# Exploring the Drivers of Youth Pursuing Vocational Training in High-Paying Sectors in Côte d'Ivoire

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**Abstract**

Education and skills are two key determinants of earning potential. Not only the level of education but also the sector of specialization can substantially influence earnings, with disparities manifesting in remuneration across various sectors. This study examines the drivers behind training choices in two high-paying sectors: information and communications and technology. The study is based on data on 2,456 people seeking vocational training in Côte d'Ivoire. Most people in the sample (72 percent of men and 52 percent of women) wanted to be trained in the energy or information and communications and technology sectors. Education levels and previous training in similar sectors are significant and positive correlates of training choice, indicating a strong path dependency. Other correlates are more gender-specific. The size of the professional network is positively correlated with the choice of training in a lucrative sector for men, but not for women. Conversely, women benefit more than men from having male role models. Finally, women who do not opt for lucrative sectors are more likely to hold conservative views over their household responsibilities.

**JEL Classification:** I26, J16, L26, O15

**Keywords:** High-paying sectors, skills, vocational training, youth employment, gender.

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## Introduction

Skills play an essential role in the economic transformation of nations, by diverting labor away from low-productivity activities, mainly subsistence farming and non-agricultural self-employment, and towards activities characterized by higher productivity. These activities can enable workers to increase their incomes within the framework of their current jobs or to transition to more lucrative occupations. In Côte d'Ivoire, akin to numerous other Sub-Saharan African nations, a substantial proportion of students discontinue their educational journey during the secondary school phase. While the gross enrollment rate in primary education approached 93% in the year 2022, this figure markedly diminishes to 55% at the secondary education level. The proliferation of young individuals not engaged in formal education significantly exacerbates the prevailing skills deficit within the labor market. In this context, Technical and Vocational Education and Training (TVET) assumes a pivotal role [1]: augmenting the reservoir of pertinent skills while concurrently serving as a conduit toward formal and/or remunerative employment avenues. Both education and skill acquisition engender heightened income potential and better labor outcomes (Angrist and Krueger (1991),Psacharopoulos and Patrinos (2018), Kuepie et al. (2009), Alfonsi et al. (2020), Heckman et al. (2006) ). Not only the level of education and skills but also the specific sector of specialization can substantially influence earning potentials, with disparities manifesting in remuneration across various sectors (Goldstein et al. (2019), Campos et al. (2015).

While men naturally gravitate toward paths that lead to better-paying fields such as Science, Technology, Engineering and Mathematics (STEM), women will tend to make different choices (Elu, 2018). Less than one-third of women in higher education worldwide are in science, technology, and mathematics-related fields. This proportion is even lower when we focus on Sub-Saharan Africa specifically. For instance, in Côte d'Ivoire, the context of this study, only 16% of women in higher education study life sciences, mathematics or statistics (UNESCO, 2017). Similar imbalances can be observed in the TVET system. Despite achieving gender parity in TVET enrollment, including women in high-paying male-dominated sectors (MDSs) remains a challenge in Côte d'Ivoire. Women's enrolment is currently 89.9% in services streams, 10.2% in the secondary sector, and almost absent from agricultural streams (0.1%). These decisions have far-reaching consequences, as MDSs are often the most lucrative.[2]

[1]The place of TVET in secondary education is still limited in Côte d'Ivoire. Despite an upsurge in enrolments in recent years, only 2 percent of the 15/24 years old participated in a TVET in 2018 according to UNESCO TVET Country Profile and UNESCO Institute for Statistics (UIS).

[2]Our analysis of two nationally representative datasets, namely the EHCVM 2018 (WAEMU Commission, 2018) and the ENV 2015 (Institut National de la Statistique, 2015), reveals that male-dominated sectors offer higher average compensation compared to other sectors. Results are available upon request.

In many countries, women tend to be concentrated in the least profitable sectors (World Bank (2022), Goldstein et al. (2019), Jonathan et al. (2015), Bardasi et al. (2011), Goldstein et al. (2019), Das and Kotikula (2019), (Alibhai et al., 2017)). Consequently, there is an increasing interest in helping women work in better-paying (often male-dominated) sectors. Acquiring the right skills through TVET can help women achieve this goal. UNESCO's current TVET strategy [3] explicitly mentions the need to develop targeted measures for inclusion and gender equality (UNESCO, 2022). Several studies highlight that women entrepreneurs are more likely to transition if they have received technical training or learned through an internship or apprenticeship (World Bank, 2022). Not only does vocational training help beneficiaries learn new skills (Campos et al., 2018), but it can also build women's self-confidence and help change norms about the sectors in which men and women can work (Croke et al. (2017), Alibhai et al. (2017)). These norms are often a significant barrier, preventing women from reaching their true potential (Das et al., 2023). But the benefits of training do not end there: it also offers the opportunity to network in sectors not easily accessible to women. In addition, under certain conditions, training can provide women with role models and mentors (Lafortune et al. (2018),Sevilla et al. (2023) ) who operate in better-paying sectors. By identifying with them and receiving their support, moving from one sector to another may be perceived as easier. Vocational training can therefore play a crucial role in reducing the gender pay gap.

