Journal of Economic Behavior and Organization 148 (2018) 241–259

Contents lists available at ScienceDirect

Journal of Economic Behavior and Organization

journal homepage: www.elsevier.com/locate/jebo

The impact of a gender and business training on income hiding: An experimental study in Vietnam

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ARTICLE INFO

Article history:
Received 6 May 2017
Revised 14 February 2018
Accepted 26 February 2018

Keywords:
Non-cooperative household models
Hiding
Information asymmetries
Gender and entrepreneurship training

ABSTRACT

We use a randomized controlled trial and behavioral game to study the extent and determinants of income hiding in rural Vietnam. We focus on a training program that aims to promote gender equality and entrepreneurship among women in poverty who are engaged in running a small business. In one treatment arm, we allow husbands to participate in the training as well. While the impact of the training on income hiding is not significant at usual significance levels if only women are allowed to follow the training, we provide some evidence that the training invites women to hide income. Our study also suggests that allowing husbands to be present at the training intensifies this effect. We discuss several mechanisms that may explain these findings, including an increase in expected income and a decrease in information asymmetry between the spouses.

1. Introduction

Economic thinking about household decision-making has evolved over time. Initially, so-called unitary household models were used in which a single planner was assumed to maximize household utility – representing the interests of all household members (e.g. Becker, 1981). This perspective gave way to intra-household allocation models based on cooperative or non-cooperative behavior of household members. Cooperative models assume income pooling by partners, and subsequent allocations based on Nash bargaining (e.g. Manser and Brown, 1980) or another form of collective decision making (e.g. Chiappori, 1988; Chiappori 1992). Such models yield outcomes that are Pareto efficient. However, cooperation may break down, and inefficient non-cooperative bargaining may occur if marriage dissolution is prohibitively costly. Household members do not pool their income, but allocate their resources according to their own preferences and in accordance with socially-enforced and specialized gender roles (e.g. Lundberg and Pollak, 1993). Contributions to the provision of household public goods are voluntary, typically resulting in under-provision of such goods. Non-cooperation within the household is not only relevant for how income is spent. Evidence suggests households may also fail to generate income efficiently (e.g., Udry, 1996; Iversen et al., 2011; Kebede et al., 2013), and fail to provide insurance to its members efficiently (Robinson, 2012).

Cooperation in households may break down because of commitment problems or transaction costs, especially when the gains from cooperation for individual members are small (say, because of low bargaining power). Individuals might resort to non-cooperative strategies to advance their interests. More typically, perhaps, hybrid strategies are followed in which

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https://doi.org/10.1016/j.jebo.2018.02.020
0167-2681/© 2018 Published by Elsevier B.V.

household members cooperate in specific domains and pursue their private interests in others. In a context of full information, individuals may resort to external commitment devices to force their preferences upon their partners. For example, Anderson and Baland (2002) demonstrate that women may commit to a specific (privately desirable) savings strategy by joining a ROSCA.[1] In a context of imperfect information about spousal income, a hybrid strategy may involve hiding part of one's income from the spouse (Chen, 2006; Castilla and Walker, 2013). Income hiding is an important topic for development economists because of potential efficiency implications. Such concerns emerge when public goods are underprovided, or when household members have different preferences for the bundle of goods and services that should be consumed. But income hiding also matters (for economists) because survey-based measures of household income may be systematically biased in the context of income hiding (Ashraf, 2009). If so, the estimates of regression models in which income enters as a regressor are biased.

Our paper contributes to the recent literature on income hiding. The main objective of the study is to test whether income hiding by women is affected by participating in a gender and business training intended to promote female empowerment – both economically as well as socially. To achieve this we use a randomized controlled trial to generate exogenous variation in exposure to the training and a behavioral game to measure income hiding. We are unaware of other studies examining the causal impact of gender and business training on income hiding. An auxiliary objective is to examine whether inviting husbands to participate in the training affects outcomes. The literature on the impact of business trainings (and micro finance, in general) is starting to mature and one key feature seems to be that gender is important, as it is seemingly harder to move female entrepreneurs than male ones (De Mel et al., 2008; Berge et al., 2015). This paper takes a next step to consider one aspect of the gender dimension of training interventions.

