

**Land Ownership and Women's
Empowerment in Sri Lanka:
An Empirical Analysis of Two
Districts**



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**International Centre for Ethnic Studies
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by

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Abstract

The study investigates the associations between women's land ownership and their empowerment, by analysing primary data collected from 2,000 households in the Kandy and Jaffna districts. The customary laws that govern land tenure and land rights in the two districts, namely the *Kandyan* law and the *Thesalawamai* law, underpinned the selection of the two districts for the study.

The study looks at the way in which different aspects of women's empowerment are influenced by women's land ownership. The empowerment-related outcomes include women's participation in economic activities, their autonomy in making decisions about household expenditure, and their involvement in land-related decisions, as well as their self-efficacy. Using logistic and ordinary least squares regression methods, patterns of association between land ownership and women's empowerment in the two districts are compared and contrasted.

The research finds that land ownership influences different aspects of women's empowerment differently. By and large, there is no significant relationship between land ownership and women's labour force participation in both districts. In fact, residential land ownership seems to discourage women's labour force participation. The analysis also does not find that women's ownership of land significantly influences their autonomy in decision-making about expenses related to food, health, education, and household maintenance. In contrast, women's land ownership seems to positively influence women's full involvement in household decisions related to land. Holding legal title seems to have a positive effect on women's full involvement in land-related decisions. Joint titles particularly seem to make it more likely that women are included in decisions to sell, rent, or pass on land to inheritors. However, women are relatively less likely to be included in decisions about pledging land as collateral, and even in decisions related to renting and renovating collateral. These findings question whether households solicit women's input for decisions related land only if it is mandated by law. Finally, land ownership does not appear to influence the subjective well-being of women, although ownership of agricultural land positively influences women's perceptions that her household has greater social status relative to neighbours.

The findings suggest that the type of land women own might play a role in the economic benefits that accrue to them from land ownership. While residential property might strengthen her bargaining power within the household, productive land ownership could catalyse their participation in economic activities. The findings also underscore the benefits of joint titles to land and property. Promoting women's involvement in strategic decisions related to land, including selling, mortgaging, and passing on land to others has the potential to increase their empowerment. However, the findings of the study suggest that this needs policies that help increase the economic utility of land for women. Key among such policies is the reduction of institutional barriers that currently hold women back from effectively exercising their ownership rights over land, and force them to depend on men to leverage the benefits to be had from holding land.

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Acronyms

AL	Advanced Level
DCS	Department of Census and Statistics
DHS	Demographic and Health Survey
GCE	General Certificate of Education
HH	Household
HOH	Head of the Household
LFP	Labour Force Participation
LOWE	Land Ownership and Women's Empowerment
OL	Ordinary Level
PFR	Principal Female Respondent
SDG	Sustainable Development Goals
SEM	Structural Equation Modelling

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01. Introduction

Women's empowerment is integral to the achievement of the transformative promise of 'leaving no one behind' of Agenda 2030. Sustainable Development Goal (SDG) 5 is specifically dedicated to the eradication of gender inequality, and at least nine more SDGs look at issues of gender equality and women's empowerment. Thus, women's empowerment is at the core of the international development agenda.

A large body of evidence shows how education and skills development, economic and political participation, access to financial markets, and asset ownership can contribute to women's empowerment (See, among others Bushra and Wajiha, 2015; Brody et al., 2015; Dutt, Grabe, and Castro, 2016; Gholipour et al., 2010; Stromquist, 2015; Kassa, 2015; Samarakoon and Parinduri, 2015; Johnson et al., 2016). Among assets, access to productive assets, particularly land, appears to be critical for improving women's bargaining power within the household and in the community. This is because land is not "just a productive asset and a source of material wealth, but equally a source of security, status and recognition" (Rao, 2011, p. 1). Productive assets, especially land, can generate income and consumption, store wealth, be passed on to future generations, and are a visible status symbol (Pradhan et al., 2018).

In Sri Lanka too, the issue of women's empowerment has been investigated from several angles. For example, several studies have found positive associations between financial literacy and financial inclusion and women's empowerment, especially among rural women, and the role of credit, especially through microfinance, in driving women's empowerment (Badullahewage, 2019; Hansen, 2015; Herath et al., 2015; Kumari et al., 2020). Other studies have examined barriers to women's empowerment in Sri Lanka (Hancock, 2006; Kandanearachchi & Ratnayake, 2017; Malhotra & Mather, 1997; Perera, 2017; Wijewardhana & Dias, 2021). Some of the main impediments that these studies identify include the non-availability of desirable job opportunities for women, deficiencies in their human capital endowment, gender gaps in domestic chores, gender-based violence, and the societally imposed and internalised gender norms.

However, the role of asset ownership, of land in particular, in shaping women's empowerment remains largely unknown in Sri Lanka. There is also no secondary

data on land ownership patterns in Sri Lanka.¹ A handful of studies provide some insights into the effects of land ownership on women's labour force participation (LFP). For example, Emran and Shilpi (2017) examined the effects of land market restrictions in Sri Lanka on women's wages in the rural labour market and found that an increase in such restrictions is positively correlated to female LFP through the effect of these restrictions in reducing women's wages, in turn argued by the authors posit to be due to higher migration costs associated with land restrictions.

Separately, Gunatilaka and Vithanagama (2018) also found that while land ownership had a positive correlation with women's LFP in the Northern Province of Sri Lanka, this positive influence was stronger for the sub-sample of women heading their households than for women from male-headed households. These findings were corroborated in a similar study conducted in the Eastern Province (Vithanagama 2020). An older comparative study on livelihood security among women living in the Nuwara Eliya district of Sri Lanka and Kangra district of Himachal Pradesh in India showed land ownership to be a constituent of economic security (Shyamalie & Saini, 2010). But the study did not address the issue of the impact of land on women's economic security.

The present research attempts to address this gap in the Sri Lankan literature on the relationship between land ownership and women's empowerment and contributes to the growing body of literature on the topic from developing countries. The study operationalises the concept of empowerment through four domains: (i) women's LFP; (ii) participation in decision-making in the household (iii) participation in decision-making related to land, and (v) women's perceptions of happiness and well-being.

A household survey was designed to collect primary data from a random sample of 2,000 households from the northern coastal district of Jaffna and the central, mountainous district of Kandy. We selected these two districts primarily because they differ from the rest of the country in terms of the laws that govern land ownership and inheritance patterns. Of the three customary laws in Sri Lanka, the Kandyan law governs the marriage, adoption, and transfer of and inheritance

¹ The Food and Agriculture Organization reports that women in Sri Lanka are estimated to own only about 15 percent of all privately-held land in the country, but this statistic from 2002 is dated (Food and Agriculture Organization [FAO] 2018). More recent statistics on women's land ownership are unavailable.

of movable and immovable property of Kandyan Sinhalese who are identified as descendants of those who were resident in Kandy when the area was occupied by the British in 1815 (Agarwal, 1990). The *Thesawalamai* law applies to Tamils who are permanently resident in Jaffna (Ibid).² Other reasons for the selection of the two districts included differences in socioeconomic characteristics, historical experiences, cultural and societal norms and ethnoreligious compositions. The questionnaire was administered to the principal female respondent (PFR) of the household, who was either the head of the household (HOH), the spouse of the HOH or the main female relative of the HOH.

Overall, the findings suggest that land ownership does not play a considerable catalytical role in women's empowerment in the household in both districts, at least not as an economic resource. In fact, residential property ownership seems to deter women's labour force participation (LFP), especially in Kandy. However, land ownership appears to encourage women's participation in in land-related decisions. Joint ownership of property in particular seems to strengthen women's full participation in strategic decisions about selling, renovating, and passing on land to successors. By and large, land ownership does not seem to have much of an effect on women's autonomy in making decisions about household expenditure. Agricultural land ownership, in particular, appears to be associated positively with women's perceptions of their household social status within the neighbourhood. However, women's perceptions of happiness are not correlated to their land ownership.

Section 2 of the paper reviews the literature about land ownership and women's empowerment. Section 3 uses the primary data to describe women's land ownership patterns in the two districts as well as the involvement of women in making decisions about land. Section 4 presents the theoretical framework that informs the empirical strategy for the data analysis, along with the definitions of both outcome variables of interest and possible explanatory variables. Section 5 presents and discusses the results of the econometric analysis next. Section 6 concludes with some reflections on policy and practice.

² The third customary law is the Muslim law which is different from the other two customary laws in that it is a religious law and is applicable to all followers of Islam, by birth or by conversion (Agarwal, 1990). The general law applies to everyone that falls outside the purview of these customary laws.

02. Literature review

The positive effects of land ownership on women are widely acknowledged. A sizeable literature confirms that women who own land tend to have greater bargaining power within the household. In other words, land ownership tends to strengthen a woman's threat point or the fallback position, which in turn would strengthen her position in intra-household bargaining. For example, a study conducted by Wang (2014) using seven waves of data from the China Health and Nutrition Survey between 1989 and 2006 found evidence in favour of the hypothesis that strengthening property rights has an impact on bargaining power within the household. The author found that when women received land ownership rights, there was a significant decrease in the consumption of cigarettes and alcohol, which are male favoured goods, and an improvement in girls' weight-for-age. In contrast, when men received land ownership rights, it led to an increase in male-favoured goods, and a decrease in men's contribution to household chores.

Panda and Agarwal (2005) who examined primary data collected from about 500 ever-married women from the Thiruvananthapuram district in Kerala found that women were much less likely to experience physical or psychological violence at the hands of their husbands if they owned at least one property. The authors have posited that land ownership would not only strengthen a woman's fallback position and therefore improve her bargaining position within the household, but also enhance her self-worth which would reduce her tolerance of violence, both of which would discourage her husband from resorting to violence against her. Although being employed can also work against violence in the same way, the authors did not find a clear pattern between women's employment and experiences of violence. These findings clearly underscore the role that land ownership can play in improving women's lives. Several more recent studies have also suggested that women's land ownership reduces their susceptibility to domestic violence (See for example, Bhattacharyya et al., 2011; Grabe et al., 2015).

Land ownership also improves women's participation in financial decision-making within the household. Behrman (2017) who analyses data from the 2010 Malawi Demographic and Health Survey (DHS) found that sole or joint land ownership boded well for women's participation in household financial decision-making.

Sole land ownership improves women's reproductive health-related decision-making power, while joint land ownership with spouses tends to lower women's participation in such decisions. The author argued that this could be symptomatic of the efforts of a spouse to assert dominance in non-financial spheres and of intra-household tensions arising from joint land ownership. The results underscore the heterogeneities and complexities of how land ownership shapes women's autonomy in different domains within the household. However, this could also be a context-specific issue. For example, Datta (2006) who conducted a qualitative study on the effects of the joint titling policy in Chandigarh, India, did not find this to be a problem at all. In fact, the author found that most men were indifferent to having joint titles, as long as they had a secure home, and as many as 80 percent of the men did not feel that their marital relationship had changed following receiving a joint title to the house. However, Datta (2006) observed that joint titling had profoundly empowering effects on women's participation in intrahousehold decision-making, their access to knowledge about public matters, their sense of security and self-esteem, and the respect they received from their husbands. The increased attachment to the house that was observed in women after receiving a joint title also showed that property ownership not only fulfils a woman's practical gender needs but also her strategic gender needs, giving voice to their preferences and the strength to act on them.

The perceived and real improvement in power and status of women within the community and at the household level associated with land ownership is also discussed in Grabe et al. (2011). The study which followed a mixed methods approach to studying the impact of land ownership on women's experiences of domestic violence in Nicaragua and Tanzania noted that women from both countries said that they received more respect from their spouses and within the community because they now owned land. In Tanzania, where traditionally women did not own property, this outcome was particularly pronounced. The opportunity to create livelihoods, and therefore an independent source of income from the land they own, also improved women's material well-being. On the other hand, the increased bargaining power land ownership afforded appeared to help women spend more household income on female goods (including women's clothes, footwear, and accessories) and away from male goods (men's clothes, footwear, and accessories) (Adebayo, 2014).

Land ownership also tends to reduce women's reliance on risky sexual activities for economic survival, especially among women who are heading their households. For example, a study using data from the 1998, 2003 and 2008-09 Kenya DHSs has observed that women who owned land were 33 percent less likely to engage in transactional sex, compared to women who worked on land they did not own. Moreover, landed women were about 60 percent less likely to be HIV-infected than those without land. The results also showed that overall household wealth had no statistically meaningful association with HIV infection status, underscoring the value of land ownership in reducing their vulnerability to engaging in transactional sex (Muchomba et al., 2014). Similar observations were made by Burroway (2012) who used data from the 2012 World Bank Data Catalogue for her analysis. The study noted that women's access to land and property had a significant negative effect on female HIV prevalence. Moreover, in countries where women have equal access to property as men, the female HIV prevalence was about 1.7 units lower than in countries where there were some restrictions to women's property ownership. Land ownership has also been found to positively influence women's contraceptive use (Juraquova & Henry, 2020), which also in turn could further reduce her vulnerability to acquiring sexually-transmitted diseases.

Arasu and colleagues' (2018) findings further corroborate Datta's (2006) findings about the positive effects of land ownership on women's awareness about formal institutions, credit, and bureaucracies, as their analysis of women's land ownership positively correlated with their financial inclusion. Analysing available DHS data from 35 developing countries, and gender and global financial inclusion data (2014) from the World Bank, the authors found that lack of land ownership excluded women from accessing formal or informal credit, and this pattern was observed across all household wealth quintiles. Joint land ownership made it more likely that women were able to borrow formally. Women who had sole ownership of land were also more likely to have savings in the formal financial system, but were less likely to access formal or informal credit. These findings suggested that patriarchal ideologies permeated the formal financial system, resulting in the marginalisation of women and other vulnerable groups participating in it (Dewan, 2011).

The instrumental benefits of women's land ownership on the welfare of other household members have also been researched. For example, Allendorf (2007) who

used the 2001 DHS data for Nepal found that children are less likely to be severely underweight in households where women own land. These findings were confirmed by a later study conducted by Menon and colleagues (2014) who analysed data from the Household Living Standard Surveys of 2004 and 2008 in Vietnam. The study noted that when women had sole ownership of Land Use Certificates (LUCs), the incidence of child sickness was much less than when LUCs were owned by men only, or owned jointly. Moreover, LUCs owned solely by women were associated positively with healthcare insurance coverage for children, the share of children enrolled in school, and the expenditure allocated towards food and beverages. The share of spending on tobacco and alcohol also declined when LUCs were held by only women.

A more recent study from Pakistan (Rehman et al., 2019) confirms these findings. The analysis employs data from the Pakistan DHS for 2012-2013 and shows that women's land ownership is significantly and positively associated with children's height-for-age z-score. In contrast, however, joint ownership of land did not have a significant effect on the z-score. Women's land ownership was also found to have a positive and significant effect on children's weight-for-age and growth stunting. This study also established causality between land ownership and women's autonomy and children's height-for-age z-score by using a Structural Equation Modelling (SEM) methodology. The results showed that women's land ownership increased a woman's autonomy which in turn improved the height-for-age z-score. Thus, the study established an important causal relationship between land ownership, women's empowerment, and the instrumental benefits it brings to the household.

Women's land ownership is widely perceived as a pathway out of poverty. This is clear from the importance that the SDG framework gives to land ownership as a driver of poverty reduction and women's empowerment. However, empirical studies that attempt to establish the causal links between women's land ownership and their empowerment are rather scant, while studies looking directly at women's land rights and poverty are almost non-existent (Meinzen-Dick et al., 2019). We managed to find only two observational studies on the topic of income and women's land ownership.

The first study conducted by Deere and colleagues (2004) using secondary data from Brazil, Paraguay, and Peru (2000-01) examined two hypotheses. The first was that female land ownership should have a positive effect on all types of households, as land ownership would give them the autonomy to choose to focus either on agricultural production or move on to off-farm activities. The second was that in a dual-headed household, female land ownership should have a positive effect on net household income mainly because of women's improved bargaining power from land ownership, which would generate higher levels of non-farm income for the household. The results showed that in all three countries, female land ownership was inversely related to the farm income of households, thereby refuting their first hypothesis. However, both in Peru and Paraguay, female land ownership was positively associated with off-farm income, with the largest and most significant effects reported from Peru. Thus, the authors concluded that the positive effects of women's land ownership on household income was mainly realized through off-farm income-generating activities.

The next and more recent study was conducted by Mahmud and colleagues (2021) using primary data from rural households in four parts of Tangail district, Bangladesh. They employed propensity score matching to estimate the income levels of women who owned land and women who did not own land, and concluded that women's land ownership had no noticeable effect on their income. They explained that this could be attributable to the small land parcels women tended to own which in turn led to lower income. The authors also suggested that rural women's inability to challenge patriarchal systems might also play a role because their voices and opinions were not counted in household decision-making.

Next, we look at several studies that attempt to ascertain the benefits of land ownership for women by constructing empowerment indices as dependent variables. These indices often combine several indicators of a given domain of empowerment or combine several domains of empowerment to construct an empowerment index. For example, Mishra and Sam (2016) who examined the effects of Nepali women's land ownership on their empowerment constructed two variables of empowerment for analysis. The first was the sum of three binary indicators related to decisions regarding women's own healthcare, major household purchases, and visits to family and relatives. Each indicator took a value of one if women made the decision alone or jointly with husbands and zero otherwise. The three indicators

were then aggregated to create an overall measure of empowerment. Next, they defined a stricter definition of empowerment as a binary variable that took the value of one if women had the sole final say in any of the three household decisions and zero otherwise. Using data from the DHS from 2001 and 2011, and performing several econometric procedures and robustness checks, they confirmed that land ownership significantly improved women's empowerment in Nepal. Moreover, the impact of land ownership on empowerment was found to be higher when corrected for endogeneity, and was generally higher in 2011 compared to 2001. The authors argue that this could be because an increase in women's bargaining power can redirect resources towards women's preferences.

Similarly, Han and colleagues (2019) constructed an empowerment index to assess the role of security in land tenure in promoting rural women's empowerment in China. Using 2016 survey data for 28 rural provinces, they constructed an empowerment index using seven variables on women's autonomy in decision-making. These included decisions related to house purchasing, consumption of durable goods, purchase of daily necessities, choices related to medical care, fertility, as well as employment and social interaction. Thus, their index was more expansive than what Mishra and Sam (2016) used as their dependent variable, both in terms of the number and range of decisions considered. If a woman made the decision independently, a value of 2 was assigned. A value of 1 was assigned if the woman participated in the decision making, and 0 if not consulted at all. The index was the sum of the values for each constituent. The results showed that the legal ownership of land, captured by whether women have a formal land certificate or not, was positively associated with women's empowerment, and that the coefficients are significant throughout all regression outputs. The instrumental variable (IV) regression the authors estimated to check for robustness of these results confirmed the positive association between legal ownership of land and women's empowerment. Another important finding of the study related to how land expropriation and tenure disputes were inversely correlated to women's empowerment, which pointed to their adverse effects of threatening women's de facto land tenure security on their bargaining power.