Despite significant benefits, why is it that more women are not seeking training and education in sectors that offer higher potential earnings? What are the characteristics of women who choose to do so? Are these different from men's? These questions are at the heart of this paper.

What drives women in Sub-Saharan Africa to train in more lucrative fields is poorly understood, and the literature on the subject is scarce. Gassier et al. (2022) show that increasing the salience of trade-specific returns nudges women with relevant technical knowledge and experience into seeking training in more lucrative trades. Buehren and Van Salisbury (2017) highlight the importance of networks, prospects, and personal preferences. Studies in other regions show that stereotypes and gender norms can create gaps between men and women in self-assessed skills and career aspirations. (Wang and Degol (2017), Reuben et al. (2014), Sansone (2017)). At the same time, overconfidence and preferences for competitiveness and risk drive gender differences in college major choices and earnings expectations (Reuben et al. (2017), Bench et al. (2015)) Despite the limited literature on this topic, we can draw on TVET literature (Ayub (2017), Agodini et al. (2004)). The litera-

[3] In line with national development priorities, UNESCO helps to enhance the relevance of technical and vocational education and training (TVET) to equip all youth and adults with the skills required for employment, decent work, entrepreneurship and lifelong learning.UNESCO's work focuses on three key areas outlined in its global Strategy for TVET (2022-2029): 1. Skills for individuals to learn, work and live; 2. Skills for economies to transition towards sustainable development; 3. Skills for inclusive and resilient societies.

ture identifies several factors, including the following: individual socio-demographic characteristics, education, past training, work experience, earnings, network, having role models, support from surrounding people, attitudes toward gender roles and agency ( UNESCO (2012), Arias et al. (2019), British Council (2020)).

Building on these previous findings, we explore the drivers of individuals seeking vocational training in one of the two following high-paying sectors, namely energy and Information, Communications, and Technology (EICT). Both sectors were identified as both male-dominated and high-paying sectors using a nationally representative dataset: the ENV 2015 (Institut National de la Statistique, 2015). Our empirical strategy uses linear regressions with cohort and city fixed effects to explore the correlates of training choices. The analysis is based on a sample of 1093 women and 1363 men who applied for job training in urban areas of Côte d'Ivoire (Abidjan and Grand-Bassam). We use data collected as part of the PRO-Jeunes program (or *PRO-Youth* in English). PRO-Jeunes was designed to provide (self-)employment support services that are particularly flexible to meet a wide range of beneficiaries' needs. It targets youth aged 15 to 30 in rural and urban areas. Each candidate can choose a generalist training program or a sector-specific vocational training during the program application process. More specifically, candidates for vocational training can choose to strengthen their skills in high-paying sectors such as energy or information and communications technology (ICT). Energy and ICT (EICT) are male-dominated sectors. Therefore, we sometimes refer to them as cross-over training for women.

The present study highlights several factors associated with individuals who choose to train in EICT. Most people in our sample (72% of men and 52% of women) made that choice. Education and training play a predominant role: an additional year of education increases the probability of seeking training in EICT by 2.9 percentage points for women and 4.3 percentage points for men. This result is partly due to the fact that vocational training courses have strict educational entry requirements. Conversely, women with prior training in non-male-dominated sectors are less likely to choose to train in high-paying sectors. The same applies to men with prior training in MDSs different from EICT. This suggests that past decisions may constrain later events or decisions (path dependency).

Other factors impact men and women differently: Women benefit greatly from having male role models while men do not. However, women who believe that their primary role is to cook and take care of the house are significantly less likely to opt for TVET in EICT (-10.5 percentage points). We do not observe the same effect on men. Finally, when controlling for education, we find that a bigger professional network only incentivizes men to train in EICT.

The main contribution of this paper is to show that the incentives to participate in TVET in high-paying sectors (often MDSs) differ between men and women, reflecting the existing gender disparities. This study highlights the need for targeted interventions to address the unique challenges faced by women pursuing training in lucrative fields. These interventions should focus on expanding women's skills and exposure to better-paying sectors, connecting them with supportive role models, and challenging social norms and attitudes toward gender roles.

# PRO-Jeunes and TVET In Côte d'Ivoire

## A TVET In Côte d'Ivoire

According to the UNESCO Institute for Statistics(UIS) database, only 5% of secondary education students are enrolled in vocational programs. At the same time, individuals with low educational achievement have limited opportunities to access post-school training (Christiaensen and Premand, 2017). In 2018, just 2% of 15-24-year-olds participated in technical and vocational programs in Côte d'Ivoire. This low representation is partly due to insufficient capacity in public sector training institutions, which can only admit around 35,000 students annually (International Labour Organization, 2019). Moreover, the infrastructure and equipment in these institutions are in poor condition. To improve the quality of Technical and Vocational Education and Training (TVET), there is a need for revised and updated curricula, modernized equipment and facilities, teacher training with mandatory immersion courses, and better management of course information, anticipation of job market needs, and certification. Currently, TVET programs do not align with industry requirements. Although connections with the private sector have been established, it remains challenging for graduates and school leavers to secure employment or internships. Frequent changes in governance and a lack of coherent long-term policies have further hampered the development of TVET in Côte d'Ivoire.

