

**WOMEN TRAINERS HELP  
WOMEN ENTREPRENEURS:  
EFFECT OF TRAINER  
GENDER ON EMPLOYMENT  
IN INDIA**

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## **ABSTRACT**

Government-sponsored training programs in emerging markets are essential to creating a skilled workforce for human capital development as well as spurring entrepreneurial activity, especially among women. In that context, we study the effect of skill development and training programs on employment preferences of women trainees. Through a mixed methods approach, we first inductively identify that the gender of trainers plays an important role in a graduating trainee's decision for wage versus self-employment. Then we conducted a quantitative analysis on 119 training institutes and 28,055 certified trainees across sectors. We found that female trainers are better at placing male trainees in employment, overcoming cultural barriers. More importantly, female trainers were better at assisting female trainees start their own venture, nurturing their entrepreneurial intentions, especially in rural areas. Male trainers were singularly focused on developing work-readiness skills, helping female students get a job in a firm.

**Keywords:** employment, women entrepreneurship, women trainer, gender, human capital

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## INTRODUCTION

Prior literature in human capital, defined as an individual's knowledge, skills, and abilities, has shown the positive impact of training on human capital development, leading to greater employment opportunities and increased labor market potential (Becker, 1964; Schultz, 1961). While increased human capital can sometimes restrict mobility in the labor market (Acemoglu & Pischke, 1998), training counteracts this to increase mobility, productivity, and wages (Acemoglu & Pischke, 1999). Trainees' participation in and attitude towards learning activities are strong predictors of their learning intentions (Colquitt et al., 2000; Noe & Wilk 1993). In addition, social and relational skills developed from responsible training programs help trainees navigate through different work situations (Hoyt, 1978). The training literature has largely been confined to augmenting human capital productivity, but there is an absence of research focusing on gender as a construct to study the effectiveness of the program itself. Our research closes this gap by focusing on the interplay of trainee and trainer gender on placement outcomes following certification from a government-sponsored skill development program. Placement for students in the training program can be either wage-employment or self-employment, and is considered a critical post-training outcome.

Women's participation in the formal workforce has consistently been low in India compared to other countries. According to the Global Gender Gap report (World Economic Forum, 2020), India ranks in the bottom 10% at #145 with only 22% of women participating in the workforce. However, this salient gender gap is not unique to India. Worldwide, only 29% of senior management roles are held by women and only 5% of the S&P 500 companies had a female CEO (Catalyst, 2019). The rate of women's participation in the workforce impacts economic and human capital indices of a country (Kabeer, 2002). Macro-level factors such as gender gaps in economy, education, politics, and health influence the micro-level decisions such as employment decisions (Klyver, Nielsen, & Evald, 2013). Economic opportunities tend to be extremely disproportionate and more evident in minority and low-income groups (Holzer & Lalonde, 2000). In India, women earn a mere one-fifth of a man's income (WEF, 2020) while globally, women made 21 cents less than men for every dollar earned (Payscale, 2019). The Indian government has been making efforts to reduce unemployment rates and bridge the gap between the government's efforts and the industry's skill requirements. One program started by the Ministry of Skill Development and Entrepreneurship (MSDE) and developed through collaboration with the country's business leaders was to provide skill development and entrepreneurship programs through a streamlined institutional mechanism under a skill certification scheme to enable the potential workforce to learn industry-relevant skills and secure a better livelihood.

In this paper, we examine the effectiveness of the ministry's short-term skill development training program. To understand the nuances behind the 'skills-to-jobs conundrum' in India, we followed an inductive approach by conducting an ethnographic study prior to creating our theory and hypotheses (Edmondson & McManus, 2007; Eisenhardt, 1989). Our first objective was to understand the ecosystem to further inform us of the potential challenges. Then we formed and tested our hypotheses using a large dataset from the skill development program merged with publicly-available trainee certification and placement data. Our nuanced findings show that while male trainers tend to inculcate work-

readiness skills, female trainers nurture the entrepreneurial orientation of female trainees, resulting into two very different outcomes of wage versus self-employment for the female trainees, respectively. These results are more pronounced in rural areas, in which literacy rates are relatively lower. Further, when placing male trainees into wage employment, female trainers outperform male trainers. These results point out that the female trainers not only outperform their male counterparts but also encourage women entrepreneurship in rural and low-literate areas, helping the strategic goals of the Indian government.