Another strategy has been to use different constituents of empowerment as outcome variables in a series of regression estimates. An example is the study by Valera and colleagues (2018) that employs data for 8,000 women from the 2016 Rice

Monitoring Survey in several regions of four Indian states, namely, Uttar Pradesh, Bihar, Odisha, and West Bengal, to unpack the causal effects of land ownership in women's participation in household decision-making. The study looked at decision-making along three domains – farming, livelihood, and household decisions – with 10 sub-categories in total as dependent variables. A woman was regarded as empowered if she had a large input in these decisions and zero otherwise. However, the authors used the terms decision-making and empowerment interchangeably to refer to the dependent variable they had constructed for the analysis. They found, in line with the empirical findings discussed above, that women's land ownership tended to increase their bargaining power in household decision-making. They also made the important distinction between women who have and do not have land titles which helped them confirm their hypothesis that women were more likely to participate in household decisions when their names appeared on the land title deed. However, the authors' analysis pointed to substantial heterogeneity across the four states in the relationship between women's legally recognised land ownership and their participation in household decision-making. Valera and colleagues (2018) pointed out that these differences might have stemmed from differences in people's awareness about legal provisions for land inheritance and the implementation of inheritance rights.

The empirical studies discussed above do not differentiate between different types of land – agricultural, residential or commercial. Studies which do are almost non-existent. A recent exception is the study by Solotaroff and colleagues (2019) who examined advances in women's economic empowerment in the rural and urban parts of Bangladesh. Their study found that agricultural land ownership was negatively associated with women's economic empowerment. The authors explained these results by using findings from the qualitative analysis which suggested that this could be because agricultural land ownership is shaped more by women's relationship with male members of the household such as their fathers, husbands, and brothers, compared to their ownership of non-agricultural assets, which were positively associated with their economic empowerment. These findings corroborate the observations of Durán (2018) from an analysis of over 500 household data from the Peruvian 2000 Living Standards Measurement Surveys. The author argued that legal land ownership alone cannot bring about empowering benefits to women as cultural norms and values can override property rights in both positive and negative ways. In fact, she finds that legal ownership of farmland

brings about opposite effects on the workloads of husbands and wives, increasing the workload of wives, but reducing that of husbands. Therefore, she argued that if labour outcomes are considered as a reflection of women's choices, this increase in bargaining power (and therefore the choice to work) deriving from land ownership may be at the cost of women's overwork.

In summary, this section has reviewed most of the empirical studies exploring the connections between women's land ownership and its implications for women's empowerment. The evidence clearly suggests that, by and large, land ownership tends to expand women's bargaining power within the household, raise her status in the community, and reduce her vulnerability to domestic violence and reliance on survivalist transactional sex. An improvement in women's empowerment or autonomy creates spillover benefits for households too, increasing the share of expenditure on beneficial expenditure and reducing unfavourable expenses such as alcohol. Land ownership has a remarkably positive effect on children too. However, most studies underscore the importance of a legal title to the land for women to benefit from land ownership. In contrast, empirical findings about the positive effects of land ownership on women's income are less clear. The few studies that have explored the links do not find much evidence to support the hypothesis that land ownership leads to more income or better livelihood outcomes for women. Furthermore, where gendered cultural norms are rigid, women might still fail to participate in household decision-making even if they owned land.

03. Data and methodology

The primary objective of this research study is to inquire into the association between land ownership and women's empowerment. Accordingly, following previous empirical studies, we propose to look at women's empowerment as the outcome variable of interest. However, given the complex and layered nature of empowerment, its measurement can be tricky. The usual practice for measuring empowerment is to construct a proxy indicator for the latent variable by way of an index. It typically comprises a number of variables capturing different dimensions of empowerment such as those related to decision-making, mobility, employment and income, education, norms and attitudes, self-efficacy etc. However, we decided against constructing an index to measure empowerment because of the subjectivities involved in applying cut-off points for each indicator in the index and defining relative weights (Bowman et al., 2017). Instead, a more effective strategy may be to look at different indicators of agency that contribute towards empowerment, as they tend to be more amenable to measurement, as Greene and South (2006) have suggested. It is also more transparent and yields more detailed information which is lost in an aggregate empowerment index. Accordingly, we construct variables representing different dimensions of what can contribute to women's empowerment. In this study, we consider three dimensions of women's empowerment.

Outcome variables

The first dimension of women's empowerment we consider is their labour force participation (LFP). Accordingly, a dichotomous variable which takes a value of one if a woman is gainfully employed or is actively looking for employment, or zero if she is economically inactive, is constructed. Although economic participation in and of itself is not a reliable indicator of women's empowerment, a large body of literature confirms that LFP brings about both instrumental and intrinsic benefits to women (see, among others Antman, 2014; Arthur-Holmes & Abrefa Busia, 2020; Kinyondo & Joseph, 2021; Morton et al., 2014; Villarreal, 2007).

Nonetheless, it must be pointed out that being pushed into the labour market due to economic hardship which stems from a place of lack of choice defies the very

definition of empowerment. Kabeer (2012) has referred to this kind of situation as ‘a distress sale of labour’ of women (p. 18). Thus, we attempt to circumvent the possibility of presuming that LFP is in fact an indicator of empowerment by looking at it as a separate analysis.

The second dimension we look at is decision-making. Two types of decisions are considered. The first is related to household expenditure. A binary variable is constructed for expenditures on food, health, education and household maintenance which would take a value of one if the PFR makes the decisions on her own and zero otherwise. The second set of decisions is related to land. The five decisions considered include those related to selling a property, renting it, renovating it, using it as collateral in a loan, and passing it on to inheritors. The variables take a value of one if the respondent is always consulted in the decision-making process and zero otherwise.

The third and final dimension is related to women’s efficacy. We look at two variables here. The first is about a woman’s perception of her household’s social status compared to that of her neighbourhood. The variable takes a value of one if a woman considers her household’s social status to be better than the households in her neighbourhood and zero otherwise. The second looks at her happiness about her own life. The information to this question is gathered on a Likert scale, with responses ranging from very unhappy (1) to very happy (5).

Methodology

As discussed in the preceding section, all but one of the outcome variables of interest considered in this study are dichotomous. Logistic regression is commonly used in regression analyses where the outcome variable is dichotomous. Thus, the econometric model is specified as follows:

$$Prob(LFPR_i | X_i) = F(\alpha + \beta X_i) + \varepsilon_i \quad (1)$$

where X_i represents a vector of explanatory variables, ε_i is the error term, and the logistic function is:

$$F(z) = \frac{1}{1+e^{-z}} = \frac{e^z}{e^z+1} \quad (2)$$

The regression coefficients β are estimated using maximum likelihood.

As the data on happiness is ordinal, we have used an Ordinary Least Squares (OLS regression) to model perceptions of happiness. The outcome variable of interest is the perception of happiness among respondents, an ordinal variable that ranges from 1 to 5, denoted by Y_i^* for the i th household ($i=1,2,\dots,n$):

$$Y_i^* = \alpha + \beta X_i + \varepsilon_i \quad (3)$$

X_i is a vector of non-random explanatory variables for the i th household, and β is the corresponding vector of regression coefficients that are to be estimated. The error term ε_i is assumed to be an unobserved normally distributed random variable with a mean of zero and a variance of σ^2 . The coefficient parameters β , and ε are estimated with the OLS method.

Both econometric procedures establish associational linkages and do not attempt to establish causal relationships. The independent variables used in the regression models are defined next.

Independent variables

The main independent variable of interest is women's ownership of land, which has many aspects to it. Therefore, how they could be meaningfully constructed required careful consideration, which was informed by international and Sri Lankan literature. A total of six dichotomous variables on land are used in the regression analysis. The first is whether a *woman has sole legal ownership of the property* her family lives in. The second is whether *she jointly owns such a property*. A third is whether a *woman owns residential property elsewhere in the country*. These three variables look at women's land ownership.

The other three variables capture the household's ownership of land and property. The first is whether *another household member* (not the PFR) *owns the property*

the household lives in or as well as any other residential property. The second is whether the household owns agricultural property. The final land-related variable is whether *the PFR's own parents own land or property.*

Only a negligible number of women own agricultural and commercial property elsewhere in the country. Moreover, the number of women who own more than one type of land and property is also small. As the inclusion of these variables may have led to biased results, women who own agricultural property only or commercial property only and more than one type of land and property were excluded from the final regression specification.

The control variables are grouped into several categories. Their inclusion in the specifications depends on which outcome variable is modelled. Table 2 summarises the independent variables used in each regression model. The first group consists of those related to PFR's own characteristics. In line with extant literature, we include variables capturing her demographic characteristics and her human capital endowment. The first is the *PFR's age*. Next, we construct a variable for *the square of the PFR's age* to account for the potential non-linear association between the age and outcome variable. A dichotomous variable captures whether the *PFR considers herself to be in good health*. The variables related to the PFR's education are constructed in two different ways. The first set of variables denoting educational attainment are mutually exclusive dummy variables. Five categories of educational outcomes are considered – *no schooling or primary education only* (used as the reference category); *Grades 6-9*; *Grades 10-11 but not passed General Certificate of Education (GCE) Ordinary Level (OL) examination*; *completed GCE OL but not GCE Advanced Level (AL)*; and *GCE AL or higher education*. Psychological characteristics such as a woman's own beliefs about her self-efficacy also play a role in shaping her empowerment (Assaad et al., 2014). Therefore, we also created a dichotomous variable to capture *women's own satisfaction with their education level*. It takes a value of 1 if women are happy about their education, and 0 otherwise.

Many empirical studies have shown significant associations between the husband's demographic characteristics and women's empowerment (Assaad et al., 2014; Sell & Minot, 2018; Wiklander, 2010). Thus, the second group of independent variables controls for the husband's characteristics. The first set of variables looks *at the husband's educational outcomes*. The categorisation of the husband's educational

outcomes is the same as for the PFR. In some instances, we used the differential in educational outcomes between the PFR and her husband, because sometimes the differences in the education levels between the spouses might have more of an impact on women's empowerment than either individual's individual education (Sell and Minot, 2018). Accordingly, three mutually exclusive variables were constructed: (1) whether *the PFR is better educated than the husband*, (2) whether *the husband is more educated than the PFR*, and (3) whether they have *similar levels of education*. The last is the base category. In addition, we constructed variables for the *age gap between the PFR and the husband* and the *PFR's age at marriage*.

The third group of variables controls for household characteristics, some of which are proxy care-related responsibilities (Wiklander, 2010). Three variables capture details about children – the *number of children aged 5 or less, children aged 6-11, and 12-19*. The last is the base category. Two variables account for *the number of adult men and adult women (excluding the PFR) in the household, who are employed*. We also control for whether the *PFR lives in the household with her own parents or with her parents-in-law*.

The correlation between household financial affluence and women's empowerment appears to be rather ambiguous. For example, Kabeer (2005) has pointed out that women from affluent households are more likely to face cultural restrictions and less likely to participate in paid work outside the home, compared to women from socioeconomically disadvantaged households. However, women from wealthier households might have a bigger say in household decisions than women from poorer households (Musonera & Heshmati, 2016). Thus, we construct several variables about household expenditure and asset-related variables to proxy household wealth and affluence. They make up the fourth group. The *log of per capita expenditure and its square* as well as dichotomous variables capturing whether or not *a household owns livestock, productive and transport-related assets* are included. We also construct a variable to capture *the log of the husband's income* as well as *the percentage share of the PFR's income towards household expenditure*. We also included a dichotomous variable capturing women's *subjective assessment of their social status*. Accordingly, a value of 1 was assigned if women perceived their social status to be better than that of their neighbours, or 0 otherwise. In

addition, we constructed a variable for the log of expected income of the PFR, as this is posited to be an important determinant of women's LFP according to neoclassical theory. However, expected income is not observed for women who are not employed. Therefore, we follow a procedure similar to Klasen and Pieters (2012) and implement a Heckman selection procedure (1979) to impute the incomes for women who are not employed (Appendix 1).

Internalised gender stereotypes can be a significant barrier to women's empowerment (Levy et al., 2020) and have a negative effect on 'power within', or the psychological dimension of women's empowerment (O'Neil et al., 2014). Thus, we incorporate several ordinal variables capturing women's own perceptions about gender roles to explore the correlation between women's internalised gender roles and the different constituents of their empowerment. Two of the variables are about perceptions towards women's employment. The first is that *women do not have to work if men provide for them*. The second is that *household work tends to get neglected if women take up employment*. The responses range from strongly agree (a score of 5) to strongly disagree (a score of 1).

Social capital also tends to play a role in shaping a woman's empowerment (Schuler et al., 2010). As such, we also construct several ordinal variables to capture women's social networks. They capture the extent to which PFRs agree that that they *have friends and relatives in the village they live in, in the district or neighbouring districts, in urban cities like Colombo, Mannar/Vavuniya, Kurunegala, Kandy/Galle, in foreign countries and in government jobs*. Additionally, we capture whether women have *strong relationships with their immediate family members and relatives*. The responses marked on a Likert scale range from strongly agree (a score of 5) to strongly disagree (a score of 1).

The regression analysis is conducted for the two districts separately. We have restricted the sample to only households with a husband, as women heading their households might be in the labour force or making decisions that we consider to be constituents of empowerment, as de facto heads of households. The independent variables submitted to each of the ensuring regression models are presented in Table 2 below. The means and proportions of both outcome and independent variables are presented in Appendix 2. However, before getting on to the econometric analysis, we present a descriptive overview of patterns of land ownership in the

two districts, along with an analysis of women's perceptions of land ownership, women's participation in land-related decisions, usual practices of passing on land to inheritors, and the prevalence land-related complexities such as land access restrictions, land conflicts, and lawsuits.

Table 1: Explanatory variables included in the regression models

Exp. Vars	Outcome variable of interest				
	LFP	Household Decisions	Land-related decisions	Social status	Own happiness
Land-related variables					
PFR sole ownership of house	Yes	Yes	Yes	Yes	Yes
PFR jointly owns house	Yes	Yes	Yes	Yes	Yes
PFR has residential land elsewhere	Yes	Yes	Yes	Yes	Yes
Household owns residential land	Yes	Yes	Yes	Yes	Yes
Household owns agri land	Yes	Yes	Yes	Yes	Yes
Parents owned/own property	Yes	Yes	Yes	Yes	Yes
PFR's characteristics					
PFR's age	Yes	Yes	Yes	Yes	Yes
PFR's age squared	Yes	Yes	Yes	Yes	Yes
PFR's perceived health	Yes	Yes	Yes	Yes	Yes
PFR's education					
Primary or no schooling (reference)	Yes	Yes	Yes	Yes	Yes
Grade 6-9 (Ref: primary or no schooling)	Yes	Yes	Yes	Yes	Yes
10-11 not OL qualified	Yes	Yes	Yes	Yes	Yes
OL qualified, less than AL	Yes	Yes	Yes	Yes	Yes
AL or more	Yes	Yes	Yes	Yes	Yes
Expected wage	Yes	No	No	No	No
PFR is in the labour force	No	No	No	Yes	Yes
Marital variables					
PFR's age at marriage	No	Yes	Yes	Yes	Yes
Age gap between husband and PFR	No	Yes	Yes	Yes	Yes
PFR has more education than husband	No	Yes	Yes	Yes	Yes
PFR and husband have equal education (reference)	No	Yes	Yes	Yes	Yes
PFR has less education than husband	No	Yes	Yes	Yes	Yes
Husband's education					
Primary or no schooling (reference)	Yes	No	No	No	No
Grade 6-9 (Ref: primary or no schooling)	Yes	No	No	No	No

10-11 not OL qualified	Yes	No	No	No	No
OL qualified, less than AL	Yes	No	No	No	No
AL or more	Yes	No	No	No	No
Household characteristics					
Children:					
Children aged 5 or less	Yes	Yes	Yes	Yes	Yes
Children aged 6-11	Yes	Yes	Yes	Yes	Yes
Children aged 12-19 (reference)	Yes	Yes	Yes	Yes	Yes
No of employed adult males	Yes	No	No	Yes	Yes
No of employed adult females (excluding PFR)	Yes	No	No	Yes	Yes
Lives with parents	Yes	Yes	Yes	Yes	Yes
Lives with parents-in-law	Yes	Yes	Yes	Yes	Yes
Income, expenditure and assets					
PFR income as % of HH expenditure	No	Yes	Yes	Yes	Yes
Log of husband's income	Yes	Yes	Yes	Yes	Yes
Per capita household expenditure	Yes	Yes	Yes	Yes	Yes
Per capita household exp. squared	Yes	Yes	Yes	Yes	Yes
Owens livestock	Yes	Yes	Yes	Yes	Yes
Has production equipment	Yes	Yes	Yes	Yes	Yes
Owens transport equipment	Yes	Yes	Yes	Yes	Yes
Perceptions					
If men provide, women don't have to work	Yes	Yes	Yes	No	No
If women work, household work gets neglected	Yes	Yes	Yes	No	No
Social status is better than in the neighbourhood	No	No	No	No	Yes
Happiness about own educational status	No	No	No	No	Yes
Social networks					
Has friends/relatives in this village	Yes	No	Yes	Yes	Yes
Has friends/relatives in this district	Yes	No	Yes	Yes	Yes
Has friends/relatives in big cities	Yes	No	No	Yes	Yes
Has friends/relatives abroad	Yes	No	No	Yes	Yes
Has friends/relatives in government jobs	Yes	No	No	Yes	Yes
Strong relationship with relatives	No	No	Yes	No	No
Strong relationship with immediate family	Yes	No	Yes	No	No

Source: Authors

04. Women’s land ownership: a descriptive overview

Our questionnaire gathered data on a number of questions related to patterns of legal ownership of land and women’s participation in land-related decision-making. This section presents a brief descriptive analysis using this information and lays the backdrop for the econometric analysis that follows. We draw comparisons between the two districts to unpack ways in which customary laws and societal norms and practices are reflected in the land ownership patterns among women, their perceptions about land, and challenges associated with land ownership.

The large majority of respondents from both districts (about 85 percent) live in households that are owned by their households. However, some nuanced patterns emerge when the data is disaggregated by the age group of the respondents. More women from Jaffna aged below 40 live in houses owned by their households than their peers from Kandy. On the other hand, more women from Kandy aged 40 and above tend to live in houses owned by their households compared to women of the same age group from Jaffna.