The TVETs offered by PRO-Jeunes differ from most other programs in that they offer quality training focused on the technical skills needed for the job market.

## B PRO-Jeunes

### B.1 Enrollment in the PRO-Jeunes program

We rely on baseline surveys collected in urban Côte d'Ivoire (Abidjan, the country's capital and Grand Bassam, the historic capital situated at around 33 km from Abidjan). These surveys were conducted as part of the impact evaluation of the PRO-Jeunes (*Pro-Youth*) program, a six-year

program (2017-2022) implemented by the International Rescue Committee (IRC). The program provides flexible (self-) employment support services to youth aged 15 to 30 years, in both rural and urban Côte d'Ivoire.[4] In addition, to be eligible for the PRO-Jeunes program, applicants must be unschooled or have dropped out of school, and show proof of identity. The program was designed to accommodate a wide range of beneficiaries' needs and knowledge levels, with one cohort targeted approximately every six months for a total of eight cohorts. For this study, we focus on two of the eight cohorts.

To attract participants, the PRO-Jeunes program was advertised by staff directly on the street and using various other methods. Recruitment is done in three stages. First, young people who are interested in the program register and express their interest. Second, the program team screens all applications and calls eligible candidates to provide more information about the program and confirm their interest in participating. Third, eligible applicants who confirm their interest in participating are invited to attend an enrollment meeting.

### B.2 Training paths

Eligible candidates who confirmed their interest during the enrollment meeting must choose a training path. Figure 1 shows the different training tracks and the number of men and women in each track. Eligible candidates can opt for either the wage-employment pathway or the entrepreneurial one. For those who select entrepreneurial training (95% of our sample), two options are available. They can choose the generalist path or receive vocational training in one of the three following sectors: energy, trade/retail, or information and communication technologies (ICT). It is worth noting that energy and ICT (EICT) are traditionally MDSs.[5] In total, 72% of men and 52% of women chose EICT.

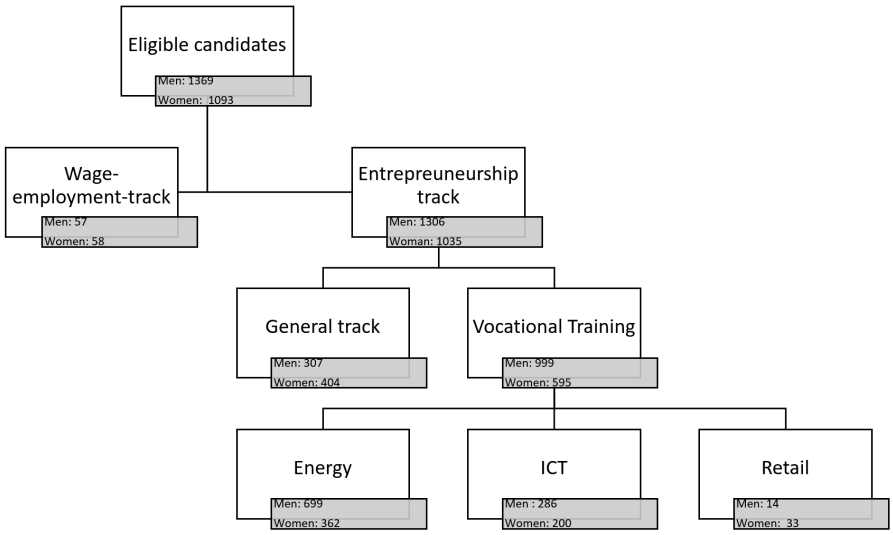
Individuals who opt for the wage-employment path are coached to find a salaried job. After a skill assessment, they formulate a professional project and receive help writing CVs and cover letters. In addition, they are trained for job interviews and receive help in researching job opportunities. Candidates who choose the generalist entrepreneurship track are encouraged to develop a business plan and receive continued coaching for 3 to 6 months. They are also linked to financial services and participate in business competitions. Individuals who opt for vocational training benefit from a different curriculum depending on their chosen path. PRO-Jeunes Energy aims to train technicians

[4]The age range of youth targeted by the project was expanded from 15-24 years old for the first three cohorts to 15-30 years old to take into account context specific constraints to youth recruitment into the project.

[5]In addition to the age requirement, candidates interested in applying for vocational training should have a minimum educational level of 3 years for the trade/retail path, 7 years for the Energy path, and 8 years for the ICT path

either in domestic electrical installation or in the design and installation of solar photovoltaic systems for applications such as buildings, solar pumping, solar street lamps, etc. Projeunes Energy is a 6-month training that requires a minimum education level of 7 years and to pass a small exam given by IRC. Courses take place in training centers equipped with electrical equipment and materials. This training program has Schneider Electric as its technical partner. PRO-Jeunes TIC offers a 2-month training course in digital marketing. It requires at least 8 years of education. Finally, the retail track (PRO-Jeunes Lipton) provides training in sales and negotiation techniques. This course requires a minimum level of education of 3 years and has Unilever as its technical partner.