Our paper seeks to bridge two literatures – the one on intra-household resource allocation and income hiding discussed above, and the nascent literature on the impact of (gender and) business training interventions. The literature contains several studies probing the impact of such so-called "Finance + " training programs (for a critical review see McKenzie and Woodruff, 2014). Some studies document training programs have the potential to alter knowledge and behavior of microfinance clients (e.g., Bulte et al., 2016a; Giné and Mansuri, 2014; Sayinzoga et al., 2016; but also see Karlan and Valdivia, 2011), although evidence suggests the response to such interventions may be gender-specific (Berge et al., 2015).[2] Complementing this literature's focus on business knowledge, practices and outcomes, our study focuses on the short-term impact of a gender and business training on intra-household decision making and incentives for hiding income.

Some recent papers also focus on information asymmetries between spouses (e.g. Hoel 2015) and income hiding from one's spouse.[3] The closest to our work are Ashraf (2009) and Fiala (2017). Ashraf (2009) uses a field experiment to show that men in the Philippines, when observed by their spouses, commit to consumption by choosing a gift certificate for themselves (rather than deposit money in a household account). But they prefer to put windfall money in their private account when their choices are unobservable to their partners. Fiala (2017) examines the interaction between income hiding and outcomes of business training. Women who hide income from their spouses have positive (but insignificant) impacts of the treatments while women who do not hide income show large significantly negative effects of the intervention. While that paper considers the mediating impact of intra-household issues and income hiding on the impact of a training intervention, we consider a complementary issue, namely the causal effect of participating in a business and gender training on income hiding.

We study income hiding using a new dataset collected in rural Vietnam – a region with a strong patriarchal culture where men control most household resources (Krantz and Vung, 2009). We invited a random sub-sample of female clients of the microfinance institution Tao Yeu May (TYM) in Vietnam to participate in a gender and business training. In addition, and responding to recent suggestions in the literature, we invite a random sub-sample of women to bring their husbands along to participate in the training (e.g., Rahman et al., 2011; World Bank, 2011). The training intends to promote gender equality and female empowerment via the gender and business components. Shortly after the training sessions had been completed, we invited a random sub-sample of the married participants, and their spouses, to participate in an income hiding game to examine whether the training induced more or less income hiding.

While our data does not enable us to precisely test the channels by which the training affects income hiding, we are able to rigorously determine the reduced form effects of the training on income hiding. Our main findings are as follows. Unlike the outcomes in Senegal discussed by Boltz et al., (2017), most Vietnamese women prefer not to hide income from their spouse, and the majority even chooses transparent behavior at a monetary cost to themselves. However, some income hiding does occur in rural Vietnam. Participating in the training appears to have two effects: it discourages honest behavior

[1] Interestingly, Anderson and Baland (2002) find an "inverted-U" shaped relation between autonomy and the decision (or ability) to join a ROSCA: women with either little or great autonomy from their husbands do not join ROSCAs, while women with average autonomy do.

[2] In addition, some literature focuses on the impact of life skills training for females. For example, Bandiera et al. (2012) found that a combined life skills and vocational training diminished engagement of adolescent girls and young women in sexual risky behaviour and increased participation in income generating activities. Adoho et al. (2014) found that the EPAG training increased employment, empowerment, and earnings of adolescent girls.

[3] There are clear parallels with the literature on income hiding within (extended) family networks, where forced solidarity between family members may exist and which may be resented by family members who are typically on the giving side of the relation. Such family members may be tempted to hide part of their income from others in order to avoid requests for assistance and support, For example, Beekman et al. (2015) find that the incidence of willingness to pay for secrecy increases with family density. In addition, Boltz et al. (2017) find that on average subjects are willing to accept a decline in income of 14% to keep their earnings hidden from their peers. See also Di Falco and Bulte (2011), Baland et al. (2011), Jakiela and Ozier, (2016), and Squires (2017).