Our study contributes to the literature in three important ways. First, we focus on a large-scale government-sponsored skill development and training program—from mobilization and training to assessment, certification and placement—aimed at lesser educated students to understand how skill-based training can improve economic outcomes for male and female students. Second, we examine the impact of trainer gender as a construct for students opting for self- or wage- employment. Third, we contribute to an understanding of how training programs work in emerging economies. Entrepreneurship research has extensively focused on developed economies in North America and Europe, but there is scant literature available on emerging economies. In addition, most of the sectors focus on high technology ventures in urban and innovative technology sectors, however, there is tremendous opportunities in the non-technology sector and in rural areas. In the next sections, we explain our theory and hypotheses, highlight our rich dataset, and explain our findings and conclusions.

## **THEORY AND HYPOTHESES**

Individuals develop their human capital through investments in schooling, on-the-job training, and other types of work experience (Becker, 1964). Government-sponsored training programs is another mechanism for integrating the unemployed and economically-disadvantaged population into the workforce. Even though the government's investment may be considered modest compared to the magnitude of skill deficiencies, government-sponsored training programs help beneficiaries earn a basic education and occupational certificates, and incentivize private entities which are effective providing support for such programs (Lalonde, 1995; Martinson & Strawn, 2003). How does gender affect career choices after completing the skill development program?

Research has examined how gender as a social construct influences the employment choices among men and women, which largely focuses on constraints of women (Gupta et al., 2009; Mirchandani, 1999). Women face stereotyping earlier in their life and are often directed toward self-selection that steers them toward female-dominated occupations (Ibarra et al., 2013). For example, women find it difficult to be in a leadership position because they are always expected to adhere to stereotypes congruent to their gender (Eagly & Carli, 2007). If women choose to pursue goals outside their stereotype, they may be expected to deliver higher results in less favorable conditions than men. Women who limit themselves to behaviors that are consistent with their gender stereotype (e.g., act communally and display warmth) are perceived as less competent and paradoxically, women who adopt masculine behaviors (e.g., act agentically and display competence) are penalized for violating their gender stereotypes (Ridgeway & Correll, 2000). There are two major drawbacks of stereotyping women: (1) over time, women tend to internalize stereotypes and avoid

displaying agentic behavior (Diehl & Dzubinski, 2016; Ely, Ibarra, & Kolb, 2011) and (2) women do not opt for jobs that have inflexible time demands or those that do not accommodate family responsibilities (Stone & Hernandez, 2013).

Women with professional careers often find it difficult to maintain a work-family balance, and end up compromising their career for the welfare of the family (Ciciolla, Curlee & Luthar, 2017; Hochschild & Machung, 2012). Cultural norms dictate that women take on greater responsibility for childcare in addition to bearing and birthing biological children (Blair-Loy, 2003; Correll, Benard, & Paik, 2007). Responsibilities of being a wife and mother limit the pursuit of wage-employment activities and a larger part of a women's married life is spent working at home and raising children (Barbulescu & Bidwell, 2013; Bielby & Bielby, 1984; Mincer, 1962; Thébaud, 2010). Women may have confidence but jobs are typically masculinized making it non-congruent with their gender and placing undue pressure to perform with limited resources and face discrimination (Barbulescu & Bidwell, 2013; Stone, 2007). All these conditions make it difficult for women to achieve a successful career.

### **Women and Self-Employment**

Given the absence of attractive employment options in a company that may also embody gender stereotypes and require inflexible time demands, self-employment may be a more viable option for women. Gupta and colleagues (2009) found that both men and women see self-employment, or largely entrepreneurship, as a male gender-role stereotype whereas only women perceived entrepreneurs to also exhibit the female gender-role stereotype. Women are often characterized to possess more communal traits of expressiveness, connectedness, relatedness, and supportiveness, whereas men were characterised to possess more agentic qualities of aggressiveness, autonomy, instrumentality and courage (Cejka & Eagly, 1999; Eagly & Carli, 2007) adding to evidence the rate of becoming an entrepreneur is far higher among men than women (Acs et al., 2005). Unlike men, women are considered risk-averse and lack exposure to information, networks, and resources to create a successful enterprise (Jeong & Harrison, 2017; Jianakoplos & Bernasek, 1998; Venkatesh et al., 2017). In a 22-country European study, scholars found that potential female entrepreneurs had a difficult time acquiring relevant resources that would otherwise help them in a start-up (Tonoyan, Strohmeier, & Jennings, 2020). Compared to men, women face challenges in both wage- and self-employment career options.