Table 2: Percentage share of women living in houses owned by household by age group

Age group	Kandy		Jaffna	
	Percentage share	% of women living in own house	Percentage share	% of women living in own house
29 or less	10.9	73.5	9.4	74.7
30-39	25.5	80.3	32.7	83.2
40-49	28.8	89.1	29.5	86.6
50-59	26.9	91.3	18.5	89.0
60 or more	7.9	93.0	9.9	88.0

Source: Land Ownership and Women’s Empowerment [LOWE] (2022) data

Ownership of property respondents live in

Patterns of legal ownership of the houses of respondents reveal some interesting insights. First, in Kandy, a little below half of the properties that the PFR’s family resided in were owned by the respondent’s husband (49.1 percent). In contrast, this share was only 15.5 percent in Jaffna. In Kandy, a little less than 30 percent

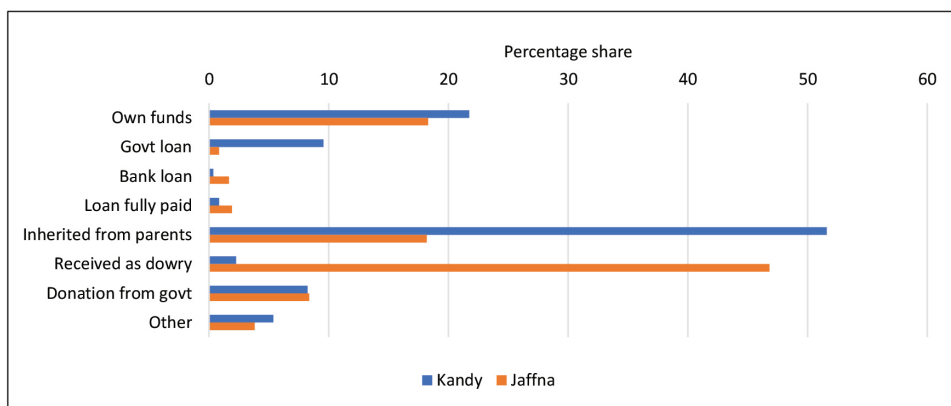
of the respondents themselves owned the property they lived in. This share was just below 24 percent in Jaffna. In contrast, joint ownership of the property by the respondent and her husband was much higher in Jaffna (46.7 percent) than in Kandy (1.5 percent). Overall, the ownership of the property by a woman, whether it is only the PFR, or jointly with husband or other family member or her mother or mother-in-law, was significantly high in Jaffna (78.4 percent) compared to Kandy (38.4 percent). Thus, despite its discriminatory provisions in the Thesawalamai law towards a married woman's ability to exercise control over her land without her husband's consent, it does not seem to particularly preclude women from legally owning land. In fact, it is generally favourable towards the recognition of property and the inheritance rights of girls (Guruparan, 2016; Isankhya Udani, 2018; Tambiah, 2004).

How the household has come to own the residential property they live in seems to play a key role in who legally owns the property in both districts. The majority of households in Kandy have come to own their property through inheritance (52 percent), and such property is by and large owned by the husband. On the other hand, many households in Jaffna have come to own their residential property in the form of dowry (47 percent), and such property is generally jointly owned by the husband and wife (59 percent). About 32 percent of property gifted as dowry in a marriage is owned only by women. It is very rare that such a property is owned only by the spouse (about 1 percent) in Jaffna. Property gifted as dowry is only a meagre 2 percent among the different sources of property ownership in Kandy. Thus, in Jaffna, the dowry system seems to encourage women's legal ownership of the property they lived in.

The next most common method of how households have come to own their residential property is using their own finances. Approximately a fifth of the sample from both districts have purchased the property they live in using their own funds. Where this is the case, in Kandy, the legal title is predominantly in the name of the husband (55 percent). Only a little less than a quarter of such property is in the PFR's name (24.2 percent) in Kandy. However, in Jaffna, even the property a household has bought with their own funds are largely held jointly by the PFR and the spouse (52.3 percent). Nonetheless, unlike with property owned through dowry, in this situation the husband tends to own the property (30 percent) more than the PFR (5.2 percent). Roughly similar shares of households from both districts have

also come to own their residential property as donations from the government. The use of loans, especially bank loans, to purchase residential property is relatively less in both districts. In Kandy, however, a little below a tenth of the sample have used government loans to purchase their residential property.

Figure 1. Sources of ownership of current residential property



Source: LOWE survey data (2022)

More households from Jaffna than Kandy have a deed to the residential property they lived in. Compared to 96.7 percent of the sample from Jaffna, only about 84.1 percent of the sample from Kandy own a deed to their residential property. Households without a deed is only 3.1 percent in Jaffna. This share is about 15.5 percent in Kandy. Nonetheless, the majority of the sub-sample in Kandy that do not have a deed live in property inherited from parents. In both districts, those living in houses donated by the government do not have a deed to such property. In Jaffna, the large the majority of the deeds (97 percent) are *Sinnakkara*³ deeds. In Kandy too, most households own a *Sinnakkara* deed (71 percent). However, a non-trivial share of households has tenancy (9.5 percent) and *Swarnabhoomi*⁴ deeds (5.6 percent). About 6.4 percent are squatters.

3 Individual deeds

4 This is a long lease given to a household occupying a government-owned land. The Swarnabhoomi deed constitutes a legal title without the right to disposal.

Ownership of land elsewhere

Most households in both districts do not own land elsewhere in the country. Only about 29 percent and 25 percent of the households in Jaffna and Kandy, respectively, own property other than their residential property. The ownership of commercial land is negligible, and will not be discussed further. In Kandy, about 60 percent of the households that have land elsewhere in the country own residential property. About 38 percent of the households own agricultural property. The shares of households in Jaffna that own residential and agricultural property are 53 percent and 46 percent, respectively. The average agricultural land extent is larger in Jaffna (about 150 perches) than in Kandy (90 perches). But the average residential land extent is similar in the two districts (about 96 perches).

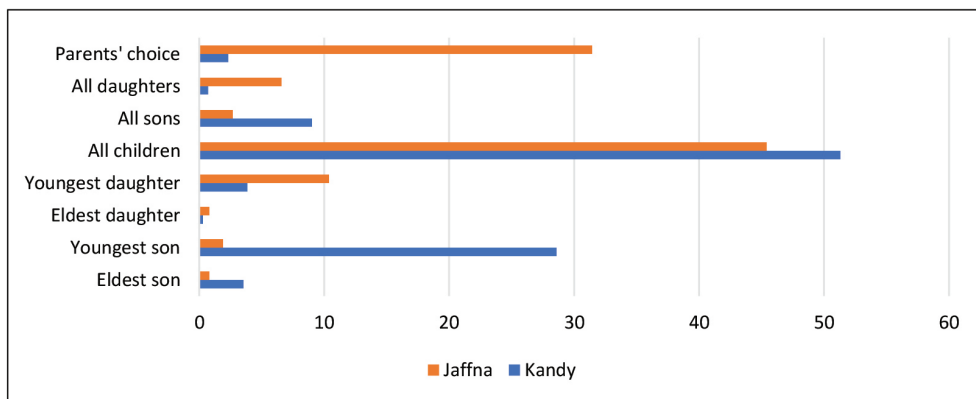
In most households, residential property owned elsewhere is only in the name of the husband. This share is in fact much higher in Jaffna (60 percent) than in Kandy (48 percent). About 23 percent of the respondents from Jaffna and Kandy districts own such property on their own. Only a very negligible number of respondents from both districts own agricultural land. A little over a tenth of the households in Kandy has received land from the government. This share is somewhat lower in Jaffna (9.5 percent). About 83 percent of the respondents in Kandy have/had parents who owned land, while this share is about 76 percent in Jaffna.

Land inheritance patterns

The land inheritance patterns show that land tends to be passed on considerably more to sons in Kandy (41 percent) than in Jaffna (5 percent). In both districts, the common practice is to pass on the land to all children after the demise of parents, although this practice seems to be more common in Kandy (51 percent) than in Jaffna (45 percent) (Figure 3). Note that it is more common for land to be passed on to sons in Kandy than in Jaffna, mostly to the younger son (29 percent). In Jaffna, a common practice seems to be passing on land to the inheritor named by the parents (31 percent) which is very rarely practised in Kandy (2.3 percent). As expected, it is also more common in Jaffna for land to be passed down to daughters (11 percent), especially the youngest daughter (10 percent), than in Kandy (4 percent). Overall, the differences in the tendencies to pass on land to male and

female inheritors might allude to the underlying provisions towards sons and daughters in the customary laws governing land ownership in the two districts.

Figure 2: Customs on land inheritance



Source: LOWE survey data (2022)

Changes in land ownership of household since marriage

Next, we inquire into how the land ownership of the household has changed since the PFR was married. In Jaffna, most households have experienced an increase in the land and property in the husband's name after marriage (55 percent). A little less than two fifths of households have seen no change, while about 5 percent have experienced a decline in the husband's land ownership since marriage. In Kandy, about 41 percent of households have experienced an increase in the land ownership in the husband's name, and a further 54 percent have seen no such change. More intriguing are the differences in the changes in the respondents' ownership of land following marriage.

Overall, marriage seems to bode well for the land ownership of both the husband and wife in Jaffna. This does not seem to be the case in Kandy. About 58 percent of the respondents in Jaffna have experienced an increase in the land in their name after marriage. About 36 percent have not experienced a change, and only about 4 percent of the respondents have seen the extent of land in their name decline after marriage. On the other hand, in Kandy, only a little below a quarter of the respondents have experienced an increase in the land in their name post-marriage, and about 67 percent have seen no difference. About 6 percent of the respondents

have experienced a decline in the land in their name following marriage. Overall, more respondents from Jaffna (69 percent) have experienced an increase in the land ownership of the household as a whole, than from Kandy (50 percent). At the same time, more respondents from Jaffna (4 percent) than Kandy (1 percent) have experienced a decline in household land ownership.

In Kandy, the increase in land ownership following marriage is much higher among husbands than wives, and points to potential disadvantages married women in Kandy face in owning land. In fact, over three-fourths of both inherited and purchased land in Kandy is owned by husbands. In contrast, in Jaffna, purchased land is generally owned jointly by the respondent and her husband (52 percent), although it is still more common for such land to be in the husband's name (31 percent), than in the respondent's name (6 percent). Furthermore, inherited land in Jaffna is owned by both women (32 percent) and men (33 percent) in roughly equal proportions. Joint ownership of such land is also much more common in Jaffna (20 percent) than in Kandy (1 percent).

Complications related to land ownership

Ownership of land is associated with numerous legal, socioeconomic, and cultural complications. In the survey, we enumerated several of such possible complications to understand to what extent respondents grapple with such issues in relation to the land owned by them and their households. Specifically, we gathered information on issues related to land access, eviction, loss or fortification of land, and lawsuits.

The complications related to land ownership are somewhat different in the two districts. For example, land access restrictions are a more common problem in Jaffna than in Kandy. About 56 percent of the respondents in Jaffna are restricted from land they legally own. This share is only 5 percent in Kandy. While problems related to land access are more common in Jaffna, fear of eviction is more of a problem in Kandy. In both districts, only a very few households have been forced to fortify their property. The share of households involved in legal action regarding land is also negligible in both districts. In Kandy, close to a third of the sample (31 percent) constantly worry about the possibility of being evicted, while a little over a tenth worry about it sometimes. In contrast, only about 22 percent of the respondents from Jaffna have a constant fear of eviction. More respondents from

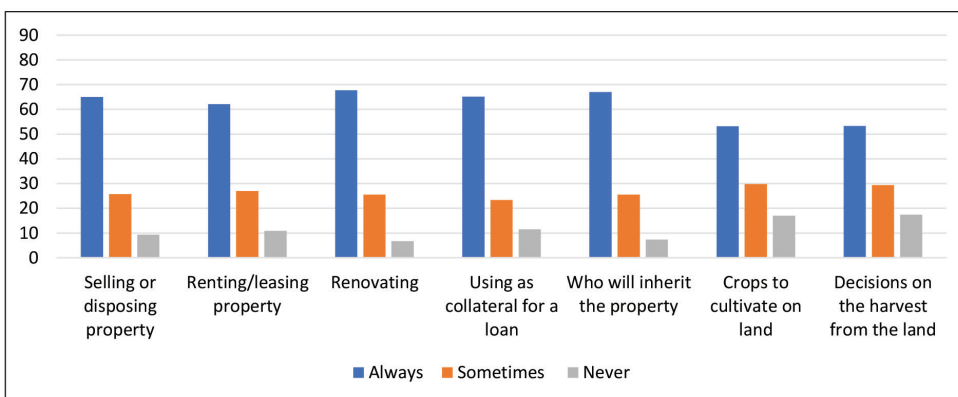
Kandy (12 percent) than Jaffna (about 3 percent) have lost or forfeited land they have previously owned. The military occupation of land is the most common reason in both districts (9 and 2 percent in Kandy and Jaffna, respectively). In both districts, only a negligible share of respondents (4 percent and 1 percent in Kandy and Jaffna, respectively) has ever resorted to taking legal action over issues of land ownership.

Women's participation in land-related decisions of the household

Legal title to land often does not always mean that women have effective ownership or control over land. Therefore, we next look at women's participation in land-related decision-making within the household to understand the extent to which they actually have control over land owned by households.

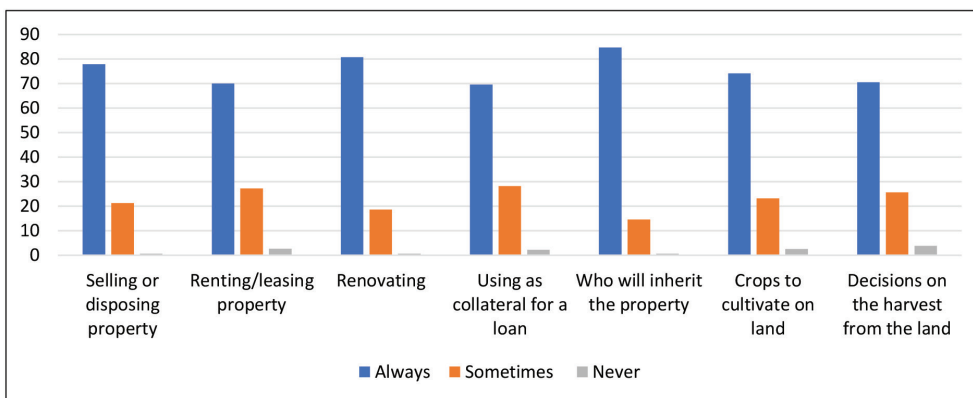
Clearly, in both districts, women tend to participate more in decisions related to land if they have sole or joint ownership of property. By and large, most women from both districts seem to be involved in decisions pertaining to land. However, fewer women from Jaffna, compared to Kandy, are excluded from land-related decisions. This could be because more women in Jaffna, compared to Kandy, have legal ownership of land. However, they are less likely to be involved in decisions related to the use of land as collateral. Nonetheless, compared to the share of women in Kandy who are never likely to be consulted about using land as collateral (11.5 percent), the corresponding share for Jaffna is negligible (2.3 percent). In Kandy, a little over two-thirds of women are always consulted on decisions related to renovations, with a similar share on who will inherit the property. Women are less likely to be always consulted in relation to renting or leasing property in the Kandy district. Overall, the percentage of women who will be always consulted about all the enumerated decisions is greater in Jaffna than in Kandy.

Figure 3: Women’s engagement in land-related decisions in Kandy (Percentage share)



Source: LOWE survey data (2022)

Figure 4: Women’s engagement in land-related decisions in Jaffna (Percentage share)



Source: LOWE survey data (2022)

Women’s perceptions of land ownership

Next, we look at how women perceive ownership of land. The descriptive analysis uncovers some subtle differences between the two districts. The patterns suggest that the large majority of women in both districts tend to recognise the importance of land as an economic resource. Most women from Kandy (96 percent), and nearly all women from Jaffna agree that land ownership gives a woman security and self-worth. Similar shares of women from the two districts also recognise that

land ownership provides women with an income-earning opportunity. Yet, more respondents from Jaffna (23 percent) believe that land is not useful to women in the absence of a husband or a male relative. In comparison, only about a tenth of the respondents from Kandy believe this to be the case.

Land ownership tends to have a more significant bearing on the marital prospects of women in Jaffna than in Kandy, a belief that seems to reconcile with their views that land should be legally passed on to daughters. In Jaffna, about 93 percent of the respondents believe that parents should always give their daughters land, compared to only about 59 percent of women from Kandy who hold a similar view. Yet, about 62 percent of the respondents from Jaffna believe that men should have control over land even if women were to legally own land. However, only about 38 percent of the respondents from Kandy share this view. The responses to the next question explain the differences in gendered perceptions of the ownership and operationalisation of land. About 91 percent of the respondents from Jaffna believe that it is difficult for women to get married if they do not own land. The share of respondents from Kandy who believe this to be true is significantly much less (16 percent). These findings echo the opinions expressed by some of the participants in a study published by the People's Alliance for Rights to Land (PARL) (2020). The report pointed out that the importance of giving a dowry to a daughter, and the social stature associated with having a dowry to give their daughters in marriage, was a source of pressure for women. The report also pointed out that the non-availability of land to be given in dowry would make negotiations of a good marriage precarious for daughters. Thus, in Jaffna, the legal title to land seems to be an important criterion for women's marital prospects, rather than its use as an economic resource. Furthermore, in both districts, the majority of women agree that it is difficult for women to deal with conflict over land boundaries with relatives or neighbours, although this share is somewhat higher in Jaffna (69 percent) than in Kandy (62 percent). About 49 percent of the respondents from Jaffna believe that it is difficult for women to deal with the military to get their land back. In Kandy, this share is 32 percent.

Summary

The main objective of this section was to provide a descriptive backdrop to the ensuing chapters by exploring patterns of land ownership, women's involvement

in land-related decision-making, the land-related challenges women grapple with and their perceptions about land ownership. Since this section covered a significant amount of descriptive data, the highlights of this overview are summarised below.

The analysis has clearly shown that more women in Jaffna than in Kandy own land, either in their own name or as joint title holders. Joint land ownership is quite rare in Kandy, and most respondents do not have property in their name. Furthermore, in Jaffna, households have come to own the properties they currently live in through both dowry and inheritance, but in Kandy, mainly through inheritance. By and large, the inheritance patterns in Jaffna seem to favour women, and in Kandy, men. Even when the respondent's residential property has been purchased with a household's own funds, the ownership patterns of such property are more varied in Jaffna, and a notable share of women tends to own them. But, in Kandy, property owned thus is generally solely owned by the spouse. In both districts, only a few respondents have built houses using loans.

While most households in both districts own *Sinnakara* deeds, a fairly sizeable number of households in Kandy have *Swarnabhoomi* deeds to their properties. While in Jaffna, there has been an increase in the properties owned by both the respondent and her husband after marriage, in Kandy, it is mainly the property owned by the husband that has increased, after marriage. Only a small percentage of households have land elsewhere in the country, and much of this property is residential or agricultural. While some of such residential property is in the respondent's name, the bulk of it is in the husband's name. Only a relatively small share of households owns agricultural land, and only a very negligible number of respondents own such productive land themselves.

Overall, not many households grapple with land-related complications such as access restrictions, eviction, fortification or court cases. Access restrictions to land are more common in Jaffna while the fear of eviction is a bigger concern among households in Kandy. Next, women's participation in decision-making about land is more pronounced in Jaffna, where relatively more of them are involved than women from Kandy. By and large, women are consulted less in decisions taken on activities related to agricultural land. In relation to residential property, women are consulted particularly less regarding decisions about using such property as collateral for loans.