Figure 1: PRO-Jeunes training tracks




*Notes:* This figure shows the different training tracks of the PRO-Jeunes program. In addition, the figure indicates the number of men and women in our sample in each track.

# Data, Measures, and Sample Description

## A Data collection

Our study draws on two baseline surveys (corresponding to two enrollment cohorts) conducted with potential beneficiaries of the PRO-Jeunes program in Abidjan and Grand-Bassam, Côte d'Ivoire. The first survey, conducted between February and July 2019, included 1,865 respondents, while the second survey conducted between May and September 2020, included 1,210 individuals. Due to the COVID-19 pandemic, both surveys were conducted via phone interviews.

In these surveys, we collected information on household characteristics and assets, as well as extensive respondent-level information on education, training, agency, aspirations, and employment in the past 30 days. We also collected data on respondents' networks and role models, as well as their attitudes toward gender roles and domestic violence.

# B Measures

## B.1 High-paying sectors and sectors dominated by men

We asked each respondent whether they engaged in an income-generating activity within the 30 days preceding the survey. For those who answered affirmatively, we collected information on the nature of their employment (self-employed or salaried), the type of activity or sector, and the income generated. We classify a sector as male-dominated when at least 75% of its workforce is male. To establish the proportion of men in each sector in Côte d'Ivoire, we drew data from the ENV 2015 (Institut National de la Statistique, 2015). The ENV is a household living standards survey conducted in 2015 by the National Institute of Statistics in Côte d'Ivoire. The survey interviewed 47,635 individuals from 12,900 households and is also nationally representative. It is worth noting that six occupations could not be categorized, and we presumed they were not male-dominated by default. 11% of respondents engaged in unclassified income-generating activities [6]. The resulting classification is summarized in Table 2. Mining/oil worker, electrical, refrigeration and air conditioning belong to the energy sector while computer and electronics belong to ICT. To ensure that our classification of MDSs is not highly dependent on the threshold used, we verified the robustness of our classification in Table 3 and in Figure A.1, in Appendix A.

In addition, Figure 2 provides an overview of the energy and TIC sectors compared to others in terms of earnings and proportion of men.

[6] We also use the EHCVM 2018 dataset (WAEMU Commission, 2018), and find that three out of the six unclassified sectors are indeed not male-dominated, resulting in less than 1% of respondents engaging in unclassified activities. Results are available upon request.

Table 1: Male dominated working sectors

| **Activity/Sector** | **Category** | **Male percentage** | **Median earning PPP** |
|---|---|---|---|
| Chemical technician | MDS | 100 | 1197 |
| Piping/Boil making | MDS | 100 | 718 |
| Real estate activity | MDS | 100 | 299 |
| Cobbling | MDS | 100 | 279 |
| Welding | MDS | 100 | 259 |
| Metal joining | MDS | 100 | 239 |
| Fishing | MDS | 100 | 199 |
| Security guard | MDS | 100 | 199 |
| Refrigeration and air conditioning | MDS | 100 | 180 |
| General mechanics | MDS | 99.83 | 199 |
| Transportation of people (bus/taxi) or goods | MDS | 99 | 299 |
| Auto mechanics | MDS | 97.7 | 239 |
| Painting | MDS | 97.04 | 299 |
| Material handling | MDS | 96.87 | 479 |
| Furniture making | MDS | 96.42 | 279 |
| Plumbing | MDS | 95.77 | 239 |
| Priest/Pastor/Imam/Marabout | MDS | 92.44 | 199 |
| Sports | MDS | 92.31 | 199 |
| Computer/Electronics/computer and mobile repair | MDS | 87.78 | 339 |
| Electricity | MDS | 85.72 | 359 |
| Artist/art Maker/photographer/musician | MDS | 83.49 | 399 |
| Teaching and education professions | MDS | 82.12 | 399 |
| Construction (masonry/scaffolding) | MDS | 81.47 | 180 |
| Mining/oil worker | MDS | 80.42 | 319 |
| Pump operator (gas station) | MDS | 76.56 | 319 |
| Liberal intellectual and scientific professions(journalists, lawyers, accountants, etc.) | MDS | 75.55 | 479 |
| Tutor (private teacher) | Not MDS | 74.14 | 798 |
| Factory worker/industrial manufacturing | Not MDS | 73.71 | 319 |
| Sewage and refuse disposal | Not MDS | 73.16 | 160 |
| Public administration | Not MDS | 68.58 | 598 |
| Political party leader/executive | Not MDS | 67.16 | 120 |
| Agriculture/livestock | Not MDS | 66.84 | 100 |
| Laundry/Textile Cleaning | Not MDS | 65.87 | 100 |
| Textile: sewing/embroidery/weaving/dyeing | Not MDS | 53.12 | 140 |
| Health and social work professions (doctors, pharmacists, nurses, other) | Not MDS | 48.58 | 287 |
| Retail trade: other | Not MDS | 41.35 | 160 |
| Services in the hotel/restaurant industry | Not MDS | 27.22 | 180 |