However, many women prefer self-employment more, despite the stereotypes and lack of access to resources. The predominant reason is that self-employment offers women more independence to choose their schedule, hours, location and allows for overall balance of the work-family conflict (Heilman & Chen, 2003; Hughes, 2003; Reynolds & Renzulli, 2005; Thébaud, 2010). Men and women who pursue self-employment also share the same characteristics such as the need for achievement, risk-taking propensity, innovativeness, and inner locus of control (Tan, 2008). However, motivations differ in that women seek achievement, job satisfaction and economic need as drivers of self-employment whereas men seek power, status, and prestige (Hirsich, 1986). Lee and Huang (2018) demonstrate that women-led social enterprises also increase attributions of warmth, thus attenuating the female

gender role incongruity.

Shane and Venkataraman's (2000) research highlights that educated individuals may be better equipped to both identify and take advantage of self-employment opportunities because of not only their increased cognitive abilities, but also the lower perceived risk of finding alternate employment should their venture fail. However, in an emerging economy, most self-employed individuals have less formal education and are heavily dependent on the success of their venture for their own survival, taking considerable financial, operational, and psychological risks, i.e., fear of failure. The risks are often exacerbated for a self-employed woman trying to gain a foothold in a male-dominated society. The notion of the 'male breadwinner' and 'female homemaker' is deep rooted and has contributed to a more gendered division of labor (Crompton & Harris, 1998; Cunningham et al., 2005; Kaufman, 2000). Even though the ideology of equality has become globally widespread, women continue to be persistently underrepresented in the entrepreneurial and formal workforce, and the status of women remains subordinate to that of men (Epstein, 2007; Sen, 2001). Amartya Sen (2001) describes seven types of gender disparities to illustrate the anti-female bias in India, e.g., natality inequality (parents aborting newborn girls), household inequality (sons are preferred and given priority in nutrition, education, and reduced housework), and professional inequality (gender asymmetry for employment and promotion opportunities), to name a few. Overcoming these inequalities is difficult, but in the next section, we examine how trainers, in particular females, can help as well as improve both the country's education and placement outcomes.

## **Trainer Gender**

Beyond individual personality traits and environmental characteristics (Agarwal, Audretsch & Sarkar, 2007; Lewis 2006; Mirchandani, 1999), the gender of the instructor can have an impact on students, particularly related to academic achievement and meeting learning outcomes (Bettinger & Long, 2005; Dee, 2007; Hoffmann & Oreopoulos, 2009). Students from lower socioeconomic backgrounds are more sensitive to the influence of teacher gender and having a parent who is self-employed or employed in a job increases their education and training aspirations, task self-efficacy, and expectancy for choosing self-employment or wage-employment, respectively (Scherer et al., 1989).

In our context, even though female trainers have chosen a specific area of specialization, they too will have to overcome the stereotypical belief that attributes of a successful leader are predominantly traits characteristic of men (Heilman et al., 1989; Ragins et al., 1998; Tharenou, 2001), thus making female trainers more resilient. Women professionals are perceived as being vocationally competent, but their level of success tends to be gauged depending on double standards rather than their actual competence (Abramson et al., 1977; Biernat & Kobrynowicz, 1997; Foschi, Lai, & Sigerson, 1994; Foschi, 1996). Overcoming these barriers makes female trainers more attuned to the needs to their students. Using this logic, we hypothesize that:

*Hypothesis 1: Female trainers are more likely to place their students than male trainers.*

Extant research shows having a female trainer benefits students who are women more than men (Bettinger & Long 2005; Dee, 2007). Bettinger and Long (2005) find evidence supporting the “role-model effect” in that female instructors positively influences course selection and choice of major in some disciplines. The role model effect boosts relative grade performance, the likelihood of completing a course and graduating with an advanced degree (Carrell, Page, & West, 2010; Dee, 2007; Hoffmann & Oreopoulos, 2009; Neumark, & Gardecki, 1998; Rothstein, 1995). Girls are more amenable to the learning process than boys and female instructors alter girls’ beliefs about commonly held gender stereotypes and increase their motivation to learn (Cornwell, Mustard, & Van Parys, 2013). On the other hand, boys economize their effort to reach an educational goal and choose predominantly male occupations that do not require advanced degrees.

In addition to the role model effect, teacher’s of the same gender as the student automatically creates an inherent, passive influence on the student (Dee, 2005). Gong and colleagues (2018) show having a female teacher increases girls’ test scores and improves both their mental status and social acclimation relative to boys. Furthermore, there is evidence that female teachers provide feedback differently to girls and boys and having a female teacher also improves girls’ self-assessment of their learning. Thus we hypothesize:

*Hypothesis 2: Female trainers are more likely to place female vis-à-vis male students.*

Although female students may prefer self-employment (Heilman & Chen, 2003), they may still need to be early guidance by trainers on how to incorporate a firm, apply for a bank loan, and market their products. Ranganathan (2017) explores the effectiveness of workplace training in facilitating retention in first-time female workers in India. She finds that experienced trainers impart better work-readiness learning based on four dimensions: self-presentation, interpersonal communication, work-life separation, and self-reliance. In our fieldwork, women mentioned getting more confident after being taught by the male trainer, who trained them in communication and survival skills. In other words, male trainers imparted the necessary work-readiness skills.