Finally, perceptions about women's land ownership point to the operational challenges women face in accessing and using land. The large majority of women agree that land gives women security and self-worth, and recognise that land is a useful source for income generation. However, more women from Jaffna than Kandy think a woman cannot make use of land without a man. Although many women from Jaffna agree that land should be passed on to daughters, they still believe that men should have control over land. These perceptions could be underpinned by the value attached to land as a dowry as many women from Jaffna believe it is difficult to get married without property in a woman's name. Thus, clearly, perceptions of land ownership in Jaffna are governed by the utility of land in the marriage market. We do not observe this in Kandy. We also observe that more women from Jaffna than Kandy find it more difficult to tackle conflicts about land boundaries with friends and neighbours or get back land from the military without the help of a man.

In sum, these descriptive patterns seem to reflect the cultural, societal, and legal values attached to land in the two districts. In Jaffna, the importance of land as a dowry appears to be a catalyst to pass on land to daughters to strengthen their marital prospects. Much of the land that has been given as dowry is either jointly or individually owned by women. This is much less common in Kandy. Furthermore, while there are benefits to women in having legal ownership of assets, such as greater participation in decision-making related to land, many women, especially from Jaffna, recognise and perceive land to be relatively useless without men's support. Although women seem to recognise the intrinsic value of land to them, its utilitarian value is by and large dependent on the presence of men, especially when it comes to tackling problems related to land.

05. Labour force participation

As discussed earlier, the challenges of meaningfully quantifying empowerment have led us to examine the correlations between women's land ownership and different dimensions of women's empowerment. We first look at the results for the first dimension of women's empowerment, i.e., LFP (Table 3). The independent variables are grouped under eight categories, which are introduced progressively into the models to build more robust results. For brevity, only the extended model is presented and discussed.

Table 3: Factors associated with the probability of LFP among respondents – Marginal effects of logistic regression

	Jaffna	Kandy
	$\beta(SE)$	$\beta(SE)$
<i>Land variables</i>		
PFR alone owns the property household lives in	-0.0122 (0.065)	-0.1211** (0.056)
PFR jointly owns the property HH lives in	-0.0724 (0.061)	0.2114*** (0.066)
PFR alone owns residential property elsewhere	-0.0612 (0.037)	0.0773 (0.068)
Household owns residential property	-0.0184 (0.080)	-0.0307 (0.035)
Household owns agricultural property	0.0865 (0.054)	-0.0093 (0.057)
Parents owned/own property	0.0506 (0.038)	0.086 (0.072)
<i>PFR's characteristics</i>		
Predicted wage	-0.1045 (0.092)	-0.0443 (0.127)
PFR's age	0.0661*** (0.011)	0.0415** (0.020)
PFR's age squared	-0.0008*** 0.000	-0.0006** 0.000
PFR's perceived health	0.0479 (0.053)	0.0292 (0.023)
Grade 6-9‡	-0.1126** (0.052)	-0.1943*** (0.066)
10-11 not OL qualified‡	-0.1930***	-0.1894***

	(0.055)	(0.063)
OL qualified, less than AL‡	-0.0845*	-0.1843***
	(0.043)	(0.068)
AL or more‡	0.3346***	0.0773
	(0.055)	(0.068)
<i>Husband</i>		
Grade 6-9	0.0313	0.0131
	(0.058)	(0.072)
10-11 not OL qualified‡	0.1146	0.0567
	(0.075)	(0.048)
OL qualified, less than AL‡	-0.1296**	-0.0725
	(0.051)	(0.050)
AL or more‡	-0.0027	0.1668***
	(0.058)	(0.050)
Log of income for husband	-0.0384	-0.0608***
	(0.035)	(0.023)
<i>Household characteristics</i>		
Children 5 or less†	-0.0581***	-0.0368
	(0.018)	(0.046)
Children 6-11†	-0.0234	0.0056
	(0.024)	(0.030)
Lives with parents	0.1410***	0.1119**
	(0.043)	(0.054)
Lives with parents in law	-0.0278	-0.0085
	(0.104)	(0.041)
No. of ill/disabled	-0.0675	-0.064
	(0.049)	(0.047)
No. of employed men	0.0365	0.0630**
	(0.045)	(0.025)
No. of employed women	-0.0418	0.0648
	(0.036)	(0.043)
<i>Income and productive assets</i>		
Per capita household expenditure	0.0693	0.0171
	(0.094)	(0.129)
Per capita household exp. squared	-0.003	0.0083
	(0.014)	(0.020)
Owens livestock	-0.0333	-0.0414
	(0.035)	(0.066)
Has production equipment	-0.0158	0.1045
	(0.031)	(0.082)
Owens transport equipment	-0.0134	0.053
	(0.058)	(0.048)
<i>Perceptions</i>		

If men provide, women don't have to work	-0.0202 (0.015)	-0.0606*** (0.016)
If women work, household work gets neglected	-0.0517** (0.024)	-0.0146 (0.013)
<i>Social networks</i>		
Friends/relatives in this village	-0.0295*** (0.010)	-0.0158 (0.016)
Friends/relatives in this district	-0.0224 (0.018)	0.0124 (0.020)
Friends/relatives in big cities	0.0443** (0.020)	0.0211 (0.018)
Friends/relatives in foreign countries	-0.0267* (0.014)	-0.0213 (0.015)
Friends/relatives in government jobs	0.0467*** (0.015)	0.0159 (0.018)
Strong relationship with immediate family	-0.0165 (0.018)	-0.0342** (0.016)
<hr/>		
P	.	.
AIC	704.3922	817.908
BIC	817.63	899.23
N	685	677

Source: LOWE survey data (2022)

Notes: Reference groups are ‡ Primary or less; † Children aged 12-19. Models are clustered at the Divisional Secretariat's division level for robust standard errors, given in parentheses; Significance level denoted by * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ at ten percent, five percent and one percent, respectively. See Appendix 2 for the means and proportions of the both outcome and independent variables.

The results suggest that land ownership is not a significant predictor of women's LFP in both districts. In Jaffna, none of the land-related variables has turned up statistically significant. However, the direction of association shows clear patterns. Residential property ownership, irrespective of who in the household owns it, has a negative effect on women's LFP in Jaffna. These results recall the findings of a recent study in Pakistan which observes a negative relationship between female LFP and the expected amount of dowry (Makino, 2021). An earlier study exploring drivers of women's LFP in a district in Punjab, India has also observed that women from households that own house and land are less likely to participate in the labour market (Hafeez & Ahmad, 2002). Agricultural land ownership, on the other hand, encourages female LFP in

Jaffna. Thus, it could be that productive land ownership, rather than residential property ownership, tends to encourage women's LFP in Jaffna. Overall, the statistical insignificance of the coefficients questions the importance of land as an economic resource in Jaffna.

In Kandy too, having the sole ownership of the house the respondent lives in makes it 12 percent less likely that she will join the labour market. The marginal effects are significant at the 5 percent cut off. Thus, clearly in Kandy, sole ownership of residential property tends to discourage women's LFP. On the other hand, the joint ownership of such property increases the probability of a woman's LFP by a substantial 21 percent, and the marginal effects are significant at the stringent 1 percent cut off. However, we are cautious about interpreting the coefficient on joint home ownership, given the few numbers of observations here. None of the other land-related variables has turned up significant for Kandy. Note, however, that unlike in Jaffna, the ownership of agricultural land is inversely associated with women's LFP in Kandy.

The results underscore the spatial heterogeneities in the implications of both non-productive and productive land ownership for women's LFP. Residential property ownership in Jaffna could possibly allude to a higher bargaining position for women within the household, given that, by and large, women have inherited land from their parents and brought it into the marriage as dowry. Such women might be in a position to choose not to work, if they do not want to. The descriptive statistics analysis also clearly pointed to the value of land attached to women's marital prospects in Jaffna, further supporting this idea.

Among the PFR's own characteristics, age has a larger positive effect on female LFP in Jaffna, compared to Kandy. Women from Jaffna are 7 percent more likely to participate in the labour market as their age increases by a year, compared to women from Kandy who are only about 4 percent more likely to participate. The square of age is inversely related to women's LFP in both districts. Although the results are significant, the marginal effects are negligible. The results suggest that while the probability of LFP tends to increase with age, it tends to wear off as respondents get older. These results corroborate those observed by Gunatilaka and Vithanagama (2018) on women's LFP in the Northern Province.

The results in relation to education show that in both districts women with the highest educational attainments, compared to those with primary or no education, are more likely to participate in the labour force, in line with the idea that Sri Lanka's labour market tends to reward academic credentials (Gunatilaka, 2013a, 2013b; Gunatilaka & Vithanagama, 2018; Himaz & Aturupane, 2011). Women from Jaffna with GCE AL or higher qualifications are about 33 percent more likely to participate than those without education or only with primary education. The corresponding marginal effects for women from Kandy are not significant and are much smaller in magnitude.

While the direction of association between women's educational attainments and their LFP is the same in both districts, there are differences in the size of the marginal effects. For example, women from Kandy are 19 percent less likely to participate if they are educated only up to Grade 9, than if they had no schooling or primary education only. This negative effect is only about 11 percent in Jaffna. The negative marginal effects of an education up to Grade 11 (but not qualified in GCE OL) on women's LFP are roughly the same size for both districts. Women from Jaffna who are qualified in their GCE OL, but not GCE AL are about 8 percent less likely to participate than those without education or only with primary education, but the marginal effects are significant only at 10 percent. The corresponding marginal effect for women from Kandy is about twice as much at 19 percent, and is significant at 1 percent.

Marginal effects of the husband's education on women's LFP suggest that being married to a better educated spouse tends to discourage women's LFP more strongly in Jaffna than in Kandy. For example, when husbands are qualified up to GCE OL, women in Jaffna are about 13 percent less likely to join the labour force. In Kandy, when husbands have GCE AL or higher qualifications, women are about 17 percent more likely to join the labour force. This observation corroborates the idea that men with higher educational outcomes might have more egalitarian attitudes towards gender roles and women's work compared to men with lower levels of education (Elamin & Omair, 2010; Hafeez & Ahmad, 2002; Solera, 2019). It is also likely that men with high educational outcomes might have the social connections

and affluence to help find and secure socially desirable employment opportunities for their spouses than men with low educational achievements.

Yet, such high educational attainments of the husband have a negative effect on women's LFP in Jaffna, although the results are statistically insignificant and negligible in size. This could be symptomatic of patriarchal values that are deeply entrenched in the Northern society (Sarvananthan, 2015). It may also reflect status consciousness. While an increase in the log of husband's income has a negative effect on women's LFP in both districts, only the marginal effects for Kandy are significant. An increase in the log income of the husband decreases the probability of LFP among respondents from Kandy by about 6 percent. These results point to the 'income effect' of men's higher status which discourages women from taking up work (Solera, 2019). Thus, the 'husband effect', as Solera (2019) terms it has two opposing effects on women's LFP. While a husband's higher educational outcomes might bode well for women's LFP, an increase in his income might have a negative effect on it. However, values and norms also tend to have an effect on how the 'husband effect' shapes women's LFP.

The presence of children appears to be more of a deterrent for women's LFP in Jaffna than in Kandy, and could be attributed to the more rigid gender values operational in Jaffna compared to Kandy. Having small children (aged 5 or less) makes it about 6 percent less likely that a woman from Jaffna will participate in the labour force. The corresponding results for Kandy are insignificant. In contrast, living with parents seems to have a positive effect on women's LFP in both districts. However, the statistical robustness and the magnitude are much greater in Jaffna, where women are about 14 percent more likely to participate if they live with parents, and the results are significant at 1 percent. Although an increase in the number of men who are employed has a positive effect on women's LFP in both districts, the results are significant only for Kandy.

None of the income or asset-related variables is a significant predictor of women's LFP in both districts. Negative perceptions about women taking up work appear to hold back women from joining the labour force in both districts. The idea that women need not work if men provide for them makes it a statistically significant 6 percent less likely that women from Kandy will participate in the labour force. On the other hand, the idea that household work is neglected if women take up work

makes women from Jaffna about 5 percent less likely to participate. The marginal effect is significant at 5 percent.

Variables capturing the strength of social networks suggest that in Jaffna the women's LFP decisions appear to be more strongly shaped by social networks, compared to Kandy. For example, while strong social networks closer to home have a detrimental effect on women's LFP in both districts, the marginal effects are significant only in Jaffna. Women from Jaffna are about 3 percent less likely to participate if they have strong networks in the village. Connections in Colombo, Mannar/Vavuniya, Kurunegala or Kandy/Galle have a positive and significant effect on the LFP among women from Jaffna, as do connections with relatives and friends employed in government jobs. Having friends and relatives abroad seems to keep women from Jaffna away from the labour market, which might proxy the income effect on women's LFP. In Kandy, close ties with immediate family seem to deter women's LFP. Although this is also true for Jaffna, the results are insignificant. These results are generally symptomatic of the ways in which gender norms and values might be reinforced through their networks. On the other hand, the deterrent effects of having family abroad could be related to remittances that households might receive from such relatives, which obviates the necessity for a woman to seek work.

In summary, this section has looked at the association between women's LFP and land-related variables controlling for a number of variables related to PFR's own characteristics, marital characteristics, household features, asset and expenditure-related characteristics, as well as perceptions about gender norms, and strength of social networks in the two districts.

The results have shown that overall, land ownership does not have a significant relationship with the probability of women's participation in the labour force. Residential land ownership typically discourages women's LFP. As it is poverty and necessity that typically tend to drive high female LFP in developing countries (Verick, 2014, 2018), it stands to reason that women who own residential property are less likely to seek paid work. The inverse association between sole (and joint) house ownership and women's LFP suggests that women who own property are unlikely to seek work, other characteristics being equal.

Next, the positive association between parental property ownership and women's LFP points to the intrinsic value of land as a status symbol or an indicator of financial affluence. Women from such households are likely to participate in the labour market as a matter of choice rather than out of necessity.

The bulk of the control variables has turned out as expected. The respondents' human capital variables work well in line with theory. Educational outcomes are in line with the existing empirical literature. Women with high education outcomes are quite likely to participate in the labour market, especially in Jaffna. The nuances in the 'husband effect' in the two districts allude to the potential differences in the gendered expectations of women. Childcare responsibilities also appear to be a bigger deterrent for the LFP among women from Jaffna, than from Kandy. Clearly, living with parents bodes well for women's LFP in both districts, indicating that women might have greater freedom of choice and/or greater bargaining power vis-à-vis their husband than if they were living with in-laws. Women might also be more comfortable leaving their children with their parents than in-laws. Gender perceptions also show that women who have internalised their roles as primary caregivers are less likely to participate in the labour force. Variables on social networks suggest that in Jaffna in particular, strong relations with immediate family as well as relatives and friends living in close vicinity have a negative effect on women's LFP, alluding to the role of such networks as reinforcing rigid gender norms. In contrast, strong relations with relatives and friends in major cities or government jobs bode particularly well for women from Jaffna, highlighting the potentially important role of contacts and networks in helping women secure gainful employment. The negative effect of having strong relations with family and relatives abroad on women's LFP in Jaffna further points to the competing ways in which needs and opportunities seem to push and pull women into the labour market.

06. Household decision-making

The next dimension of empowerment we focus on is related to decision-making. We consider women's autonomy in decision-making to be a constituent of the broader concept of empowerment. As mentioned earlier, we consider two types of decisions, namely those related to household expenditure and land. In this section, we look at the results of household decision-making (Table 5). The outcome variables of interest are whether women make completely independent decisions about expenditure related to food, health, education, and household maintenance. The independent variables are grouped under eight headings and the regression analysis is conducted separately for each district. The discussion of results (Table 6) is largely limited to statistically significant results for brevity.

As in the preceding section, we begin with a discussion of the land-related covariates. Land-related variables do not seem to have a statistically significant effect on women's autonomy on household expenditure-related decisions in both districts. While the sole ownership of the house the PFR currently lives in has a positive effect on women's decision-making related to all four enumerated decision types, the results in Jaffna have turned up significant only in relation to maintenance expenditure. The marginal effects which are significant at the 5 percent cut off are sizeable at 20 percent. Given that women (and not just the PFR) own land more than men in Jaffna, as noted in the descriptive analysis, it makes sense that women are more likely to make independent decisions about maintenance expenses.

Joint ownership of the residential property the PFR lives in generally makes it less likely that women will make any of the decisions on their own, although the marginal effects are insignificant. The results are mixed, and largely significant, in both districts when women own residential property elsewhere in the country. Only the marginal effects of educational expenditure in Jaffna have turned up significant. The results show that in Jaffna, women who own residential property elsewhere in the country are about 8 percent less likely to make independent decisions about educational expenditure.

In Kandy, women from households that own residential property elsewhere are less likely to make independent decisions about all four enumerated decisions. The results, however, are significant only in relation to maintenance expenditure, and

at 10 percent, the marginal effect is fairly sizeable. The results, albeit insignificant, are more mixed in Jaffna.

Household ownership of agricultural land is by and large positively associated with women's sole decision-making related to all four expenditures, although none of the marginal effects is significant. In Jaffna, parental property ownership has mixed effects on women's autonomous decision-making in the four expenditure categories. But, in Kandy, the marginal effects are positive in all four models, meaning women whose parents have owned/own land are more likely to make independent decisions related to the enumerated expenditures. However, the marginal effects are significant (at 10 percent) only for education. If parents have owned/own land, women from Kandy are about 8 percent more likely to make independent decisions related to educational expenses.

Although most of the land-related variables were insignificant, the directions of associations of the coefficients with the outcome variables corroborate the findings from the earlier analysis on women's LFP. Reflecting on the analysis of factors associated with women's LFP, we found that women who owned the homes they lived in were less likely to participate in the labour force. Therefore, it makes sense that such women might be fully engaged in household work, and make independent decisions on household expenditure. The results corroborate the findings of Valera and colleagues (2018) who found that women's land titles have a positive and significant effect on women's participation in all enumerated family decisions. The negative effect of joint title ownership to the properties they live in, on women's autonomous decision-making resonates with Doss et al.'s (2014) observations. They found that in Malawi, Tanzania and Mali, when women had joint titles, than when they had sole ownership, they were less likely to participate in household decision-making. However, in India, the patterns were similar to what is observed here, i.e., joint land ownership was inversely related to women's participation in household decisions, although the coefficients were insignificant.

The results raise the question of which aspect of land ownership might influence women's empowerment, its intrinsic value as a source of self-worth or security, or its utilitarian value as a source of income generation and livelihoods. To elaborate, the positive, albeit statistically insignificant, effect of agricultural land ownership on

the probability of women's autonomous decision-making, suggests that ownership of productive land bodes well for women's empowerment. However, so does sole ownership of the residential property households live in. Yet, joint ownership of residential property or ownership of residential property elsewhere has mixed or negative effects on women's autonomy in decisions about household expenditure.

