Shared Knowledge, Shared Lives: Literacy Spillovers in Rural Spanish Households, 1906–1920

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Extended Abstract

This article examines whether literacy generated economic spillovers within rural households in early twentieth-century Spain and, if so, whether those spillovers improved the position of illiterate household members or instead reinforced unequal internal hierarchies. This study focuses on La Mancha between 1906 and 1920, a period marked by delayed educational expansion, agrarian inequality, vineyard growth, and increasing market integration. Rather than treating literacy as an exclusively individual attribute, this article reconceptualises it as a household-level capability that could be shared across co-residents. In low-literacy environments, one literate person could read contracts, interpret tax obligations, handle administrative paperwork, and mediate access to markets and state institutions on behalf of others. However, such knowledge was not automatically egalitarian. Because literacy could be selectively shared or strategically controlled, it could raise overall household productivity while leaving illiterate members with only partial access to the gains.

This article engages three literatures at once. First, it speaks to classic human capital theory, which links education to productivity, earnings, and long-run mobility. Second, it draws on work on external returns to education, especially scholarship showing that knowledge can generate spillovers through families, peers, and workplaces. Third, it contributes to collective household theory by asking how a non-rival but potentially excludable resource such as literacy is allocated within families. This perspective is especially useful in the historical Spanish case. Although the Moyano Law had made schooling compulsory in the nineteenth century, effective participation remained limited, especially in rural interior provinces. Enrolment did not guarantee regular attendance, teacher availability was uneven, and literacy diffusion lagged behind that of much of Western Europe. In this setting, the household remained the main unit through which labour, information, and resources were organised.

Empirically, this article is based on a newly linked micro-dataset for Campo de Criptana, a municipality in Ciudad Real, the region with the most expansive vineyard during the phylloxera influenced vineyard

closure in Europe. It combines four archival sources for 1906, 1910, 1916, and 1920: the population census, the income tax register, and the urban and rural wealth tax registers. The census provides information on age, sex, literacy, occupation, and household position, while the fiscal and property records make it possible to observe taxable income and asset holdings. Individuals were linked across sources using conservative name-matching procedures supported by residential information, allowing the reconstruction of household-level exposure to literacy together with individual economic outcomes. The resulting dataset is unusual for rural Spain because it makes it possible to analyse not only income and wealth levels, but also the intra-household distribution of those resources.

The empirical strategy concentrates on illiterate individuals. The key explanatory variable is literacy exposure, defined as whether an illiterate person lived with at least one literate co-resident. This design allows the analysis to isolate differences among people who themselves lacked literacy while varying in household access to it. This article estimates linear models for logged income and logged wealth, both in pooled form and across two sub-periods: the Vineyard Boom and Population Surge (1906–1910), and the Post-Boom Rural Consolidation period (1916–1920). It then examines heterogeneity by gender and by household type, distinguishing farm, mixed, and non-farm households according to the occupational composition of co-residents. Finally, it evaluates whether literacy exposure altered the internal allocation of resources by modelling each illiterate individual's share of total household income and total household wealth.

Three broad findings emerge. First, literacy exposure is associated with positive income gains for illiterate individuals, but these effects are strongly contingent on historical context. In the pooled sample, co-residence with a literate household member is associated with a modest income premium of about 1.2 percent. During the vineyard boom, however, the premium rises to roughly 2.1 percent and becomes clearly significant, while in the post-boom period it shrinks and loses significance. The most plausible interpretation is that literacy became more economically valuable when commercialization intensified and households had to navigate a more demanding informational environment. During the boom, literacy likely improved coordination over contracts, taxation, transactions, and market timing, allowing households to convert information into higher earnings. When expansion subsided, those gains became weaker.

Second, the benefits of literacy exposure were sharply gendered. Women consistently gained more than men from living with a literate household member. Whereas men's income gains were generally around 2 percent during the boom, women's gains rose to approximately 3.5 to 4 percent once interaction effects are taken into account. These results matter because women in rural Spain faced severe constraints in education, formal employment, and property ownership. Literacy exposure therefore appears to have functioned as an indirect channel through which women could improve their economic position, even when they themselves remained illiterate. At the same time, the findings do not imply that literacy erased gender inequality. Baseline female disadvantages remained large, particularly for wealth, which indicates that indirect access to literacy could mitigate but not overturn broader legal and social asymmetries.

Third, income and wealth responded very differently to literacy exposure. While income effects are positive and often meaningful, especially in expansionary years, the wealth results are weak, uneven, and frequently negative for men. In the pooled sample, literacy exposure is associated with a negative but statistically weak wealth coefficient; during the boom years, the negative association becomes larger and significant for men, reaching close to 9 percent. For women, positive interaction effects partly offset this pattern during the boom, but wealth gains remain inconsistent overall. This divergence between income and wealth is central to the argument of the paper. Literacy exposure appears to improve short-run earning capacity and occupational positioning, yet it does not systematically translate into ownership of land or property. In rural La Mancha, wealth was embedded in inheritance, social status, and rigid institutional structures. As a result, information and coordination could raise flows of income without altering the formal distribution of assets.

The household-type results reinforce this interpretation. Literacy exposure produced its strongest income returns in farm households, especially during the vineyard boom. This is consistent with the idea that literacy mattered most where production, sales, and household coordination were deeply intertwined. In farm settings, the ability of one member to manage written information could affect the productivity of the entire family. Mixed households also showed positive income effects, though with less precision, while non-farm households displayed smaller and more variable gains. Wealth effects, by contrast, did not follow the same pattern and tended to converge toward zero outside the boom years. Taken together, these findings suggest that literacy spillovers operated above all through household-centred production and market interaction rather than through direct individual claims over assets.

Perhaps the most striking result concerns intra-household allocation. Literacy exposure did not increase the share of income or wealth accruing to illiterate members. On the contrary, it reduced those shares. In the pooled sample, illiterate individuals exposed to household literacy received about 3 percentage points less of total household income and roughly 6 percentage points less of total household wealth. During the vineyard boom, the negative wealth-share effect became even larger. These results indicate that literacy spillovers were real but not egalitarian. Illiterate household members could benefit through higher income levels or improved occupational standing, yet literate members appear to have retained greater control over the distribution of resources, particularly assets. In other words, the household was both the channel through which literacy benefits circulated and the arena in which those benefits were selectively appropriated.

This article makes two main contributions. Substantively, it adds a new dimension to the historical literature on education and inequality in Spain by showing that the consequences of literacy depended not only on whether schooling expanded, but also on how human capital was mediated inside families. Methodologically, it demonstrates the value of linking census and tax microdata to move beyond individual outcomes toward household-level processes. More broadly, the findings speak to a wider development question that remains relevant in many middle-income settings today: educational expansion can improve earnings and inclusion without necessarily loosening deeper structures of wealth inequality. Human capital can raise household capability while still reproducing uneven bargaining power and unequal control over assets.

Overall, this article argues that literacy in rural Spain should be understood as a context-dependent household capability. It was productive, because it helped households exploit opportunities created by commercialization and demographic expansion. It was unequal, because its benefits were filtered through gender norms, household structure, and entrenched property institutions. And it was historically contingent, because the strongest returns appeared during moments of rapid economic change rather than uniformly over time. By shifting attention from individual literacy to literacy exposure within families, the study offers a new way to think about the relationship between education, inequality, and household welfare in historical economies.