**Table 1 continued from previous page**

| Activity/Sector | Category | Male percentage | Median earning PPP |
|---|---|---|---|
| Maintenance and cleaning/surface technician | Not MDS | 22.92 | 80 |
| Retail trade: foodstuffs | Not MDS | 21.39 | 140 |
| Hairdressing/cosmetic care | Not MDS | 20.78 | 140 |
| Governor | Not MDS | 17.93 | 180 |
| Food/beverage processing | Not MDS | 9.77 | 120 |
| Kitchen/pastry/restaurant | Not MDS | 5.54 | 239 |
| Other* | Not MDS | NA | NA |
| Miscellaneous services (campaigns, events, etc.)* | Not MDS | NA | NA |
| Chair/chapel rental* | Not MDS | NA | NA |
| Video game room* | Not MDS | NA | NA |
| Discotheque* | Not MDS | NA | NA |
| Telephone booth* | Not MDS | NA | NA |

*N*otes:

*Not MDS by default.

We consider that electrical, mining/Oil workers and refrigeration and air conditioning belong to the energy sector. Computer and electronics were assigned to ICT.

Table 2: Male dominated training sectors

| **Training sector** | **Category** | **Male percentage** | **Median earning PPP** |
|---|---|---|---|
| Welding | MDS | 100 | 259 |
| Piping / boilermaking | MDS | 100 | 718 |
| Air conditioning/cooling | MDS | 100 | 180 |
| Industrial maintenance | MDS | 100 | 479 |
| Security/guarding | MDS | 100 | 199 |
| General mechanical engineering | MDS | 99.83 | 199 |
| Logistics/transport | MDS | 97.93 | 319 |
| Automotive mechanics | MDS | 97.7 | 239 |
| Joinery/cabinetmaking/carpentry | MDS | 96.42 | 279 |
| Electronics | MDS | 95.61 | 319 |
| Audiovisual (cameras, photos) | MDS | 91.43 | 399 |
| Customs/transit | MDS | 90.88 | 399 |
| Informatics | MDS | 90.04 | 399 |
| Electricity | MDS | 85.72 | 359 |
| Masonry/construction/plumbing/painting | MDS | 83.75 | 192 |
| Laundry/textile cleaning | MDS | 83.07 | 180 |
| Music/sports | MDS | 81.23 | 199 |
| Teaching | MDS | 78.6 | 710 |
| Business/accounting | Not MDS | 67.87 | 798 |
| Agriculture | Not MDS | 66.45 | 100 |
| Textile/sewing/embroidery | Not MDS | 51.4 | 120 |
| Foreign language training | Not MDS | 50.43 | 120 |
| Health | Not MDS | 47.29 | 339 |
| Hotel industry/tourism | Not MDS | 27.22 | 180 |
| Hairdressing | Not MDS | 20.78 | 140 |
| Catering/cooking/pastry-making | Not MDS | 5.54 | 239 |
| Journalism | Not MDS | 0 | 475 |
| Health, safety/environment* | Not MDS | NA | NA |
| Computer graphics* | Not MDS | NA | NA |
| Oil production* | Not MDS | NA | NA |

*N*otes:

*Not MDS by default.

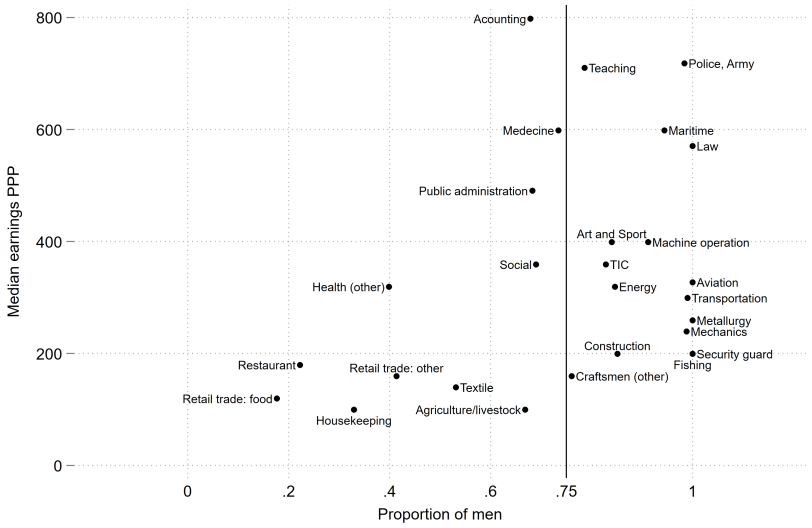
We consider that electricity, oil production and air conditioning belong to the energy sector. Informatics and electronics were assigned to ICT.