Few of the characteristics of the PFR appear to influence the probability of women's autonomous decision-making on household expenditure. In Kandy, a woman's age, its square, or her perceived good health has no statistically significant effect on the probability of her participation in household decision-making. In Jaffna, women are about 3 percent more likely to make independent decisions about health and household maintenance expenditure, and the coefficients are significant at 5 and 10 percent cut-offs, respectively. But the probability of making autonomous decisions about health expenditure tends to decline with age, although very marginally.

None of the PFR's education-related variables has turned up significant in Jaffna, and only a few in Kandy. The results generally suggest that women with higher educational outcomes are less likely to make autonomous decisions about all four enumerated expenditures, compared to women with only a rudimentary education. The marginal effects for the Kandy sub-sample are significant at some level for food, education, and health expenses mainly for women who are qualified up to GCE OL.

The age gap between the PFR and her spouse has a negative effect on her autonomous decision-making across all four decisions for women in Jaffna, and for all but maintenance-related decisions for women in Kandy. All the marginal effects are negligible in magnitude, and are insignificant in Kandy. In Jaffna however, an increase in the age gap between the PFR and her spouse by one year has a statistically significant, albeit very small, negative effect on a woman's autonomous decision-making on education, health, and maintenance expenses. Thus, having an older partner seems to affect women's full participation in household decision-making, especially in Jaffna. In contrast, women's age at marriage does not seem to have a statistically significant effect on such decision-making.

In both districts, women who are better educated than their husbands are more likely to make independent decisions about all four expenditure types, than women

who have similar levels of education as their husbands. However, only the marginal effects related to health have turned up significant for Jaffna, and that too only at 10 percent. Thus, women from Jaffna who have higher educational outcomes than their husbands are about 8 percent more likely to make independent decisions about health-expenditure of the household, compared to women with similar education outcomes as their husbands. In Kandy, women with higher educational outcomes than their husbands, compared to those with similar levels of education as their husbands are about 10 percent, 11 percent, 14 percent and 16 percent more likely to make autonomous decisions related to food, health, education and household maintenance expenditure respectively. All marginal effects are significant at some level. Thus, having a higher education than the husband bodes well for women's decision-making role in the household in Kandy, than in Jaffna. Moreover, a good education seems to influence women's bargaining power more positively within the household than land ownership, especially in Kandy.

Among household characteristics, the presence of children has mixed effects on women's autonomy in decision-making about household expenditure in both districts. The presence of children aged 5 or less, compared to older children (aged 12-19) has no statistically significant effect on decision-making, except in Kandy in relation to education expenditure. In such households in Kandy, women are about 8 percent less likely to make autonomous decisions about education expenditure. In Jaffna, an increase in the number of children aged 6 to 11 compared to older children (aged 12 to 19) has a statistically significant positive marginal effect of 8 percent and 3 percent on the probability of women's autonomous decision-making on food and education expenditure, respectively. It is however difficult to glean from this information whether the autonomous decision-making based on child-related variables stems from women's gender roles as primary caregivers and therefore is her responsibility, or whether she makes independent decisions because she has the freedom to do so.

The kind of extended family women live in also seems to have an impact on their decision-making autonomy. As we observed for LFP, living with parents seems to benefit women in both districts in making independent decisions about household expenditure. In Jaffna, women living with their parents are 16 percent and 9 percent more likely to make autonomous decisions on food and health expenditure,

respectively. In Kandy, the corresponding marginal effects are 9 percent and 15 percent for food and health expenditure, respectively. Living with in-laws generally has a negative effect on women's autonomous decision-making in both districts, although the marginal effects are insignificant.

Among variables capturing income and productive assets of households, only a few have turned up statistically significant in the two districts. In Jaffna, an increase in the share of the PFR's contribution to household expenditure makes it a statistically significant and numerically substantial 18 percent less likely that she will make independent decisions about any of the four expenditures. They are also about 6 percent less likely to make autonomous decisions on health expenditure, although here the marginal effects are significant only at 10 percent. The results are more mixed and statistically insignificant in Kandy. While at a first glance the negative effect of an increased contribution to household expenditure on a woman's sole decision-making appears to be counterintuitive, several reasons make this relationship plausible. If a woman is gainfully employed, she might not have the time or energy to make such decisions on her own and therefore, delegate some of this decision-making to other household members. This might be especially true for food expenditure. Another argument is that a woman who contributes substantially towards household expenditure might deliberately involve her husband or another household member in making these decisions. This can be a strategy to avoid potential household conflicts stemming from the aberration of gender norms as she plays an income-earning role that is traditionally considered to be a man's, usually the husband's.

The associations between the ownership of productive assets and women's autonomy in decision-making on the enumerated expenses are somewhat fuzzy. The marginal effects on the ownership of enumerated assets are nuanced both across the enumerated decisions and the two districts. For example, in Jaffna, women from households that own livestock are about 10 percent more likely to make independent decisions about food expenditure. They are also about 9 percent more likely to independently make decisions about maintenance expenditure, although here the marginal effects are significant only at 10 percent. In contrast, the ownership of livestock is consistently inversely associated with women's autonomous decision-making in Kandy. On the other hand, in Jaffna, the ownership of production equipment, although insignificant, has a negative effect on women's

independent decision-making. But, the effect of the ownership of such assets is positive for women in Kandy. For example, women from households that own productive assets are 13 percent and 12 percent more likely to make autonomous decisions related to education and health expenditure, respectively. However, the ownership of transport equipment is inversely associated with women's autonomous decision-making in both districts, although the marginal effects are by and large insignificant. In Jaffna, women from households that own transport equipment are about 11 percent less likely to make independent decisions about food expenditure.

The marginal effects on perception-related variables are largely insignificant and produce mixed results. However, in both districts, women who believe that women do not need to work if men provide for them are more likely to make autonomous decisions about household expenditure. While both marginal effects are significant at 5 percent, it is somewhat higher in Jaffna at 5 percent, compared to 3 percent in Kandy. It is somewhat counterintuitive that women with more traditional norms about their roles as women have greater autonomy in making household decisions. But it also goes to show the complexity of empowerment as a concept, and the importance of recognising the importance of choice in the kind of role women want to play within the household.

In summary, land-related variables do not seem to have a meaningful influence on women's ability to make independent decisions about household expenditure, except for those related to maintenance expenditure, and that too mainly in Jaffna. The results are somewhat different from existing empirical studies such as Doss et al (2018), Valera et. Al (2018) or Mishra and Sam (2016) which show a significant, positive and non-trivial effect of women's land ownership on their bargaining power. However, the positive effect of sole ownership, but the negative effect of joint ownership on women's ability to make independent household decisions shows that women who have property solely in their name might be in a stronger bargaining position within the household. As for land holdings elsewhere (other than the property the respondent lives in), ownership of agricultural land seems to positively influence women's autonomy in decision-making compared to ownership of residential land.

However, the most considerably large positive effect on a woman's autonomy is observed when her educational outcomes are higher than her husband's, particularly in Kandy. Care responsibilities, proxied by the variables on children, and living arrangements (with parents or parents-in-law), as well as patterns emerging from expenditure and asset-related variables, reflect to varying degrees, possible effects of the gender norms on women's independence in decision-making about household expenses. Internalised gender norms seem to encourage women to take independent decisions about household expenditure, encouraging the reader to critically look at what empowerment might mean to women. Holding on to traditional gender roles in and of themselves might not be disempowering for women if such roles give women greater authority in handling household expenses. Yet, as Doss et al. (2018) caution in their conclusion, even though women might provide input for decisions, the final say might come from men, which is revealed in their qualitative analysis. On the other hand, joint decision-making might not necessarily be a sign of disempowerment if women willingly consult men about these decisions. A more relevant analysis, in our opinion, is therefore to look at women's participation in land-related decisions, the analysis of which is discussed next.

Table 4: Factors associated with decision-making about household expenditure – Marginal effects of logistic regression for district level sub-samples

	Food			Education			Health			HH Maintenance		
	Jaffna $\beta(SE)$	Kandy $\beta(SE)$	Jaffna $\beta(SE)$	Jaffna $\beta(SE)$	Kandy $\beta(SE)$	Jaffna $\beta(SE)$	Jaffna $\beta(SE)$	Kandy $\beta(SE)$	Jaffna $\beta(SE)$	Jaffna $\beta(SE)$	Kandy $\beta(SE)$	
<i>Land variables</i>												
PFR sole ownership of house	0.1316 (0.106)	0.0262 (0.094)	0.0035 (0.040)	0.0442 (0.066)	0.0761 (0.073)	0.0081 (0.072)	0.2049** (0.086)	0.0616 (0.092)				
PFR jointly owns house	-0.0568 (0.063)	-0.0106 (0.136)	-0.0031 (0.027)	0.0178 (0.088)	-0.0169 (0.055)	-0.0489 (0.126)	-0.0860 (0.062)	-0.1193 (0.105)				
PFR has residential land elsewhere	-0.0547 (0.051)	-0.0407 (0.076)	-0.0801** (0.037)	0.0396 (0.083)	0.0227 (0.051)	-0.0347 (0.100)	-0.0727 (0.066)	0.0473 (0.083)				
Household owns residential land	-0.0225 (0.055)	-0.0518 (0.064)	0.0046 (0.045)	-0.0272 (0.056)	-0.0335 (0.070)	-0.0224 (0.047)	0.0203 (0.070)	-0.1025** (0.052)				
Household owns agri land	-0.0392 (0.081)	0.1039 (0.092)	0.0663 (0.053)	0.0614 (0.103)	0.0391 (0.066)	0.1217 (0.097)	0.0937 (0.074)	0.0519 (0.064)				
Parents owned/own property	-0.0528 (0.050)	0.0650 (0.051)	0.0370 (0.038)	0.0754* (0.044)	0.0219 (0.041)	0.0158 (0.043)	-0.0350 (0.051)	0.0333 (0.057)				
<i>PFR's characteristics</i>												
PFR's age	0.0204 (0.013)	-0.0059 (0.015)	0.0205 (0.014)	0.0057 (0.018)	0.0299** (0.012)	-0.0035 (0.013)	0.0274* (0.016)	-0.0172 (0.014)				
PFR's age squared	-0.0001 (0.000)	0.0000 (0.000)	-0.0002 (0.000)	-0.0001 (0.000)	-0.0003** (0.000)	0.0000 (0.000)	-0.0002 (0.000)	0.0002 (0.000)				
PFR's perceived health	-0.0163 (0.034)	0.0189 (0.031)	0.0064 (0.029)	0.0169 (0.030)	-0.0255 (0.033)	0.0203 (0.024)	0.0295 (0.036)	0.0006 (0.026)				
Grade 6-9#	-0.0784 (0.074)	0.0508 (0.056)	-0.0607 (0.039)	0.0129 (0.066)	0.006 (0.052)	0.0605 (0.065)	0.0345 (0.067)	0.1387* (0.080)				
10-11 not OL qualified#	-0.0892 (0.083)	-0.0826 (0.115)	-0.0605 (0.056)	-0.0676 (0.063)	0.0037 (0.051)	-0.0222 (0.070)	0.0225 (0.075)	0.0297 (0.108)				

OL qualified, less than AL#	-0.0574 (0.058)	-0.1319* (0.080)	-0.0375 (0.029)	-0.1915** (0.094)	0.0026 (0.044)	-0.1702** (0.080)	-0.0010 (0.062)	-0.0569 (0.087)
AL or more#	0.0493 (0.050)	-0.085 (0.071)	-0.0612 (0.056)	-0.0626 (0.076)	-0.0483 (0.048)	-0.0896 (0.072)	-0.0038 (0.061)	-0.0952 (0.065)
<i>Marital variables</i>								
Age gap between PFR and husband	-0.002 (0.004)	-0.0049 (0.008)	-0.0060*** (0.002)	-0.0076 (0.006)	-0.0059** (0.003)	-0.0028 (0.007)	-0.0083* (0.005)	0.0027 (0.007)
PFR's age at marriage	-0.0013 (0.004)	0.0006 (0.004)	-0.0026 (0.004)	0.0019 (0.004)	-0.0029 (0.004)	-0.0013 (0.003)	-0.002 (0.004)	0.0013 (0.004)
PFR more years of education than husband#	0.0645 (0.051)	0.0973*** (0.030)	0.0261 (0.043)	0.1356** (0.055)	0.0757* (0.043)	0.1110* (0.059)	0.0601 (0.058)	0.1698*** (0.037)
PFR has less years of education than husband#	0.023 (0.052)	-0.0212 (0.044)	0.0300 (0.045)	-0.0190 (0.042)	0.0340 (0.048)	-0.0510 (0.041)	-0.0130 (0.049)	-0.0088 (0.056)
<i>Household characteristics</i>								
Children 5 or less †	-0.0261 (0.026)	0.0148 (0.037)	-0.0018 (0.023)	-0.0753** (0.033)	0.0047 (0.033)	-0.0511 (0.031)	-0.0174 (0.022)	-0.0066 (0.048)
Children 6-11†	0.0810*** (0.021)	0.0073 (0.027)	0.0321** (0.015)	-0.0234 (0.027)	0.0124 (0.026)	-0.0141 (0.023)	-0.0123 (0.023)	-0.0178 (0.020)
Lives with parents	0.1566*** (0.053)	0.0911** (0.044)	0.0133 (0.045)	0.0941 (0.057)	0.0949** (0.047)	0.1536*** (0.051)	0.0425 (0.065)	0.1152 (0.090)
Lives with parents in law	0.0469 (0.105)	-0.0845 (0.078)	-0.1256 (0.132)	-0.0168 (0.071)	-0.1872 (0.156)	-0.0965 (0.064)	-0.0129 (0.088)	-0.0276 (0.065)
<i>Income and productive assets</i>								
PFR income as % of HH exp	-0.1788*** (0.057)	-0.0293 (0.025)	-0.0533 (0.040)	-0.0369 (0.025)	-0.0645* (0.038)	0.0041 (0.022)	-0.0336 (0.053)	0.0166 (0.034)
Log of husband's income	0.0008 (0.041)	0.0024 (0.028)	-0.0502 (0.032)	0.0254 (0.042)	-0.0532 (0.041)	0.0537 (0.037)	0.0302 (0.036)	0.0129 (0.030)
Per capita HH expenditure	-0.0308 (0.109)	0.1258 (0.093)	-0.0655 (0.094)	0.0225 (0.109)	-0.0397 (0.107)	-0.0479 (0.078)	0.0372 (0.110)	0.0679 (0.137)

Per capita household exp. squared	0.0122 (0.015)	-0.0205 (0.015)	0.011 (0.012)	-0.0122 (0.016)	0.0066 (0.015)	-0.0011 (0.011)	-0.0017 (0.015)	-0.0165 (0.019)
Owens livestock	0.0971*** (0.037)	-0.0313 (0.056)	-0.012 (0.019)	-0.0652 (0.070)	0.0159 (0.028)	-0.0689 (0.062)	0.8666* (0.047)	-0.0537 (0.069)
Has production equipment	-0.0738 (0.065)	0.0114 (0.104)	-0.0058 (0.031)	0.1310** (0.057)	-0.0142 (0.043)	0.1163** (0.056)	-0.0212 (0.049)	0.0733 (0.045)
Owens transport equipment	-0.1098* (0.065)	-0.0232 (0.042)	-0.0258 (0.023)	-0.0094 (0.041)	-0.031 (0.032)	-0.0397 (0.034)	-0.0547 (0.047)	-0.0161 (0.022)
<i>Perceptions</i>								
If men provide, women don't have to work	-0.0288 (0.027)	0.0074 (0.014)	0.0072 (0.016)	0.0218 (0.014)	-0.0028 (0.017)	0.015 (0.010)	0.0454** (0.023)	0.0282** (0.012)
If women work, HH work gets neglected	-0.0173 (0.045)	0.032 (0.027)	-0.0084 (0.027)	0.0205 (0.024)	-0.0262 (0.027)	0.002 (0.024)	-0.0669 (0.042)	0.0038 (0.025)
P	.	.	.	.	.	.	.	.
AIC	766.11	855.36	510.42	827.86	600.46	802.72	755.17	833.29
BIC	878.56	935.75	622.87	908.25	712.92	883.11	867.63	913.68
N	664	643	664	643	664	643	664	643

Source: LOWE survey data (2022)

Notes: Reference groups are † Primary or less; # PFR and husband have similar levels of education; † Children aged 12-19. Models are clustered at the Divisional Secretariat’s division level for robust standard errors, given in parentheses; Significance level denoted by * p<0.10, ** p<0.05, *** p<0.01 at ten percent, five percent and one percent, respectively.

07. Decisions about land

The second set of decisions we look at is related to land and property. We consider five decisions about land as outcome variables of interest, namely those related to selling, renting, renovating land and property, using land and property as collateral for loans, and decisions about passing on land and property to descendants. For this analysis, the sample is restricted to households that own land and property as many of the enumerated decisions are irrelevant if a household does not own land. The regression output for the two districts is presented in Table 5 below, and the discussion is limited mostly to statistically significant results.

The first group of variables is related to land ownership. Women's sole ownership of the property in which they live has a positive effect on women's participation in land-related decisions in both districts, but the effects seem to be larger and statistically significant mostly in Kandy. Women in Kandy who individually own their houses are about 12 percent more likely to be always consulted about decisions to sell or renovate property, and about 11 percent more likely to be always consulted on decisions regarding inheritance. However, in Jaffna, the marginal effects have turned up only in relation to the inheritance decision, and there too the results are significant only at the 10 percent cut-off.

Nonetheless, in Jaffna, joint ownership of the residential property the PFR lives in seems to have a consistently positive effect on her full participation in all five decisions. But the results are significant only for decisions about selling, renovating, and passing on of property. This is also the case for Kandy. In Jaffna, women who jointly own the property are about 25 percent more likely to be always consulted in selling property. In Kandy, this probability is about 21 percent. Furthermore, women from Jaffna and Kandy who have joint ownership of their homes are respectively, 19 percent and 11 percent more likely to be consulted about decisions on property renovation. Next, the joint ownership of homes makes it about 12 percent and 15 percent more likely that women from Jaffna and Kandy, respectively, will fully participate in decisions about property inheritance decisions.

Next, having residential property elsewhere in the country in the PFR's name bodes well for her full participation in decisions about sale of property in both Jaffna and Kandy. In Jaffna, women with such land are about 18 percent more likely to

participate in decisions about selling property. In Kandy, the probability is about 11 percent, but is significant only at 10 percent. In Kandy, women whose parents have owned/own property are more likely to fully participate in land-related decisions, although results are not significant in relation to decisions about collateral and inheritance. In both districts, there is a higher probability of women being always consulted about decisions related to selling property if their parents have owned/own property. The marginal effects are about 11 percent and 14 percent in Jaffna and Kandy respectively. In both districts, almost none of the land-related variables has turned up significant in relation to full participation in collateral-related decisions.