However, female trainers were more likely to impart the nurturance skills and knowledge that the female student prefers, such as advice on building and nurturing an enterprise. In emerging economies like India, women opt for self-employment due to the economic need, which largely encompasses survival, nutrition, healthcare, and education (Minniti, 2010). Female trainers may be more equipped to guide and mentor their female students to help achieve their own career goals, thereby leading to our next hypothesis:

*Hypothesis 3: Conditional on placement, female trainers are more likely to place female students in self- vis-à-vis wage-employment.*

Rapid urbanization in India has led to the entry of many multinational corporations located in urban and suburban cities, thus creating more wage-employment options. Even in emerging markets, most multinational corporations follow equal opportunity norms by promoting diversity, offering health insurance, offering paid maternity leave, and providing support for childcare, thus making them a favourable wage-employment choice for women in urban and suburban cities. However, rural areas lack the required resource infrastructure

to attract corporations to set up their enterprises (Venkatesh et al., 2017). Given their lack of education relatively to peers in urban and suburban cities, female trainers may steer their students living in rural areas more towards self-employment options. Hence, we hypothesize:

*Hypothesis 4: Conditional on placement, female trainers are more likely to place female students in self- vis-à-vis wage-employment in rural vis-à-vis urban or suburban areas.*

Education and human capital development has been positively associated with better employment opportunities and female instructors play a positive role in this outcome (Coverdill et al., 1996; Rothstein, 1995). In high literate states, such as Kerala and Himachal Pradesh, women are more likely to have lower aspirations for entrepreneurship to begin with (Field et al., 2010) due to the abundant job opportunities available to them. However, women in low-literate Indian states, such as Odisha and Bihar, have less economic development and fewer options to work in a company. Since women are particularly disadvantaged with respect to the outcomes of schooling (Jacobs, 1996), female trainers would suggest that their students in these low literate states pursue entrepreneurial activities, leading to our final hypothesis:

*Hypothesis 5: Conditional on placement, female trainers are more likely to place female students in self- vis-à-vis wage-employment in low vis-à-vis high literate states.*

## METHOD

### Data and Sampling Procedure

We used a mixed methods approach incorporating both quantitative and qualitative elements into our study. The first component is the qualitative data collected from participants, trainers and program coordinators of the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) skill development program at Centurion University, Odisha. We observed a classroom-based life-skills module in session and a lab-based electrical engineering lab in session. We interviewed 6 female participants, 2 teachers (1 male & 1 female) and program coordinators (female) and the chairman of the university to understand the vocational skill ecosystem. Because women were very hesitant to speak up and share their experiences with us, we had to make this a group activity rather than a one-to-one exercise. The setting was made less formal and the women started sharing their experiences about the skill development program and about their lives and ambitions in general. The women we interviewed were selected by the program coordinators. We did ask about their choice of the women to interview with us. The women we interviewed were the best in the batch being trained and showed more potential and enthusiasm than the others when there was a call for volunteers to interview with us. This data was used earlier to inform our theory and hypothesis, and the results to a few of our key questions are shared below.

The second component was a proprietary quantitative dataset that was obtained through a non-disclosure agreement with NSDC and the PMKVY website. The NSDC data consisted of individuals who had been trained through the PMKVY initiative of the



government from August 2016-December 2017. This data consisted of 65,656 records of participants who had completed the skill development program and were placed in either wage or self-employment. However, we do not know the sampling and selection method used by NSDC to retrieve the records shared with us. When compared with the placement data available on the PMKVY website the data shared by NSDC had participants who had qualified the Enrolment→ Training→ Assessment→ Certification→ Placement route in that the value on these variables was “yes”. To understand what happened to the participants who enrolled, but did not complete the assessment and certification, and hence not placed, we downloaded a larger dataset of over 2.3 million records available on the PMKVY website. To maintain consistency of the data we only considered the participant data as our time period (August 2016 - December 2017) and our initial dataset stood at 1.04 million records (see Figure 1).