Table 3: Robustness check for the classification of male-dominated sectors

| | Male | | | Female | | |
|---|---|---|---|---|---|---|
| VARIABLES | T_75 | T_65 | T_60 | T_75 | T_65 | T_60 |
| Had a training in MDSs | -0.009 | 0.001 | 0.001 | 0.208** | 0.186** | 0.186** |
| | 0.018 | 0.025 | 0.025 | 0.041 | 0.045 | 0.045 |
| Worked in MDSs | -0.070** | -0.070** | -0.070** | 0.006 | 0.006 | 0.006 |
| | 0.012 | 0.012 | 0.012 | 0.027 | 0.027 | 0.027 |
| Proportion of contacts in the network working in MDSs | -0.124*** | -0.124*** | -0.124*** | -0.058 | -0.058 | -0.058 |
| | 0.016 | 0.016 | 0.016 | 0.060 | 0.060 | 0.060 |
| Has a role model working in MDSs | -0.002 | -0.002 | -0.002 | 0.095** | 0.095** | 0.095** |
| | 0.019 | 0.019 | 0.019 | 0.016 | 0.016 | 0.016 |

*N*otes:
Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
This table shows the regression of training choices on different variables. The outcome is a dummy equal to one when the respondent chose the ICT or energy vocational training (MDSs). For each variable (i.e. row)/gender combination, a separate regression is done. In each column, we vary the threshold used to determine whether a sector is classified as male-dominated. Our reference threshold is T_75, i.e. 75%. In other words, using the reference threshold, any sector that is at least 75% male is considered male-dominated. Note that for each regression, we use cohort and city fixed effects. In addition, we include sociodemographic controls (respondent age, marital status, number of dependent children, proportion of female adults in the household, and household wealth index). Standard errors are clustered by zone. Due to a low number of clusters (6), we rely on wild bootstrap to compute p-values.

Figure 2: Scatterplot of median earnings on the proportion of men in each trade using the ENV and dataset




## B.2 Characteristics potentially associated with training choices

We aim to identify the factors associated with training choices in high-paying sectors and have organized our variables into six categories based on the existing literature: (i) socio-demographic characteristics, (ii) education and training, (iii) employment and earnings, (iv) network, (v) role model and support, (vi) agency and attitudes toward gender roles and domestic violence.[7] All variables are listed in Table 4.

Specifically, we consider the respondent's age, number of dependent children, the proportion of women in the household, and wealth decile (top 40% of households with the most assets) as socio-demographic variables. In terms of education and training, we consider whether respondents have attended any qualifying training, the field of training and whether the training was in MDSs, including specifically in EICT.

We also analyzed the relationship between training choices and variables related to employment and earnings. These variables include information on the type of employment (salaried or self-employed), the type of activity/sector, and the income generated. Additionally, we examined the size and composition of each respondent's professional network by asking them to name 3-5 people

[7]We also explored the correlation between social-emotional skills and training choices, but our results did not show a significant relationship. The effect was very close to zero and smaller than the minimum detectable effect. These results contrast with (Das et al., 2023). Results are available upon request.

they could count on in their professional life. We recorded the relationship to the contact (friend, family, other) and their professional activity. We also asked respondents if they knew someone who had been successful in their professional life, i.e., a role model, and noted the relationship with the role model and the role model's occupation for those who answered in the affirmative. In addition, we asked respondents if they had access to individuals outside of their family for work- or business-related advice, and if so, the gender of the designated individual(s).

The survey included modules measuring respondents' agency, attitudes toward gender roles, and attitudes toward domestic violence (Table A.1 contains the full list of questions, with potential answers). To assess attitudes toward gender roles, we read four sentences that reflected common stereotypes about men's and women's abilities and roles. A score aggregating answers to all the questions was then computed. Finally, we calculated a cohort-specific z-score. To construct our agency measure, respondents were asked about their ability to make decisions in six different areas: entrepreneurial activity, employment, purchasing durable goods, minor household expenses, health, and daily tasks. A z-score by cohort was again calculated to reflect the level of agency. Finally, to assess attitudes toward domestic violence, participants were asked whether they believed it was justified for men to hit or beat their wives in four scenarios. The sum of affirmative responses was converted into a cohort-specific z-score to obtain the final score.

## C Sample description

Our sample consists of individuals for whom we have information on all six previously established categories of variables: (i) socio-demographic characteristics, (ii) education and training, (iii) employment and income, (iv) network, (v) role model and support, (vi) agency and attitudes towards gender roles and domestic violence. We interviewed 3075 people, but our analysis sample consists of only 2456. Excluded respondents differ slightly from their counterparts: on average, they are one and a half years older and more literate. In addition, they are more likely to be a woman from Abidjan, to have received training in EICT in the past, and to have a male role model.