Clearly, the results are encouraging in that women's legal ownership of land is positively associated with them being always consulted about decisions about such land. Joint ownership has the most sizeable positive effect on women's participation in all enumerated decisions. The results resonate with Dutta's (2006) finding that most women felt empowered when they received joint titles to their homes because it legally prevented the husbands from making unilateral decisions about selling such property. Dutta (2006) also noted that joint titling compelled husbands to consult their wives more often about decisions related to raising finances for house construction, repayment of loans, mortgages etc. Thus, from a policy perspective, these results make a strong case for incorporating joint titles in development interventions, not just to ensure gender equality in ownership, but also to legally empower women to safeguard their land and property.

However, observe also that none of the land-related variables is significant (although by and large, the direction of association is positive, as desired) in relation to women's participation in decisions about using land as collateral. The results suggest that gender biases permeate the formal financial sector, and that women tend to be marginalised from participating in it. This could also be tied to some perceptions that even women have about the importance of having a man to make land useful to them, as discussed in the descriptive statistics analysis (see also Gunatilaka and Vithanagama 2018).

The majority of the variables capturing the PFR's characteristics are statistically insignificant in both districts, and it is difficult to establish patterns of association. Only one education-related variable has turned up significant. Women educated up to GCE Advanced Level or more are more likely to be always consulted in all

of the land-related decisions, compared to women with no or primary education only. This pattern fails to hold only in relation to inheritance decisions in Kandy. In Jaffna, women with the highest educational achievements, compared to those with only a basic or no education, are about 12 percent and 9 percent more likely to be fully involved in rent and collateral-related decisions, respectively. In Kandy, women with these educational attainments are 11 percent and 8 percent more likely to fully participate in decisions about rent and renovation-related decisions. Most importantly, at these education levels, women from both districts are about 9 percent more likely to be always consulted regarding collateral-related decisions, which did not seem to be the case in both districts even when women legally owned land. Thus, the results suggest that women's educational attainments, more than their legal ownership of land, might facilitate their inclusion in strategic decisions about land such as pledging them for mortgages.

Most of the marital variables have turned up statistically insignificant in both districts. An increase in the age gap seems to encourage women's full participation in decisions about selling and renting land in Jaffna, but the marginal effects are quite small. In Kandy, an increase in the age at marriage has a negative, but very negligible effect on women's full participation in decisions about renting, renovating or pledging property as collateral.

The most prominent variable among the marital variables is the educational outcome differential between the PFR and her husband, mainly in Kandy where such differences seem to have a considerable effect on women's full participation in these decisions. For example, when women are more educated than men, compared to when they have similar levels of education, they are less likely to be fully consulted about all decisions. All marginal effects are significant at least at 5 percent and range between 10 percent (for rent-related decisions) and 13 percent (for collateral-related decisions). Interestingly, they are also less likely to be consulted if they have lower educational outcomes than their spouses, compared to when they share similar educational outcomes. Here women are about 11 percent less likely to be always consulted on decisions about selling and renovating property. They are about 8 percent less likely to be always consulted on decisions about passing on property. The marginal effects of the differences in education levels between the PFR and spouse are statistically insignificant in Jaffna.

It is interesting that at both higher and lower levels of education than the husband, women are generally less likely to be always consulted about all enumerated decisions, compared to when both of them share similar educational levels. It is predictable, although not justified, that husbands who are more educated than their spouses might not think to always include wives in any of the enumerated decisions. What is concerning, however, is the greater likelihood that women who are more educated than their husbands are also not always consulted about land-related decisions. The results might be symptomatic of deep-rooted issues of toxic masculinity where a husband might assert his dominance over a more educated wife by excluding her from strategic decisions such as those pertaining to land and property. This, together with the rather haphazard ways in which women's own educational variables are associated with their full inclusion in land-related decision-making, indicates that legal ownership of land, more than her human capital endowment, would be a greater catalyst for strengthening women's bargaining power in most land-related matters.

In both districts, the presence of children does not seem to have a significant effect on women's full participation in land-related decision-making. However, the living arrangements tend to affect women's ability to fully participate in land-related decisions. Living with parents makes it more likely that women will be always consulted in land-related decisions. The results are by and large insignificant, however. In Jaffna, women living with parents are about 10 percent and 9 percent more likely to be fully involved in decisions about property selling and inheritance, although the results are significant only at 10 percent. Living with in-laws has mixed and insignificant effects on the women's participation in land-related decisions in Jaffna. The marginal effects for respondents from Kandy, on the other hand, are consistently negative. In Kandy, women living with in-laws are about 19 percent less likely to fully participate in decisions about selling land, and the marginal effects are both sizeable and significant at the stringent 1 percent cut-off.

Among the income and asset variables, an increase in the contribution of PFR's income towards household income makes it more likely that she will be always consulted in relation to all land-related decisions in both districts. None of the marginal effects is significant for Jaffna, however. In Kandy, an increase in the contribution from the PFR to household income makes it 14 percent, 11 percent, 9 percent and 8 percent more likely that she will be always consulted in decisions

related to renting, mortgaging, passing on, and selling property respectively. Only the marginal effects related to renovation decisions have turned up statistically insignificant.

On the other hand, an increase in the log of the husband's income has a negative effect on women's full participation in all of the land-related decisions in both districts. In Jaffna, however, only the marginal effect in relation to collateral has turned up significant. An increase in the spouse's log income makes it about 6 percent less likely that women in both districts will be consulted about using land for collateral. In Kandy, the negative marginal effects of this variable are significant at some level in all but the decision related to rent. Thus, clearly, an increase in the husband's income tends to marginalise women from participating in financing decisions related to the property, confirming the concerns expressed earlier. The results are indicative of a negative outcome of the 'husband effect' (Solera, 2019).

An increase in household per capita expenditure has a positive effect on women's participation across all land-related decisions in both districts, but the results are statistically significant only for Jaffna. In addition to being significant, the marginal effects are considerably large, ranging from 16 percent to 28 percent across the five enumerated decisions. However, the negative association between the square of per capita expenditure in both districts show that as the per capita expenditure increases, women are less likely to participate in these decisions. In Jaffna, these negative marginal effects, all of which are statistically significant, range from 3 percent in relation to rent-related decisions to 5 percent in relation to inheritance-related decisions. In Kandy, the inverse association is significant only for inheritance-related decisions.

In general, women from households with higher expenses and more assets are likely to be always consulted in land-related decisions. Ownership of livestock bodes well for women's participation in land-related decisions in both districts, and most of the marginal effects are statistically significant at some level. Importantly, women from these households in both districts are more likely to be consulted always on decisions regarding the use of property as collateral. The ownership of productive assets also generally encourages women's full participation in decision-making about land in both districts. In contrast, household ownership of transport

equipment does not seem to have a statistically significant impact on women's participation in land-related decisions in both districts.

The perceptions-related variables produce somewhat mixed results and point to the complex ways in which gender norms are seen to influence women's participation in land-related decisions. In Jaffna, women who believe that it is not necessary for them to work if their husbands provide for them are less likely to participate in all of the land-related decisions. They are about 5 and 6 percent less likely to be always consulted in decisions regarding the sale, renting, mortgaging, and inheritance decisions regarding land, and all four marginal effects are statistically significant at some level. Thus, clearly, while such perceptions might encourage the autonomy of women in relation to household expenditure-related decision-making, they tend to marginalise women from being included in land-related strategic decisions. Nonetheless, in Kandy, women who believe that household work will be neglected if they go out to work are about 5 percent more likely to participate in decisions to sell land. The marginal effect is significant at 1 percent. Women from Kandy are also about 4 percent more likely to be involved in decisions to use land as collateral. Although the results are somewhat counterintuitive, they suggest that women's internalised gender roles as caregivers might in fact make it more likely that they are always consulted in relation to decisions about significant assets of the household, in this case, land. None of the variables has turned out significant for Jaffna.

Access to social networks appears to be a good predictor of women's full participation in land-related decisions. Strong social networks in Jaffna appears to be unfavourable for women's participation in decisions about inheritance. Women with strong ties within the village are about 6 percent less likely to be always consulted in decisions about property inheritance. In Kandy, this kind of social network has a small negative effect (about 3 percent) on women's participation in decisions regarding the sale of land. Observe however that in Jaffna, having strong networks in neighbouring villages or in the district as a whole, bodes well for women's participation in all land-related decisions. Women with such connections are about 7 percent, 9 percent and 10 percent more likely to participate in decisions about selling, renting, or using property as collateral, respectively. Finally, strong relations with the immediate family increase the probability of women's full participation in land-related decisions in both districts.

In summary, this analysis suggests that women's land ownership enables their inclusion in important decisions about disposing of land either through sale or gift. Joint ownership is particularly influential in strengthening women's bargaining position in such decisions, and underscores the importance of legal ownership of land among women. However, legal ownership does not seem to have much of an impact on women's participation in decisions regarding the use of land as collateral, which possibly derives from structural gender rigidities and the marginalisation of women in the formal financial system. These results point to the presence of a gap between women's legal and effective ownership of land, because even where they have legal title to the land, they might be excluded from important strategic decisions about land use, especially as collateral. However, we found if a woman's parents were property owners, then she was more likely to be always consulted about land-related decisions. Thus, there seem to be significant intergenerational benefits of land ownership for women.

Among the control variables, the differentials in educational attainment between the PFR and the husband are particularly interesting. We observed that women are less likely to be always consulted in land-related decisions, particularly in Kandy, if they are more educated than their husbands. It could be that men might attempt to redress the impact of education differentials on power relations within the household, by monopolising decision-making about land.

Income and asset variables also present some useful insights. In general, well-off households, as proxied by higher per capita expenditure levels, are likely to include women in land-related decisions. A higher contribution from the PFR towards household expenditure also makes it more likely that women will be always included in land-related decisions, especially in Kandy. The availability of livestock and productive assets also bode well for women's full inclusion in decision-making. However, as men earn more, women are less likely to be always consulted in these decisions. Finally, strong connections with immediate family and strong networks with friends within the district appear to encourage women's full participation in land-related decision-making. Thus, social capital is also quite important for women to have a strong say in land-related decisions in both districts.

Table 5: Factors associated with decision-making about land – Marginal effects of logistic regression for the district-wise sub-samples

	Sell			Rent			Renovate			Collateral			Inheritance	
	Jaffna β/SE	Kandy β/SE	Jaffna β/SE	Kandy β/SE	Jaffna β/SE	Kandy β/SE	Jaffna β/SE	Kandy β/SE	Jaffna β/SE	Kandy β/SE	Jaffna β/SE	Kandy β/SE	Jaffna β/SE	Kandy β/SE
<i>Land variables</i>														
PFR owns house herself	0.0986 (0.064)	0.1226** (0.056)	0.0310 (0.060)	0.0272 (0.074)	0.0540 (0.055)	0.1248*** (0.043)	-0.0030 (0.050)	0.0228 (0.071)	0.0759* (0.044)	0.1128*** (0.032)				
PFR jointly owns house	0.2521*** (0.049)	0.2136*** (0.062)	0.0692 (0.049)	-0.0265 (0.090)	0.1868*** (0.058)	0.1123*** (0.045)	0.0951 (0.059)	-0.0015 (0.092)	0.1179*** (0.042)	0.1465*** (0.052)				
PFR has residential land elsewhere	0.1755*** (0.048)	0.1125* (0.060)	0.1137** (0.045)	-0.0211 (0.063)	0.1150** (0.056)	0.0629 (0.050)	0.0706 (0.052)	-0.0068 (0.058)	0.0626 (0.039)	-0.0102 (0.037)				
Household owns residential land	0.0667 (0.052)	0.0451 (0.045)	-0.0048 (0.051)	-0.0726 (0.061)	0.0331 (0.049)	0.0103 (0.052)	0.0198 (0.063)	-0.0081 (0.073)	0.0238 (0.041)	0.0099 (0.045)				
Household owns agri land	0.014 (0.070)	-0.0068 (0.080)	-0.0134 (0.054)	-0.0584 (0.080)	0.1036 (0.066)	0.0567 (0.073)	0.0984 (0.062)	0.0683 (0.073)	0.0374 (0.056)	0.0231 (0.064)				
Parents owned/own property	0.1149** (0.045)	0.1371*** (0.040)	0.0147 (0.036)	0.1173*** (0.039)	0.064 (0.064)	0.1096*** (0.037)	-0.0784* (0.042)	0.0661 (0.060)	-0.0224 (0.045)	0.0255 (0.043)				
<i>PFR's characteristics</i>														
PFR's age	-0.0165 (0.016)	-0.0193 (0.018)	0.0105 (0.017)	-0.005 (0.014)	-0.0128 (0.013)	0.0007 (0.017)	0.2225 (0.016)	-0.0037 (0.013)	-0.0185 (0.015)	-0.0020 (0.012)				

PFR's age squared	0.0002 (0.000)	0.0002 (0.000)	-0.0001 (0.000)	0.0001 (0.000)	0.0002 (0.000)	0.0000 (0.000)	-0.0002 (0.000)	0.0000 (0.000)	0.0003 (0.000)	0.0000 (0.000)
PFR's perceived health	-0.0277 (0.031)	-0.0112 (0.029)	-0.015 (0.035)	-0.0253 (0.032)	0.0365 (0.029)	0.0057 (0.028)	-0.0029 (0.037)	-0.0361 (0.039)	0.0402 (0.027)	0.0047 (0.028)
Grade 6-9 [#]	-0.0112 (0.080)	0.0342 (0.102)	0.1141 (0.094)	0.115 (0.077)	-0.0164 (0.079)	-0.0544 (0.043)	0.0889 (0.090)	0.0659 (0.077)	0.1054 (0.067)	0.0592 (0.077)
10-11 not OL qualified [#]	-0.0005 (0.074)	-0.0652 (0.087)	0.1064 (0.073)	-0.015 (0.070)	0.0236 (0.067)	-0.0728 (0.068)	-0.0046 (0.090)	-0.1098 (0.084)	0.0698 (0.067)	-0.0146 (0.075)
OL qualified, less than AL [#]	-0.0083 (0.051)	0.041 (0.081)	0.059 (0.054)	0.0373 (0.078)	-0.0701 (0.053)	-0.0463 (0.052)	0.0373 (0.051)	-0.0238 (0.071)	0.0238 (0.057)	0.0516 (0.052)
AL or more [#]	0.0697 (0.046)	0.0409 (0.048)	0.1238** (0.051)	0.1113** (0.054)	0.0563 (0.042)	0.0790** (0.039)	0.0875** (0.043)	0.0928* (0.055)	0.0324 (0.056)	-0.0034 (0.048)
<i>Marital variables</i>										
Age gap	0.0108*** (0.004)	0.0011 (0.004)	0.0080* (0.005)	0.0004 (0.004)	0.0013 (0.005)	0.0059 (0.004)	0.0054 (0.004)	0.0022 (0.004)	-0.0014 (0.004)	0.0041 (0.004)
PFR's age at marriage	0.0024 (0.004)	-0.0052 (0.004)	-0.0021 (0.003)	-0.0060* (0.003)	0.0021 (0.004)	-0.0059* (0.003)	-0.0046 (0.003)	-0.0069** (0.003)	0.0031 (0.004)	-0.0009 (0.004)
PFR more years of education [#]	-0.0859 (0.058)	-0.1019** (0.044)	-0.0542 (0.039)	-0.0993*** (0.036)	-0.0412 (0.054)	-0.1211** (0.049)	-0.0222 (0.052)	-0.1256** (0.052)	-0.0381 (0.049)	-0.1050*** (0.040)
Husband more years of education [#]	-0.0239 (0.061)	-0.1063** (0.045)	0.0301 (0.035)	-0.065 (0.041)	-0.0227 (0.056)	-0.1092** (0.048)	0.0364 (0.035)	-0.0757 (0.049)	-0.0025 (0.043)	-0.0756* (0.040)

<i>Household characteristics</i>										
Children 5 or less†	-0.0277 (0.032)	-0.0625* (0.033)	0.0309 (0.030)	-0.0484 (0.033)	0.0104 (0.030)	-0.0134 (0.031)	0.0224 (0.037)	-0.0413 (0.033)	-0.0118 (0.022)	-0.0301 (0.026)
Children 6-11†	-0.0222 (0.024)	-0.0157 (0.031)	-0.0006 (0.025)	-0.0141 (0.029)	0.0119 (0.025)	-0.0091 (0.030)	0.0325 (0.027)	0.0379 (0.029)	-0.0078 (0.026)	-0.0183 (0.029)
Lives with parents	0.0958* (0.056)	0.0653 (0.070)	0.0629 (0.069)	0.0828 (0.074)	0.0212 (0.055)	0.0762 (0.060)	0.0684 (0.060)	0.1077 (0.084)	0.0940* (0.057)	0.0658 (0.074)
Lives with parents in law	-0.0409 (0.094)	-0.1856*** (0.071)	0.0496 (0.084)	-0.0546 (0.085)	-0.0016 (0.085)	-0.0358 (0.077)	-0.042 (0.088)	-0.1369 (0.084)	-0.0272 (0.085)	-0.1558 (0.099)
<i>Income, expenditure and assets</i>										
PFR income as % of HH exp	0.0247 (0.051)	0.0767* (0.043)	0.0316 (0.044)	0.1364*** (0.041)	0.0142 (0.044)	0.0555 (0.040)	0.0119 (0.042)	0.1132*** (0.041)	0.0684 (0.043)	0.0925** (0.037)
Log of husband's income	-0.0488 (0.040)	-0.0739* (0.038)	-0.0462 (0.033)	-0.0426 (0.035)	-0.052 (0.040)	-0.0664* (0.034)	-0.0631** (0.031)	-0.0579** (0.026)	-0.0238 (0.040)	-0.0634** (0.027)
Per capita HH exp	0.2465*** (0.088)	0.0206 (0.133)	0.1645* (0.092)	0.085 (0.106)	0.2054** (0.088)	0.0754 (0.114)	0.2279** (0.096)	0.1766 (0.117)	0.2815*** (0.097)	0.2244 (0.155)
Per capita HH exp. squared	-0.0420*** (0.012)	-0.0034 (0.018)	-0.0271* (0.014)	-0.0164 (0.016)	-0.0354*** (0.013)	-0.0108 (0.015)	-0.0355** (0.015)	-0.0271 (0.018)	-0.0518*** (0.014)	-0.0417* (0.022)
Owens livestock	0.0748* (0.041)	0.1579*** (0.052)	0.0831* (0.046)	0.1764*** (0.057)	0.0461 (0.036)	0.1025** (0.047)	0.0771* (0.041)	0.1526*** (0.053)	0.0587* (0.030)	0.0529 (0.037)
Has production equipment	0.0833* (0.046)	0.1325 (0.086)	-0.0389 (0.055)	0.0348 (0.101)	0.0923* (0.051)	0.1277* (0.075)	-0.01 (0.047)	0.071 (0.083)	0.1164** (0.046)	0.1555*** (0.075)

Owens transport equipment	0.0163 (0.052)	0.0017 (0.045)	-0.0156 (0.054)	0.0032 (0.036)	0.018 (0.056)	0.0117 (0.036)	-0.0088 (0.070)	-0.0457 (0.057)	-0.0127 (0.053)	0.0212 (0.034)
Perceptions										
If men provide, women don't have to work	-0.0562** (0.023)	-0.0064 (0.020)	-0.0258 (0.021)	0.0146 (0.018)	-0.0470** (0.022)	0.0238 (0.021)	-0.0513** (0.025)	-0.0156 (0.021)	-0.0587*** (0.019)	0.0055 (0.019)
If women work, household work gets neglected	0.0303 (0.022)	0.0490*** (0.019)	-0.0423 (0.026)	0.0239 (0.020)	0.0283 (0.023)	-0.0016 (0.019)	-0.0174 (0.027)	0.0393** (0.018)	0.009 (0.019)	0.0136 (0.021)
Social networks										
Has friends/relatives in this village	-0.0217 (0.020)	-0.0267* (0.015)	-0.0156 (0.023)	-0.0236 (0.016)	-0.0281 (0.023)	-0.0115 (0.024)	0.0008 (0.023)	-0.0061 (0.017)	-0.0612*** (0.021)	-0.0229 (0.019)
Has friends/relatives in this district	0.0618*** (0.019)	0.0216 (0.029)	0.0861*** (0.019)	0.0321 (0.027)	0.0616** (0.026)	0.0205 (0.036)	0.1024*** (0.020)	0.0266 (0.030)	0.0613** (0.031)	0.0064 (0.034)
Strong relationship with relatives	-0.0159 (0.045)	-0.0298 (0.027)	-0.0096 (0.032)	-0.0052 (0.025)	0.0065 (0.040)	-0.0327 (0.022)	-0.0306 (0.040)	-0.0145 (0.028)	-0.026 (0.042)	0.0086 (0.025)
Strong relationship with immediate family	0.0548 (0.035)	0.0846*** (0.029)	0.1038*** (0.024)	0.0846*** (0.028)	0.0494 (0.032)	0.0767*** (0.023)	0.0850** (0.037)	0.0755** (0.037)	0.1031*** (0.039)	0.0727*** (0.028)

P	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
AIC	1045.4	1039.6	970.7	1100.8	968.8	980.4	1041.5	1113.3	1027.0	1040.9			
BIC	1205.8	1199.8	1129.3	1261.0	1129.3	1140.6	1202.0	1273.5	1187.4	1201.1			
N	828	822	828	822	828	822	828	822	828	822			

Source: LOWE survey data (2022)

Notes: Reference groups are ‡ Primary or less; # PFR and husband have similar levels of education; † Children aged 12-19. Models are clustered at the Divisional Secretariat's division level for robust standard errors; Significance level denoted by * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ at ten percent, five percent and one percent, respectively. The means and proportions of both outcome and independent variables are presented in Appendix 2.