The data shared by NSDC had no personally identifiable information but when we mapped the participant ID on the NSDC data and the PMKVY dashboard we were able to add the name of the participant and the name of the organization where they were placed to our dataset. We also verified that the data NSDC data was in fact a subset of data that is publicly available on the PMKVY website. The NSDC data provided additional information about the trainers that is not available on the website. We used a concatenation of fields to map the data. The details about participants who were not placed was filled in by concatenating training center code, job role ID and batch start date. Once this was filled in, the trainer details were added to each of the mapped fields. All rows where we were unable to map the batch ID's and trainers were dropped from the dataset. We eliminated individual level data based on missing data concerns in that we were unable to map batch and trainer details. We also compiled batch level data, and dropped batches where there was no variability in the choice of placement. We hypothesize that post completion of the skill development program a choice to choose between wage and self-employment is available. We dropped all those batches where all students opted for wage employment. We discarded the data where we were unable to map the trainer data to PMKVY website. These rows were discarded as incomplete. Our merged dataset now consisted of complete detailed information on participants, trainers and placements. We dropped small class sizes (< 5) and sectors with no gender variability, such as construction and beauty. Our final dataset consisted of 28,055 records.

## Measures and Analysis

Our first dependent variable, student *placement*, is measured as a binary variable that is coded one for ‘yes’ and zero for ‘no.’ Upon closer analysis, we realized that another key outcome is whether placement is in *self-employment* (=1) or wage employment (=0), and this is our second dependent variable. In our analysis of histograms, wage employment is largely more balanced between males and females (see Figure 2), whereas self-employment is much higher among females than males (see Figure 3). Our key independent variable is *female trainer*, measured as a binary variable coded one if the trainer's gender is female and zero for male. We measure student gender by coding *female student*, which equals one for female and zero for male. We did not have any transgender trainers or students in our sample. For our split sample analyses, we included differences the median between rural and non-rural locations, and low and high levels of female literacy in states. This data was extracted from

the Indiastat website.

To control for time invariant factors, we include fixed effects at training center-level, industry-level, and state-level. We also include a number of control variables, such as *trainer experience*, *class size*, and *certified*. Trainer experience is count of the number of batches taught by a trainer, and class size is measured by the total number of students in a batch. Both of these variables were log transformed. Certification was measured as a binary as to whether the student received certification, and we note that the mean for this variable is quite high. In fact, it was dropped from one of our split-sample models on a state with high female literacy since there was no variability.

We ran a fixed effects OLS model. The results are robust to a fixed effect logit analysis, but given the large number of observations and for ease of reporting the results, we used the findings from the OLS models. We include a number of various robustness checks, and discuss them in the next section.

## **RESULTS**

Tables 1 and 2 show the descriptive statistics and correlation tables. Tables 3 and 4 show the results for our hypotheses. We find strong statistical support for Hypothesis 1 (see Model 2 in Table 3); female trainers have a strong influence on placement of students. Unfortunately, we do not find support for the combination of a female trainer and female student leading to better placement (see Model 3 in Table 3), therefore we reject Hypothesis 2.

To understand our results better, we look at our second set of hypotheses, considering whether placement is in self- or wage- employment. Hypothesis 3 is strongly supported in all of the models in Table 4; the female trainer-female student combination works best in placing students in self-employment. Looking back at Hypothesis 2, this means that while women are, on average, successful at placing female students in self-employment, they are worse than average in placing female students in wage-employment (hence the non-significant relationship). Instead, women trained by male trainers are more likely to gain work-readiness skills and get placed in a job. For female trainers helping female students in their venture, the effect is stronger in rural vs. non-rural areas (compare Models 2 and 3 in Table 3), thus supporting Hypothesis 4. However, we do not find statistical difference between high and low literate states, therefore Hypothesis 5 is not supported.

## **ROBUSTNESS CHECKS**

Even though not formally hypothesized we tested to see if there was a difference in the income of men and women for the same job role. The average salary across all our observations is 9,657 rupees per month and we found that women earned 394 rupees lesser than men for the same job role. There is a penalty for having a female trainer of 134 rupees and choosing self-employment of 292 rupees. Women in urban areas earned 610 rupees less than men, this disparity widens in suburban and rural areas. A woman in suburban areas earns 1,867 rupees less than a man, while a woman in rural areas earns 2,160 rupees less than a man. This finding illustrates the prevalence of gender pay gap in India.