Of the 2456 respondents included in our sample, 5% opted for wage-earning training, 30% for general entrepreneurship training, and 65% for vocational training. Of those choosing vocational training, 95% opted for EICT. Table 4 presents descriptive statistics by gender for individuals from the cities of Abidjan and Grand Bassam separately and for the entire sample. We also examine differences between men and women in each city.

Our sample is well-balanced in terms of gender, with nearly equal numbers of men and women. The characteristics of male and female respondents are very similar in Abidjan and Grand Bassam.

However, the much smaller sample size in Grand Bassam induced a limited power to detect gender differences. Most respondents are from Abidjan and are not engaged, married, or in a union. Women are, on average, 22 years old, the same as men, but they are two times more likely to have a child. Women have completed one year less education than men, earn less income, and come from households with fewer assets (significant at least at 5%). Additionally, a higher proportion of women in our sample said they had not worked in the last six months.

As might be expected, men are more likely to have received training in MDSs and to be working there. Of the men, 40% worked in MDSs in the month before the survey, compared to one in 10 women. In addition to having a smaller professional network, 40% of women do not have a male contact in their network. This may imply fewer job opportunities in sectors dominated by men.

In line with previous literature, men are significantly more likely to agree with most conservative statements on gender norms, such as "men and women have different abilities in different areas" or "women's most important role is to cook and take care of her home". In contrast, women show a higher tendency to justify domestic violence. This may stem from the fact that they are less educated and come from poorer households, as suggested in other studies (Doku and Asante (2015), Yount and Li (2009)).

It is worth noting that despite the barriers they face, more than half of the women in our sample expressed a desire to pursue professional training in EICT, which are known to be higher-paying sectors. Thus, the absence of women from these sectors is not always a matter of choice.

Table 4: Descriptive Statistics

| | Abidjan | | | Grand Bassam | | | Sample | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Diff | Male | Female | Diff | Male | Female | Diff |
| **Sociodemographics** | | | | | | | | | |
| Age of the respondent | 22.30 | 22.42 | -0.12 | 21.34 | 20.76 | 0.58 | 22.14 | 22.13 | 0.01 |
| ***SD*** | *3.03* | *3.33* | | *2.72* | *2.87* | | *3.00* | *3.31* | |
| Married, in concubinage or enganged | 0.06 | 0.18 | -0.12** | 0.06 | 0.15 | -0.09* | 0.06 | 0.18 | -0.12** |
| Has at least one dependent child | 0.21 | 0.42 | -0.22** | 0.13 | 0.48 | -0.35** | 0.19 | 0.43 | -0.24*** |
| Number of dependent children | 0.33 | 0.67 | -0.33*** | 0.19 | 0.79 | -0.60** | 0.31 | 0.69 | -0.38** |
| ***SD*** | *0.80* | *0.97* | | *0.58* | *1.09* | | *0.77* | *0.99* | |
| Proportion of adult women in the household | 0.34 | 0.66 | -0.32*** | 0.33 | 0.69 | -0.36 | 0.34 | 0.66 | -0.32*** |
| ***SD*** | *0.21* | *0.19* | | *0.23* | *0.19* | | *0.22* | *0.19* | |
| Household is in the top 2 wealth quintile (by cohort) | 0.44 | 0.38 | 0.06** | 0.34 | 0.33 | 0.01 | 0.43 | 0.37 | 0.06** |
| **Education and training** | | | | | | | | | |
| Years of education | 10.73 | 9.72 | 1** | 9.10 | 8.30 | 0.80 | 10.47 | 9.47 | 0.99*** |
| ***SD*** | *3.20* | *3.99* | | *3.69* | *3.95* | | *3.34* | *4.02* | |
| Had a professional training | 0.22 | 0.22 | 0.00 | 0.23 | 0.28 | -0.06 | 0.22 | 0.23 | -0.01 |
| Had a training in MDSs (excluding EICT) | 0.08 | 0.01 | 0.07** | 0.09 | 0.00 | 0.09 | 0.08 | 0.01 | 0.07*** |
| Had a training in EICT | 0.11 | 0.09 | 0.02 | 0.09 | 0.05 | 0.04 | 0.11 | 0.09 | 0.02 |
| Want to be trained through vocational training | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Want to be trained in EICT | 0.75 | 0.55 | 0.20** | 0.58 | 0.34 | 0.24 | 0.72 | 0.51 | 0.21*** |
| **Employment and earnings** | | | | | | | | | |
| Worked in the last 6 months | 0.80 | 0.68 | 0.12** | 0.74 | 0.75 | -0.02 | 0.79 | 0.69 | 0.10** |
| Wage-employed in the last 30 days | 0.68 | 0.43 | 0.25** | 0.60 | 0.51 | 0.10 | 0.67 | 0.44 | 0.23*** |
| Self-employed in the last 30 days | 0.36 | 0.39 | -0.04 | 0.28 | 0.48 | -0.19 | 0.34 | 0.41 | -0.06 |
| Worked in MDSs (excluding EICT) in the last 30 days | 0.26 | 0.07 | 0.19** | 0.38 | 0.05 | 0.33 | 0.28 | 0.06 | 0.21*** |
| Worked in EICT in the last 30 days | 0.21 | 0.05 | 0.15*** | 0.13 | 0.07 | 0.05 | 0.19 | 0.06 | 0.14*** |
| Total revenue earned during the last 30 days | 57,580.32 | 21,864.20 | 35,716*** | 44,104.50 | 23,791.44 | 20,313 | 55,385.44 | 22,193.93 | 33,192*** |
| ***SD*** | *79,663.14* | *37,586.12* | | *66,204.61* | *51,335.15* | | *77,767.53* | *40,251.61* | |
| **Network size and characteristics** | | | | | | | | | |
| Has at least one professional contact in the network | 0.82 | 0.76 | 0.06* | 0.71 | 0.82 | -0.11 | 0.80 | 0.77 | 0.03 |