8. Perceptions of social status and happiness

The third and final dimensions of empowerment we consider in our analysis is related to perceptions of efficacy. We have considered two dependent variables, namely perceptions about respondents' social status, compared to that of their neighbours, and about their overall happiness. Social status is a dichotomous variable, taking a value of 1 if respondents believe they enjoy a higher social status compared to other households in their neighbourhood and zero otherwise. A logistic regression is performed on the social status outcome variable. The perception of happiness is an ordinal variable that takes a value of 5 if a respondent is very happy and 1 if very unhappy. Following Ferrer-i-Carbonell and Frijters (2004), we conducted an OLS regression analysis on the happiness outcome variable. The results are presented in Table 6 below, and the discussion is generally limited to statistically significant results for reasons of brevity.

Table 6: Factors associated with perceptions of social status and happiness

	Social status		Happiness	
	Logistic regression		OLS regression	
	Jaffna	Kandy	Jaffna	Kandy
	<i>β(SE)</i>	<i>β(SE)</i>	<i>β(SE)</i>	<i>β(SE)</i>
<i>Land variables</i>				
PFR sole ownership of house	-0.0530 (0.098)	-0.0500 (0.055)	0.0737 (0.056)	-0.0409 (0.058)
PFR jointly owns house	0.1034*** (0.038)	-0.2418** (0.116)	0.0389 (0.043)	0.1567** (0.058)
PFR has residential land elsewhere	-0.1337*** (0.044)	-0.0230 (0.067)	0.1000** (0.047)	-0.1330* (0.072)
HH owns residential land	0.0259 (0.041)	0.0354 (0.056)	0.0627 (0.038)	-0.0135 (0.050)
HH owns agri land	0.0965** (0.038)	0.1312*** (0.029)	-0.0885* (0.047)	-0.0002 (0.068)
Parents owned/own property	0.0762 (0.051)	-0.0132 (0.055)	-0.1021** (0.037)	0.1080 (0.071)
<i>PFR's characteristics</i>				
PFR's age	-0.0021 (0.016)	0.0137 (0.014)	-0.0232 (0.019)	-0.0069 (0.012)
PFR's age squared	0.0000	-0.0002	0.0003	0.0001

	(0.000)	(0.000)	(0.000)	(0.000)
PFR's perceived health	-0.0515*	0.0639**	0.1276***	0.0457**
	(0.027)	(0.028)	(0.031)	(0.020)
Grade 6-9‡	-0.1084**	-0.0707	-0.0947**	-0.1012
	(0.052)	(0.065)	(0.046)	(0.094)
10-11 not OL qualified‡	-0.0453	-0.1122*	-0.0029	-0.2355***
	(0.075)	(0.066)	(0.042)	(0.069)
OL qualified, less than AL‡	-0.0087	-0.1993**	-0.0217	-0.1095
	(0.063)	(0.083)	(0.036)	(0.066)
AL or more‡	-0.0406	0.1435***	-0.0145	-0.0757**
	(0.043)	(0.043)	(0.039)	(0.031)
Is in the labour force	-0.0782	-0.1368***	-0.0860	-0.0028
	(0.073)	(0.044)	(0.064)	(0.073)
<i>Marital variables</i>				
Age gap	0.0095**	0.0094**	0.0056	0.0127***
	(0.004)	(0.004)	(0.006)	(0.004)
PFR's age at marriage	-0.0044*	0.0044	0.0027	0.0032
	(0.003)	(0.004)	(0.003)	(0.004)
PFR more years of education#	-0.0710*	0.1468**	0.0178	0.0257
	(0.041)	(0.068)	(0.032)	(0.044)
Husband more years of education#	-0.0728*	0.1403***	-0.0054	0.0146
	(0.039)	(0.045)	(0.029)	(0.048)
<i>Household characteristics</i>				
Children 5 or less†	0.0032	0.0381	0.0294	-0.0626*
	(0.024)	(0.043)	(0.027)	(0.035)
Children 6-11†	0.0175	-0.0425	0.0096	0.0052
	(0.021)	(0.029)	(0.017)	(0.025)
No of employed men	0.0550**	0.0176	0.0475**	-0.0103
	(0.028)	(0.033)	(0.021)	(0.029)
No of employed women	0.0503	0.0012	-0.0397	-0.0825**
	(0.046)	(0.042)	(0.060)	(0.030)
Lives with parents	0.0753	0.0493	-0.0393	0.0300
	(0.057)	(0.072)	(0.056)	(0.051)
Lives with parents-in-law	0.078	-0.083	-0.0368	-0.0204
	(0.068)	(0.060)	(0.074)	(0.071)
<i>Income, expenditure and assets</i>				
PFR income as % of HH exp	0.2042**	0.1249*	0.0989	-0.0481
	(0.093)	(0.070)	(0.075)	(0.094)
Log of husband's income	0.0941**	0.0015	0.1286***	0.0300
	(0.046)	(0.033)	(0.038)	(0.018)

Per capita HH exp	0.1662**	0.1262	-0.0119	0.0580
	(0.084)	(0.160)	(0.114)	(0.067)
Per capita HH exp. Squared	-0.0192	-0.0244	0.0034	-0.0118
	(0.012)	(0.023)	(0.015)	(0.008)
Owns livestock	-0.0651*	-0.0285	0.0125	0.0591
	(0.036)	(0.041)	(0.028)	(0.058)
Has production equipment	0.0276	0.0238	0.0485	-0.1588
	(0.033)	(0.084)	(0.032)	(0.106)
Owns transport equipment	0.0460	0.0829*	0.2239***	0.0443*
	(0.050)	(0.047)	(0.071)	(0.021)
<i>Social networks</i>				
Has friends/relatives in this village	-0.0042	0.0092	0.0280	0.0041
	(0.030)	(0.019)	(0.022)	(0.019)
Has friends/relatives in this district	-0.0164	-0.0173	-0.0207	-0.0267
	(0.019)	(0.016)	(0.013)	(0.016)
Has friends/relatives in big cities	0.0282*	0.0044	0.0091	-0.0034
	(0.017)	(0.014)	(0.013)	(0.015)
Has friends/relatives in other countries	0.0156*	0.0314**	0.0025	0.0092
	(0.009)	(0.013)	(0.013)	(0.013)
Has friends/relatives in government jobs	0.0421***	0.0467**	0.0121	0.0182*
	(0.016)	(0.021)	(0.020)	(0.009)
<i>Perceived satisfaction</i>				
About own education			0.0309	0.0876**
			(0.027)	(0.032)
About own social status in neighbourhood			0.1247***	0.0817**
			(0.042)	(0.034)
Constant			1.9851***	3.3567***
			(0.622)	(0.344)
R-squared			0.2154	0.1105
P	.	.	.	.
AIC	611.65	816.37	539.3	687.2
BIC	724.11	896.76	651.8	767.6
N	664	643	664	643

Source: LOWE survey data (2022)

Notes: Reference groups are ‡ Primary or less; # PFR and husband have similar levels of education; † Children aged 12-19. Models are clustered at the Divisional Secretariat's division level for robust standard errors; Significance level denoted by * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ at ten percent, five percent and one percent, respectively.

Land-related variables show mixed patterns of association with women's perceptions of social status in the neighbourhood. Joint ownership appears to have opposite effects on women's perceived social status in Jaffna and Kandy. In Jaffna, women who have joint ownership of their residential property are about 10 percent more likely to think of their household as better off than others in their neighbourhood. In contrast, women in Kandy who jointly own property are about 24 percent less likely to think that they enjoy an above-average social status. Thus, clearly, joint titles seem to have different social interpretations in the two districts. Individual ownership of the residential property women live in has no statistically significant association with women's perceived social status in both districts. Ownership of residential property elsewhere in the country has a negative effect on perceptions of social status in both districts. The marginal effects are significant, and large only for Jaffna, however. This could be because land owned elsewhere might be less visible to outsiders compared to land owned in the area respondents live in, and therefore not as beneficial for their social status. The ownership of agricultural property makes it more likely that women from both districts will perceive their social status to be higher than others in their neighbourhoods.

Many of the PFR's own characteristics do not seem to have an effect on women's perceptions of social status. Generally, health, education, and LFP seem to have an influence on women's perceptions of social status, although the patterns of association are not always the same in both districts. In Kandy, perceived good health makes it about 6 percent more likely that women will consider their households to be of a higher social status than their neighbours. In Jaffna, however, women in good health are about 5 percent less likely to consider their social status to be higher. These perplexing results, however, are significant only at 10 percent.

Generally, in Jaffna, education does not seem to affect women's perceptions of social status. However, in Kandy, women's education seems to affect their perceptions of social status. For example, women with education up to, but not qualified in, GCE OL, compared to women with no education or primary education only, are about 11 percent less likely to consider their households as enjoying a higher social status. Women who have studied up to Grade 12-13 (but have not completed GCE AL) are about 20 percent less likely to feel so, compared to the reference group. In contrast, women with GCE AL or higher qualifications are about 14 percent more

likely to perceive their social status to be better than other households in their neighbourhood.

Women's LFP seems to have a negative marginal effect on women's perceptions of social status in both districts. However, the results are significant only for Kandy, where women are about 14 percent less likely to perceive their social status to be better if they are in the labour force. However, an increase in the share of a woman's contribution to household expenditure has a strong and sizeable positive effect on women's perception of their social status in both districts, but especially in Jaffna.

Some of the marital variables have a statistically significant effect on women's perceived social status in both districts. An increase in the age gap between the PFR and the spouse has a statistically significant, albeit numerically small, positive effect on women's perceptions of social status in both districts. The educational differences between PFRs and their husbands have opposite effects on women's social status in the two districts. In Jaffna, women with higher or lower educational outcomes than their husbands, compared to those with comparable educational outcomes as their husbands, are about 7 percent less likely to think that their social status is better than that of their neighbourhood. However, in Kandy women with higher education levels than their husbands, compared to the reference group, are about 15 percent more likely to perceive their households to have a higher social status than their neighbours. This is also true for women who are less educated than their husbands. They are about 14 percent more likely to perceive their household social status to be better, compared to the reference group.

Several household characteristics related to the household's labour supply and financial affluence of households also tend to have a positive effect on women's perception of social status. An increase in the number of employed men in the household has a statistically significant positive correlation with perceived social status in Jaffna. An increase in the number of employed women also bodes well for women's status in both districts. Many of the income and asset-related variables seem to have a statistically significant effect on perceived social status, especially in Jaffna. In both districts, an increase in the share of PFR's contribution to household expenditure has a statistically significant and strong positive effect on perceived social status. An increase in the log of the husband's income, on the other hand, bodes well for women's perception of social status in Jaffna. Furthermore,

an increase in the per capita household expenditure makes it roughly 17 percent more likely that women from Jaffna will perceive their social status to be better than in the neighbourhood.

The ownership of livestock appears to have a negative effect on perceived social status in Jaffna, although the results turn up significant at 10 percent only. In contrast, having transport assets is positively associated with social status in both districts. In Kandy, women from households with vehicles are about 8 percent more likely to perceive their household's social status to be above average.

Social networks appear to have a significant effect on women's perceptions of social status in both districts. Women from households that have friends in government jobs are about 4 percent and 5 percent more likely to consider their social status to be above-average, in Jaffna and Kandy, respectively. Having friends and relatives in other countries also has a positive marginal effect of 2 percent and 3 percent respectively among women from Jaffna and Kandy, on perceptions of social status. Having friends in bigger cities such as Colombo, Mannar/Vavuniya, Kurunegala and Kandy/Galle also has a positive effect on the perception of their social status among women in Jaffna.

The results in relation to perceptions of happiness, by and large, suggest that land ownership per se has little to do with women's perceptions about their own happiness. The majority of the land-related variables are insignificant for both districts. However, in Jaffna, most of the land-related variables are positively correlated with women's perceptions of happiness. The patterns of association between land-related variables and women's happiness are more mixed in Kandy.

Joint titling appears to be positively correlated with women's happiness in both districts, although the results are significant only for Kandy. Land owned elsewhere is positively associated with women's happiness in Jaffna, but not in Kandy. The ownership of agricultural property has a negative association with women's happiness in both districts, although the coefficients are significant only for Jaffna. In Jaffna, women whose parents own/owned property are likely to be less happy.

The majority of PFR's own characteristics do not seem to have an effect on women's perceptions of happiness. Good health appears to be positively associated with women's happiness in both districts, in line with expectations. Educational variables do not seem to share a statistically significant association with women's happiness in both districts. Nonetheless, albeit statistically insignificant, LFP bodes well for women's happiness in both districts.

Almost none of the marital variables seem to affect women's happiness. In Kandy, having an older spouse tends to bode well for women's happiness as well. While actual educational attainments themselves have no bearing on women's happiness, their own level of satisfaction with their education is an important factor for their happiness, especially in Kandy.

Many of the household characteristics have also turned up statistically insignificant in relation to happiness. An increase in the number of employed men in the household has a statistically significant positive correlation with happiness in Jaffna. An increase in the number of employed women also is negatively correlated with women's perceptions of happiness. In fact, in Kandy, an increase in the number of employed women reduces women's happiness by about 8 percent. These results suggest underlying gender norms which, if where women transcend traditional roles, might bode well for perceived social status, but not for happiness.

Many of the household income- and asset-related variables do not appear to have any bearing on women's perception of happiness. An increase in the log of the husband's income tends to increase happiness among women in Jaffna. The ownership of transport assets increases women's perceptions of happiness in both districts, by 22 percent in Jaffna, and 4 percent in Kandy.

By and large, social network variables also do not seem to have a statistically significant association with perceptions of happiness in both districts. The constant, which captures the autonomous happiness level, i.e., the level of happiness if all the independent variables are simultaneously equal to zero, is much higher in Kandy, compared to Jaffna.

In summary, this analysis has established that land ownership is differently associated with women's perceptions of their social status and happiness in the two districts. The opposite effects on joint ownership of residential property on the perceived social status among women in Jaffna and Kandy point to the different social values attached to different types of land ownership patterns in the two districts. While joint titling appears to be a socially desirable, land ownership pattern in Jaffna, that does not appear to be the case in Kandy. Having residential land elsewhere in the country does not seem to help women's perceptions of social status or happiness. On the other hand, agricultural property ownership bodes well for social status. These results point to the complexity of what land means to women. Importantly, land-related variables do not seem to have a remarkable association with women's happiness in both districts.

Among the control variables, educational variables generate some useful insights. The importance of education for social status in Kandy more than in Jaffna could be indicative of the greater labour market opportunities for women with higher educational attainments in Kandy. On the other hand, the level of education has no bearing on women's happiness, alluding to its irrelevance to women's self-efficacy in the two districts. The effects of the educational differential between the PFR and her husband on perceptions of social status might to some extent be symptomatic of underlying gender norms and values in the two districts. The negative marginal effect of LFP coefficients on perceived social status in both districts, especially in Kandy, are also possibly reflective of societal expectations of a woman's role. However, if women bring a substantial income home, they are more likely to perceive their social status to be higher. The positive correlation between a husband's income and both social status and happiness in Jaffna further corroborates the idea of gendered expectations of men and women. The positive effect of an increase in the number of employed men on the perceived social status also this hypothesis.

Higher per capita expenditure, which potentially proxies greater household financial affluence, has a positive effect on women's perceptions of their social status, in line with expectations, but has no statistically significant bearing on women's own happiness. Having transport equipment at home has a positive effect on women's perceived social status in both districts, and even on women's happiness in Jaffna.

Overall, strong social networks seem to improve the perception of social status, but, by and large, have no effect on happiness. On the other hand, perceptions of a higher social status than those of their neighbours have a strong positive effect on women's happiness in both districts. The autonomous level of happiness is higher in Kandy than in Jaffna which might be reflective of the underlying socioeconomic and developmental differences between the two districts.

09. Conclusions

This study has examined the associations between women's land ownership and their empowerment, using primary data collected from a random sample of 1,000 respondents each from Kandy and Jaffna districts in 2022. The selection of the two districts was motivated by the uniqueness of the laws governing land tenure and rights in the two districts: the Kandyan law in Kandy which applies to individuals of Kandyan origin and the *Thesawalamai* law applicable to residents of the Jaffna district. To the best of our knowledge, this is the first study of its kind conducted in Sri Lanka.