We also tested to see if grades obtained positively impacted the placement of a trainee in wage- versus self-employment. Grades or scores are most often treated as proxies for competency, and higher grades often are a reasonable predictor of effective performance in the job. During our fieldwork, we found that teaching methods in the PMKVY skill certification program were tailored to match the lowest education level of the class (e.g., a high school dropout). This is a clean slate approach and creates a level playing field for those with lower level of education. Scores are actual indicators of how much the trainee was able to absorb in the classroom. Given the competition for jobs and an abundant pool of college graduates, doing well in the training program increases the trainees' chance of getting placed in a job. Though not a surprising result women who seek self-employment are generally scored better than men. On the other hand, what was surprising was firms are more likely to hire men even when they scored less because men are often treated in a positively biased manner (Ng & Wiesner, 2007). Female students with higher grades were less likely to get placed in wage-employment than male students with lower grades. Women faced a greater discrimination even when they are highly competent (Gerdes & Garber, 1983).

### **ADDITIONAL QUALITATIVE ANALYSIS**

While the hypotheses testing was based on empirical data and statistical analyses, the study was grounded in substantial qualitative antecedents was initiated with extensive field study.

*How has the training program changed the knowledge, skills and attitude of women?*

Prior to joining the skill development program, the women had no idea that they can have a sustainable livelihood. The women had self-doubt and were in constant fear that they did not have the skills to seek active employment. The doubt and fear were imbibed in them by their parents or spouses who wanted the women to be under their control (patriarchal societal norm of not educating the girl-child). Post training the women feel empowered knowing they not only have the skills but are also on an equal footing as men. The women are confident that they will survive through the pressures of a job and will be able to seek employment at the end of the training program. Some of the women also mentioned that they would like to learn more skills that will make them supervisors and managers.

*What kind of societal norms prevented women from seeking active employment?*

Women are often asked not to step out of their houses by either the parents or the in-laws. Safety is one the primary concerns that families have when deciding to send women out to work. A married woman is often pressurized to have a baby and raise her children well rather than seek employment. The very fact that these women have been told that they cannot do anything prevented them from seeking active employment. However, the skill development initiatives have instilled the skillset as well as the confidence to seek active employment.

*What is the kind of transformation did the women see in themselves?*

The women we interviewed come from lower economic backgrounds. Access to information on education, sustainable livelihood options and employment, and economic and financial inclusivity are nil. The only aspiration these women were taught was to be a wife and learn how to cook to make their husband's family happy. When the women learnt about the skill development and enrolled in them, they learnt the required skills as well as the important life skills that they require to sustain themselves in a job. They have learnt to communicate well, groom themselves and were very enthusiastic about the changes that a job can bring in their lives.

## **DISCUSSION AND CONCLUSION**

In our study, we found that trainer gender plays a crucial role in the placement of students in a job or in starting their own venture. We found that female trainers are better at placing their students than male trainers. However, we found evidence of opposite trainer-trainee success. Largely due to their underlying motivation to overcome social barriers, female trainers are more likely to place male students in a job. By contrast, the male trainers' desire to inculcate work-readiness skills leads them to better place culturally-motivated females in a job. Conditional on placement, however, female trainers are better at supporting, nurturing, mentoring, and helping female students success in self- vis-à-vis wage-employment. Coming in proximity with other working women (the female trainers) helps the female students overcome gender stereotypes and instills an urge to earn. Rather than taking up more time-bound wage earnings, they strike a balance by choosing entrepreneurship, which helps them balance both their work and family (often a priority). This effect is prominent in rural areas where women have to take care of their families alone and may not have access to support systems that urban women can enjoy. Surprisingly, difference in literacy rates does not affect placement, suggesting within state differences is more salient than across states. Irrespective of the female literacy level across different states, female trainees continue to opt for self-employment, more so when they have been trained by female trainers.

The rapid rise in India's population contributes to a growing labor force, thereby increasing India's human capital potential. At the national level, human capital is a key factor for growth, development, and competitiveness. The human capital (knowledge, skills, and abilities) possessed by the labor force creates value in a nation's economic system in a country's most important resource (Barney & Wright, 1998; Coff, 1997). Human capital accumulation is influenced by the government's policies and interventions that increase economic and labor market growth (Benhabib & Spiegel, 1994; Schultz, 1961). Therefore, an emerging market's long-term success strongly depends on its human capital development and government-incentive training programs.

Women play an important role in the economic progress of a country. Historically, women's foray into self-employment was a defence mechanism against economic distress, however, the creation of new business enterprises is viewed as a fundamental indicator of the economic progress of a country (Acs et al., 2005; Minniti et al., 2005). Women's representation in self-employment remains low even after accounting for social, economic, demographic, and human capital factors, raising concerns for researchers and policymakers alike (Jennings & Brush, 2013). Women prefer tasks and occupations that favour qualities

considered congruent to their social roles (Cejka & Eagly, 1999), and not surprisingly, the identity of a female entrepreneur meets the individual's goal for work-family balance (Ciciolla, Curlee & Luthar, 2017; Heilman & Chen, 2003; Hochschild & Machung, 2012; Reynolds & Renzulli, 2005).

