveals that when spouses can negotiate with each other, the preferred hours of hypothetical training to earn income increases for both women and men. And if care is not a constraint (e.g. spouse is around to look after children), the desired training hours go up too.

Taken together the results demonstrate that women participate in the formal labour market less than men due to a higher allocation of unpaid care work, social attitudes, and less agency over the decision to work for pay. However, encouraging spouses to negotiate time and relaxing constraints, such as social norms and childcare deficits, can lift female labour participation.

What measures can promote women's equitable participation in the economy?

The results show gender disparity in unpaid care work and how it affects the economic opportunities available to women, especially those with young children. Measures to tackle this are outlined below.

Education

Men and women who have more years of education have more equal views of paid and unpaid work along with gender roles within a household. Education is a long-term investment that can shift gender norms.

At the same time, encouraging the sharing of unpaid domestic work regardless of gender is an important step to lifting female labour participation.

Campaigns

Targeting attitudes about women entering the paid labour force is important.

Women, particularly those engaged in high levels of unpaid labour, had an unmet demand for training that could lead to paid employment.

However, many women will need support to overcome societal expectations to prioritise unpaid care work, and to exercise their agency to seek paid work.

Invest in care

Without care infrastructure, caregivers, primarily women, are unable to fully participate in the labour market. Investing in a high-quality and affordable care ecosystem will have multiple benefits for society, including reducing the unpaid care burden for women, promoting children's development, supporting families, promoting job creation and boosting the economy.[ix]

Survey time use

Good quality time use data underpins effective policy and programs to lift female labour participation, including childcare, elderly care, parental leave, flexible work, and programs to boost income earning capacity, such as entrepreneurship or skills training. What is not measured cannot be improved.

How can Statistics Indonesia efficiently survey time use?

The time use survey has been piloted with the intention of assisting Statistics Indonesia to integrate a time-use module into Indonesia's labour force survey (Sakernas), undertaken every six months. The instruments have been effectively piloted in urban areas. They will also need to be tested in rural areas. Important points for future efforts are set out below.

Work definition

It is important to capture both paid and unpaid work to value the efforts of all members of society. Unpaid work and own-use production both subsidise the cost of care that upholds families and economies, and often substitute for the lack of social services, while remaining largely invisible and not recognised. Time use surveys offer the best way to accurately capture the extent to which these activities are performed.

Capture multi-tasking

Failing to account for services provided in unpaid work (care, home and own-use production), often undertaken simultaneously, will result in inefficient and potentially ineffective policies.

Care distinction

Understanding whether care is supervisory care (on-call care in close proximity) or active care (direct care for child developmental and educational needs) is important to design care and work policies. A 'recovery section' of the survey where respondents are prompted to think again about whether they provided supervisory care can help.

A range of other methodological issues such as selection of representative respondents (including conducting the survey at a good time for women and men), training enumerators, and allowing sufficient time for the multi-modal approach are important.

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