As empowerment is an elusive concept, we decided to look at a deconstructed version of it by looking at its individual constituents instead of constructing an aggregate index. Accordingly, we picked four dimensions of empowerment with several sub-constituents, namely, LFP, decision-making related to household expenditure (food, health, education and household maintenance), participation in land-related decisions (selling, renting, renovating, using land as collateral, inheritance decisions), and perceptions of efficacy (social status and own happiness). Six land-related variables were included in the regression analysis, taking into account different types of land (residential and agricultural), and legal title (owned only by women, jointly by women, and by other household members). We also included a dichotomous variable to capture whether respondents' parents owned/own land themselves.

We applied logistic and OLS regression methods to the data to model the covariates of dependent variables. We controlled for the characteristics of the respondent, her marital and household characteristics, variables on income-expenditure and assets, social networks and variables on women's perceptions and values. The regression analysis was limited to only households with a husband, as women heading their households might have no choice but to take some of the enumerated decisions as de facto heads of households.

We observe significant differences in the patterns of land ownership in the two districts. The majority of households in Jaffna have come to own land through dowry, and such property is usually jointly owned by the PFR and her husband.

Overall, more women than men own land in Jaffna, compared to Kandy. The commonly practised land inheritance practices in the two districts suggest that while in Kandy, parents seem to prefer sons over daughters in deciding whom to pass the land to, there is no such preference in Jaffna. Patterns of changes in property ownership suggest that marriage bodes well for land ownership of both the husband and wife in Jaffna, but mainly for the husband in Kandy. In both districts, far fewer households own agricultural land compared to residential land and property. Furthermore, even when a household owns such productive land, the share of women who own it is negligible compared the share of women who own residential property. These patterns may reflect the value of land as a social asset for women, rather than as an economic resource.

Land ownership and women's LFP

We find that land ownership does not have a significant effect on a woman's decision to take up paid work. In fact, ownership of residential property tends to discourage women's LFP in both districts. Economic necessity is typically what drives women to seek paid work in poorer countries. Thus, we posit that the inverse association between property ownership and women's LFP might reflect choice, and not a necessity. It could be that bringing property into the marriage is a woman's contribution to the household finances, thereby obviating the need for her to join the labour force.

In fact, land appears to feature more as a status symbol than an economic resource in both districts. Land is perceived as a very important factor for women's marital prospects in Jaffna than in Kandy. In fact, most women from the Jaffna sub-sample believe that land is not useful to women without men's support, and it is difficult for women to get married without land. Much fewer women from Kandy believe this to be the case. These findings also sit well with the fact that women tend to own residential property but not productive land such as agricultural or commercial property.

Thus, while it is encouraging that women from Jaffna tend to legally own land, its utilitarian value as a source of improving a woman's marital prospects seems somewhat retrogressive, and overshadows its economic value to a woman. It is also important to note that although many women recognise the intrinsic value of

land to them and agree that land is a source of security, self-worth, and an income-earning opportunity, most women still feel the need for the presence of men, especially when it comes to tackling problems related to land.

The human capital variables, especially educational outcomes, are in line with theory in both districts. However, gender norms seem to be more of a deterrent to women's LFP in Jaffna than in Kandy. Typically, strong social networks closer to home tends to discourage women's LFP in Jaffna, but in contrast, such networks in metropolitan cities or government jobs have a positive effect on their LFP. These patterns highlight the ways in which social connections may reinforce or challenge gender rigidities women grapple with. Moreover, the negative effect of having strong relations with family and relatives abroad on women's LFP in Jaffna further points to the competing ways in which needs and opportunities seem to push and pull women into the labour market.

Land ownership and decision-making about household expenses

Land ownership also does not seem to have much of an effect on a woman's ability to make autonomous decisions about expenditure pertaining to food, education, health, and household maintenance. Some effect of land ownership on women's autonomy is observed only for maintenance expenditure in Jaffna. This could be because significantly more women from Jaffna, compared to Kandy, hold legal title to land, which might empower them to take autonomous decisions about maintenance expenses. Furthermore, many households in Jaffna have come to own property through dowry, and such property is usually jointly owned by the respondents and their spouses, unlike in Kandy where joint titles are less common. Joint ownership of property also might strengthen women's ability to make independent decisions about household maintenance, in Jaffna.

However, there is some evidence in favour of the positive effects of sole ownership of property on women's bargaining power within the household in both districts. Moreover, women from households that own agricultural land are also more likely to have higher bargaining power in making independent decisions about household expenditure. However, one must be cautious in the interpretation of the results here, because women in agricultural households might have to make decisions if their spouses are busy working the agricultural lands.

Higher educational outcomes of the PFR, relative to that of her husband, particularly in Kandy, create a considerably large positive effect on a woman's autonomy in household expenditure-related decisions. Interestingly, women who hold traditional gender values are more likely to take independent decisions about household expenditure. This finding in particular highlights the complexity of empowerment as a concept; seemingly retrogressive internal values appear to encourage women to take up an autonomous role in household decisions. We believe this finding further validates our decision to look at different constituents of the concept of empowerment. Moreover, we must also caution that joint decision-making might not necessarily be a sign of disempowerment if women willingly consult men about these decisions.

Land ownership and land-related decision-making

Land ownership is positively associated with women's participation in land-related decisions, unlike with decisions regarding household expenditure. Clearly, legal title to land makes it more likely that women are always included in important decisions about disposing of land either through sale or passing it on in both districts. Joint ownership is particularly influential in strengthening a woman's bargaining position in such decisions, particularly in Jaffna. These patterns reinforce the merits of joint ownership of land and property between spouses. Yet, a lower inclination to include women in the use of land as collateral, and even in renting or renovating land, suggests that women might not be consulted even if they legally own land unless it is absolutely necessary. On the other hand, parental property ownership encourages women's full participation in land-related decisions, highlighting the intergenerational benefits of land ownership for women.

The tendency to exclude women, particularly in Kandy, who are more educated than their husbands, might be emblematic of the ways in which men attempt to assert power over land use, even if they have legal title to such property. The household economic situation also has complex bearings on women's ability to fully participate in land-related decisions. Generally, household financial affluence appears to allow women more autonomy in land-related decisions. However, when the husband's income increases, women are less likely to be consulted in land-

related decisions. Strong connections with family and relatives also bode well for women's full participation in land-related decisions.

Land ownership and perceptions of social status and happiness

Land ownership tends to be positively associated with a woman's perception of her household's social status within the neighbourhood. But the patterns of association are not the same in both districts. For example, while joint land ownership is seen to elevate women's perception of social status in Jaffna, the reverse is true in Kandy. These results possibly point to the different social values attached to joint ownership of land in the two districts.

Some of the control variables appear to be more important predictors of women's perceptions of social status, much more than land-related variables. For example, educational attainment influences women's social status in Kandy, possibly due to better labour market opportunities for women with higher educational levels there, than in Jaffna. Underlying gender norms also appear to influence women's perceptions of social status, especially in Jaffna. For example, women who are in the labour force tend to perceive their households to have a lower social status than their neighbours. On the other hand, if women bring home a substantial income, it is likely that women will perceive their social status to be higher. Higher financial affluence as well as strong social networks, also have a positive effect on women's perceptions of social status, particularly in Jaffna.

Land ownership is not significantly correlated with women's happiness in both districts. However, in general, land ownership is more consistently positively associated with women's happiness in Jaffna than in Kandy. The inverse correlation between agricultural land ownership and women's happiness might allude to economic distress or drudgery of agricultural work.

Most other characteristics do not have a significant effect on women's perceptions of happiness. While one's actual educational attainments do not seem to impact on women's happiness, their own satisfaction with their educational attainment bodes well for women's happiness in both districts, but more in Kandy. LFP and income-related variables also suggest that gender norms might influence women's perceptions of happiness. For example, an increase in the husband's income is

associated with greater happiness among women in Jaffna. Furthermore, owning transport equipment seems to bode well for perceptions of both social status and happiness, especially in Jaffna. Although the strength of social networks does not seem to matter in women's perceptions of happiness, women in both districts who believe that their social status is better than that of their neighbours tend to be happier. The lower autonomous happiness level reported from Jaffna compared to Kandy might be due to the underlying economic challenges and other war-related challenges women from the North grapple with.

Reflections on policy

Reflecting on these findings leads to several policy implications. In principle, there are no barriers to women's land ownership in Sri Lanka. But outdated gender-discriminatory provisions in the customary laws governing land ownership continue to persist and are symbolic of the underlying social values that deny women full and meaningful access to land. The findings, especially from Jaffna, underscore the gap between legal and effective ownership of land. To elaborate, the descriptive statistics analysis clearly shows that more women in Jaffna than in Kandy tend to have legal title to land. Yet at the same time, in Jaffna, the importance ascribed to land as dowry, and women's perception that land is relatively useless without a man, points to the practical and cultural barriers to the effective use of land as an economic resource. Thus, mere legal ownership of land might not necessarily have a meaningful catalytic effect on women's bargaining power within a household, especially if a woman perceives herself to be incapable of managing such property without male support. Thus, while there is an important and a long-overdue need to repeal the inequitable provisions in land laws in the country, there is also a pressing need to ensure that any improvements to the land laws of the country are implemented in practice. To this end, it is important that women are in fact aware of their land rights, and that the institutional environment recognises and promotes women's land rights. While as to how this could happen is outside the scope of our study, advocacy and awareness building campaigns championing women's land rights in other parts of the world can be adopted and replicated here.⁵

5 See for example, "Stand for Her Land" (<https://stand4herland.org/>), a global advocacy campaign on women's land rights.

It is also important to recognise that the value of land as an economic asset depends on many factors. First, there is the question of what type of land she owns. Our analysis suggests that residential property ownership, by and large, tends to discourage women's LFP. However, women are more likely to participate in the labour force if their households own productive land. Thus, the economic benefits of land ownership to women might also depend on the type of land she owns. Nevertheless, the greater probability of LFP among women who own agricultural land might not necessarily be a positive outcome for women, if the drudgery of work affects their subjective well-being, or if their LFP earns little (such as in the case of participating family workers). While residential property could improve her bargaining power within the household, it might not have a real effect on her ability to take up paid work. In fact, residential property ownership might inadvertently reinforce traditional gender roles by keeping women at home.

The results suggest that women who own joint titles to land are more likely to be always consulted in land-related decisions. Thus, joint titles might be a successful strategy to promote women's involvement in strategic decisions related to land such as the sale of land or passing it on to inheritors. Therefore, development interventions that involve providing new houses and land (in situations of relocation or resettlement) should focus on encouraging joint titling for potential beneficiaries.

It is also important that the formal financial systems recognise and include women in credit disbursement processes, especially those involving land as collateral. A revision into their procedures to consider joint consultations with the borrower and his spouse or the principal female relative during the loan processing period might be an effective way to promote the inclusion of women in decisions to pledge land as collateral for loans. Joint titles would also be especially beneficial for ensuring that women are consulted in important decisions such as using land as collateral for loans.

Another important reflection at a policy level should be about how to improve the economic utility of land to women. Throughout the analysis, land appears to be more of a status symbol than an economic resource for women. First, only a very few women own agricultural land. Next, owning residential property, by and

large, seems to obviate the need to participate in the labour market, although most women recognise land as an asset that can help generate income. On the other hand, parental property ownership seems to be symptomatic of household affluence which has a strong empowering effect on women's LFP decisions and participation in land-related decisions. Land ownership generally bodes well for perceptions of social status. Thus, it could be argued that land ownership has a positive effect on women mainly through its social value than its value as an economic resource. In fact, many women are of the opinion that it is difficult to tackle land-related complications without the help of men. Thus, there should be a greater reflection on strengthening the economic utility of land for women, and how institutional barriers can be addressed in order for women to use land without having to rely too much on male support.

Finally, the analysis points to the importance of education, social networks, and women's contribution towards household income as stronger indicators of women's autonomy in decision-making processes. Measures to strengthen these resource endowments, especially women's labour market opportunities and educational outcomes, would likely support women's empowerment while more long-term efforts are undertaken to make land an effective asset for women in strengthening their empowerment.

Appendix 1: Heckman Selection Procedure

Heckman selection	
	<i>β(SE)</i>
Log of PFR's income	
PFR's age	0.0555
	(0.039)
PFR's age squared	-0.0005
	0.000
Years of schooling for PFR	0.1387***
	(0.027)
Lives in Jaffna	0.0101
	(0.089)
Constant	7.0415***
	(0.852)
<hr/>	
Selection	
PFR's age	-0.0039
	(0.004)
PFR's perceived health	0.1184**
	(0.058)
Children aged 5 or less	-0.2642***
	(0.073)
Children aged 6-11	-0.0970*
	(0.050)
Years of schooling for PFR	0.1365***
	(0.043)
Years of schooling for husband	-0.0205
	(0.021)
Perception: If men provide, there is no need for women to work	-0.0948***
	(0.037)
Perception: If women work, household work gets neglected	-0.0897**
	(0.043)
Constant	-1.3186**
	(0.594)
<hr/>	
athrho	
Constant	0.0013

	(0.188)
Insigma	
Constant	-0.2240***
	(0.084)
p	0.0000
AIC	3007.42
BIC	3091.75
N	1437.00

Source: LOWE survey data (2022)

Appendix 2: Means and proportions of variables used in the regression analyses

	Jaffna		Kandy	
	Mean	Robust SE	Mean	Robust SE
<i>Outcome variables</i>				
LFP	0.4329	0.0496	0.3826	0.5351
<i>Decisions about household expenditure</i>				
Food	0.3077	0.0191	0.4137	0.3470
Education	0.1237	0.0160	0.3981	0.1566
Health	0.1674	0.0194	0.3655	0.2075
Maintenance	0.2956	0.0394	0.3935	0.3767
<i>Land-related decisions</i>				
Sell land	0.5490	0.0431	0.4930	0.6377
Rent land	0.2805	0.0450	0.4277	0.3732
Renovate	0.6440	0.0348	0.6283	0.7157
Collateral	0.3906	0.0536	0.4635	0.5010
Inheritance	0.5867	0.0473	0.5879	0.6841
<i>Self-efficacy</i>				
Social status	0.2172	0.0362	0.4277	0.2917
Very unhappy	0.0010	0.0010	0.0010	0.0010
Unhappy	0.0190	0.0043	0.0160	0.0040
Neutral	0.1520	0.0181	0.1505	0.0113
Happy	0.5060	0.0410	0.7298	0.0140
Very happy	0.3220	0.0334	0.1027	0.0096
<i>Land-related variables</i>				
PFR sole ownership of house	0.1418	0.0260	0.2053	0.1953

PFR jointly owns house	0.4525	0.0273	0.0202	0.5087
PFR has residential land elsewhere	0.1976	0.0238	0.0715	0.2466
Household owns residential land	0.2730	0.0283	0.6890	0.3313
Household owns agri. land	0.1146	0.0227	0.0886	0.1613
Parents owned/own property	0.7783	0.0477	0.8429	0.8765
<i>PFR's characteristics</i>				
PFR's age	41.3952	0.5569	42.1260	42.5421
PFR's age squared	1820.4090	49.5934	1883.5040	1922.5480
PFR's perceived health	3.9110	0.0513	3.8569	4.0166
PFR primary or no schooling	0.0437	0.0071	0.0575	0.0584
PFR Grade 6-9	0.1403	0.0227	0.1229	0.1871
PFR Grade 10-11	0.1282	0.0160	0.1322	0.1612
PFR OL qualified	0.5897	0.0344	0.6501	0.6606
PFR AL or more	0.2986	0.0320	0.3359	0.3645
Expected wage	9.9269	0.0302	9.8842	9.9892
<i>Husband's characteristics</i>				
Husband primary or no schooling	0.0784	0.0171	0.0607	0.1135
Husband Grade 6-9	0.1689	0.0214	0.1400	0.2130
Husband Grade 10-11	0.5988	0.0496	0.6454	0.7008
Husband OL qualified	0.3605	0.0363	0.3733	0.4353
Husband AL or more	0.1192	0.0213	0.0467	0.1631
<i>Marital variables</i>				
Age gap	2.8311	0.1429	3.5070	3.1255
PFR's age at marriage	23.8235	0.3830	22.8911	24.6123
PFR more years of education	0.3937	0.0226	0.2986	0.4403
PFR and husband has similar education	0.4103	0.0224	0.4846	0.0434
Husband more years of education	0.4103	0.0224	0.4837	0.4564
<i>Household characteristics</i>				
Children 5 or less	0.3831	0.0264	0.3857	0.4374
Children 6-11	0.4465	0.0318	0.5023	0.5120
Children 12-19	0.6335	0.0453	0.6631	0.0412
Live with parents	0.1312	0.0159	0.0855	0.1639
Live with parents-in-law	0.0362	0.0074	0.0980	0.0515
No. of employed men	1.1931	0.0244	1.1773	1.2432
No. of employed women (ex. PFR)	0.1041	0.0135	0.1291	0.1318
<i>Income, expenditure and assets</i>				
PFR income as % of HH expenditure	0.3722	0.0467	0.3013	0.0198
Log of husband's income	10.2206	0.0293	10.4257	10.2808
Per capita household expenditure	2.6683	0.0549	2.5671	2.7814
Per capita household exp. squared	7.8249	0.3717	7.1633	8.5904
Owns livestock	0.4992	0.0327	0.1260	0.5665

Has production equipment	0.1855	0.0192	0.0591	0.2250
Owens transport equipment	0.8612	0.0216	0.3919	0.9058
Perceptions				
If men provide, women don't have to work	2.7677	0.0824	3.1633	2.9375
If women work, HH work gets neglected	2.3152	0.0706	2.6672	2.4606
PFR satisfied with own education	0.4404	0.0345	0.4432	0.5114
Social networks				
Has friends/relatives in this village	3.8069	0.0887	3.6439	3.9897
Has friends/relatives in this district	3.1222	0.1288	3.4246	3.3875
Has friends/relatives in big cities	2.3620	0.1012	3.0358	2.5704
Has friends/relatives in foreign countries	2.6818	0.0797	2.8880	2.8458
Has friends/relatives in government jobs	2.9005	0.1171	3.1353	3.1416
Strong relations with immediate family	3.4962	0.0473	3.9347	3.5936
Strong relations with relatives	3.3967	0.0371	3.5985	0.1203

Source: LOWE survey data (2022)

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Land Ownership and Women's Empowerment in Sri Lanka: An Empirical Analysis of Two Districts

**Ranmini Vithanagama
Ramani Gunatilaka**

This study uses primary data from 2,000 households in Jaffna and Kandy districts to investigate the association between land ownership and several outcome variables related to women's empowerment, namely their economic participation, autonomy in decision-making about household expenditure, involvement in land-related decisions, and self-efficacy. The study does not find a particularly significant association between land ownership and women's participation in economic activities or their autonomy in decisions about household expenditure. However, land ownership, especially joint titles, appears to encourage women's involvement in land-related decisions in both districts. While land ownership does not seem to have an effect on women's happiness, agricultural land ownership bodes well for women's perceptions of their social status in the neighbourhood. Overall, land appears to be more of a resource of social value than economic value for women in both districts.



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