Our findings can help inform public policy to empower women to join the workforce or become entrepreneurs. Policymakers should continue to incentive multinational corporations to enter the country to promote gender diversity and work-from-home friendly policies. Such policies can bring additional benefits to females, who continue to face age-old biases and stereotypes. In addition, male trainers should preferably train women to instill more confidence, prepare for a corporate role, and potential absorption into a large corporation.

In rural areas, the government should incentive organizations to bring in more female trainers, who can act as role models and encourage participation from female trainees, given their better understanding of societal challenges women face and how to overcome the age-old biases about women. Policymakers should also grow elements of the gig economy in rural areas, where women would be particularly open to entrepreneurial opportunities. Social enterprises working in rural areas can take cognizance of our findings to design interventions that use such gender interactions to benefit all actors. Further, the government's role must be focused on creating an entrepreneurial ecosystem to promote equal opportunity to women. Creating women entrepreneurship networks, having women mentors, providing access to formal credit, encouraging microloans for women, conducting training programs and creating industry councils that support the growth of women entrepreneurs are some measures that policy makers can initiate to sustain the post-pandemic self-employment aspirations of women.

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Table 1: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
1. Placement	0.826	0.379	0	1
2. Wage Employment	0.545	0.498	0	1
3. Female Student	0.608	0.488	0	1
4. Female Trainer	0.513	0.500	0	1
5. Trainer Experience (Logs)	0.875	0.561	0	2.485
6. Class Size (Logs)	2.619	0.830	0	3.989
7. Certified	0.963	0.188	0	1

Table 2: Correlation Table

	1	2	3	4	5	6
1. Placement						
2. Wage Employment	0.50*					
3. Female Student	0.15*	-0.03*				
4. Female Trainer	0.18*	-0.05*	0.52*			
5. Trainer Experience (Logs)	-0.02*	-0.01	-0.01	0.01		
6. Class Size (Logs)	-0.15*	-0.09*	0.13*	0.18*	0.03*	
7. Certified	0.33*	0.16*	0.02*	0.04*	-0.02*	-0.18*

Table 3: Placement of students based on student and trainer gender.

DV: Placement	(1) Controls	(2) Hyp. 1	(3) Hyp. 2	(4) Robust SE
Female Trainer		0.031*** (0.000)	0.547*** (0.000)	0.547*** (0.000)
Female Trainer X Female Student			-0.413*** (0.000)	-0.413*** (0.000)
Female Student	0.015*** (0.000)	0.013*** (0.000)	0.026*** (0.000)	0.026† (0.068)
Trainer Experience	0.006* (0.037)	0.005† (0.054)	0.006* (0.049)	0.006† (0.087)
Class Size	-0.026*** (0.000)	-0.026*** (0.000)	-0.026*** (0.000)	-0.026* (0.019)
Certified	0.399*** (0.000)	0.398*** (0.000)	0.398*** (0.000)	0.398*** (0.000)
Constant	0.375*** (0.000)	0.354*** (0.000)	0.357*** (0.000)	0.357*** (0.000)
Training Center Fixed Effects	YES	YES	YES	YES
Industry Fixed Effects	YES	YES	YES	YES
Indian State Fixed Effects	YES	YES	YES	YES
Observations	28,055	28,055	28,055	28,055
Training Centers	119	119	119	119
Adjusted R-Square	0.362	0.363	0.364	0.367
Akaike Information Criterion	3181.5	3145.0	3123.3	3101.3
Bayesian Information Criterion	3618.4	3590.1	3576.6	3463.9

p-values in parentheses

† p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

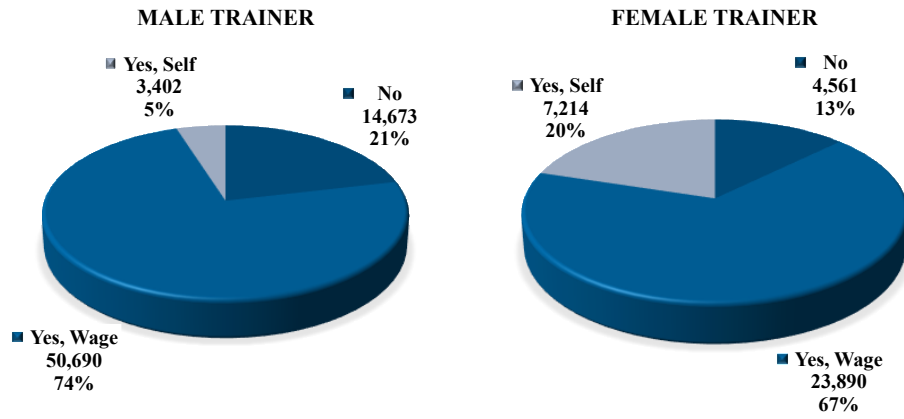
Table 4: Self- vis-à-vis Wage-Employment and Split Sample Analysis

DV: Self- vis-à-vis Wage- Employment	(1)	(2)	(3)	(4)	(5)
	Hyp. 3	Hyp. 4: Location		Hyp. 5: Female Literacy	
		Rural	Non-Rural	Low	High
Female Trainer X Female Student	0.094*** (0.000)	0.132*** (0.000)	0.092*** (0.000)	0.106*** (0.000)	0.108*** (0.000)
Female Trainer	-0.016 (0.165)	-0.432** (0.004)	-0.436* (0.022)	-0.006 (0.641)	-0.088*** (0.000)
Female Student	-0.016† (0.083)	-0.007 (0.529)	-0.052** (0.001)	-0.017† (0.074)	-0.094 (0.668)
Trainer Experience	0.003 (0.593)	0.009 (0.133)	0.013 (0.131)	0.005 (0.388)	0.017† (0.077)
Class Size	-0.021*** (0.000)	-0.010+ (0.095)	-0.055*** (0.000)	-0.035*** (0.000)	0.027** (0.007)
Certified	-0.056† (0.065)	-0.045 (0.168)	0.024 (0.760)	-0.060* (0.046)	
Constant	0.480*** (0.000)	0.245*** (0.000)	0.272** (0.005)	0.602*** (0.000)	0.687*** (0.000)
Training Center Fixed Effects	YES	YES	YES	YES	YES
Industry Fixed Effects	YES	YES	YES	YES	YES
Indian State Fixed Effects	YES	YES	YES	YES	YES
Observations	23,159	16,193	6,966	16,820	6,399
Training Centers	119	97	69	98	51
Adjusted R-Square	0.107	0.090	0.231	0.088	0.171
Akaike Information Criterion	23895.7	16501.2	5671.2	16853.1	5970.8
Bayesian Information Criterion	24338.4	16870.5	5958.8	17170.1	6200.5

p-values in parentheses

† p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 1: Placement by Trainer Gender



Starting Sample Size: 104,430 candidates

Duration: August 2016 – December 2017



Figure 2: Wage-Employment by State and Gender

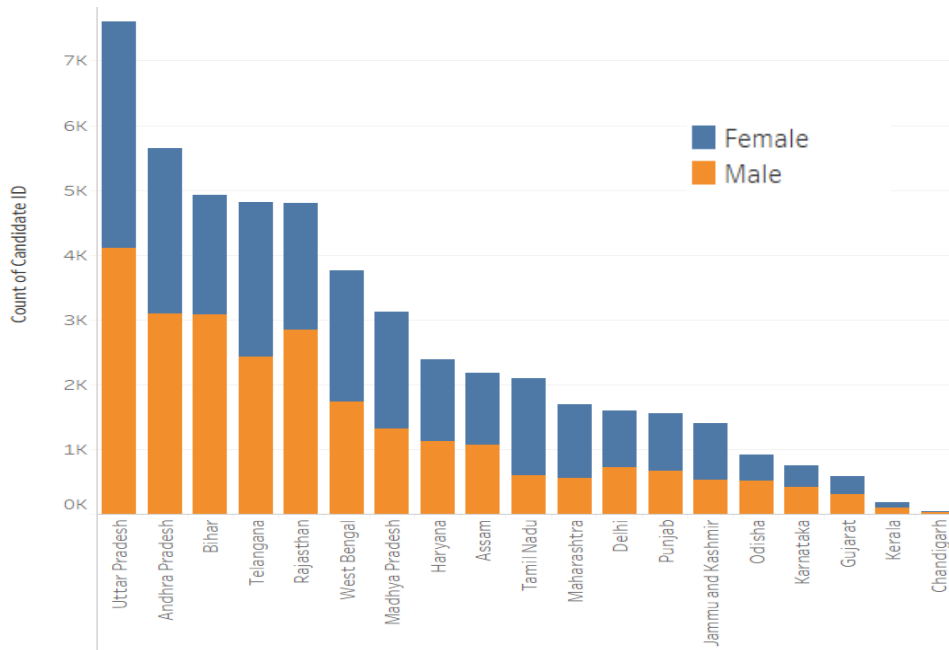


Figure 3: Self-Employment by State and Gender