**Table 4 continued from previous page**

| | Abidjan | | | Grand Bassam | | | Sample | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Diff | Male | Female | Diff | Male | Female | Diff |
| Network size | 1.92 | 1.67 | 0.25** | 1.83 | 1.81 | 0.02 | 1.91 | 1.70 | 0.21** |
| ***SD*** | *1.36* | *1.32* | | *1.50* | *1.23* | | *1.38* | *1.30* | |
| Has at least one male contact in the network | 0.72 | 0.59 | 0.13** | 0.68 | 0.64 | 0.05 | 0.72 | 0.60 | 0.12** |
| Proportion of males in the network | 0.56 | 0.43 | 0.13** | 0.54 | 0.43 | 0.11 | 0.55 | 0.43 | 0.12*** |
| ***SD*** | *0.40* | *0.41* | | *0.42* | *0.39* | | *0.41* | *0.40* | |
| Proportion of family members in the network | 0.62 | 0.58 | 0.04** | 0.47 | 0.57 | -0.11 | 0.59 | 0.58 | 0.02 |
| ***SD*** | *0.44* | *0.44* | | *0.45* | *0.43* | | *0.44* | *0.44* | |
| Proportion of friends in the network | 0.16 | 0.14 | 0.02 | 0.22 | 0.17 | 0.04 | 0.17 | 0.14 | 0.03 |
| ***SD*** | *0.31* | *0.28* | | *0.36* | *0.32* | | *0.32* | *0.29* | |
| Proportion of individuals working in MDSs (excluding EICT) in the network | 0.41 | 0.33 | 0.09** | 0.44 | 0.33 | 0.11 | 0.42 | 0.33 | 0.09*** |
| ***SD*** | *0.60* | *0.57* | | *0.60* | *0.53* | | *0.60* | *0.56* | |
| Proportion of individuals working in EICT in the network | 0.04 | 0.03 | 0.01** | 0.04 | 0.02 | 0.02 | 0.04 | 0.03 | 0.01*** |
| ***SD*** | *0.16* | *0.14* | | *0.15* | *0.11* | | *0.16* | *0.13* | |
| **Role Model and support outside the family** | | | | | | | | | |
| Has a role model | 0.79 | 0.68 | 0.11** | 0.75 | 0.61 | 0.13 | 0.78 | 0.67 | 0.11*** |
| Has a male role model | 0.72 | 0.34 | 0.38*** | 0.65 | 0.33 | 0.33 | 0.71 | 0.34 | 0.37*** |
| Has a female role model | 0.07 | 0.34 | -0.27*** | 0.09 | 0.29 | -0.19 | 0.07 | 0.33 | -0.26*** |
| Has a role model working in MDSs (excluding EICT) | 0.19 | 0.09 | 0.10** | 0.20 | 0.05 | 0.14 | 0.19 | 0.09 | 0.10*** |
| Has a role model working in the EICT sectors | 0.09 | 0.07 | 0.02 | 0.08 | 0.05 | 0.02 | 0.09 | 0.07 | 0.02 |
| Can ask for professional advice from people around him/her (outside the family) | 0.84 | 0.74 | 0.10*** | 0.80 | 0.81 | -0.01 | 0.83 | 0.75 | 0.08*** |
| Can ask for professional advice only from men around him/her | 0.46 | 0.18 | 0.28*** | 0.54 | 0.23 | 0.31 | 0.47 | 0.19 | 0.28*** |
| Can ask for professional advice only from women around him/her | 0.06 | 0.27 | -0.21** | 0.06 | 0.36 | -0.30** | 0.06 | 0.28 | -0.22** |
| Can ask for professional advice from both men and women around him/her | 0.32 | 0.29 | 0.03 | 0.20 | 0.22 | -0.02 | 0.30 | 0.28 | 0.02 |

**Table 4 continued from previous page**

| | Abidjan | | | Grand Bassam | | | Sample | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Diff | Male | Female | Diff | Male | Female | Diff |
| **Gender attitudes, agency and domestic violence** | | | | | | | | | |
| Attitudes toward gender roles | 0.47 | 0.46 | 0.01 | 0.46 | 0.44 | 0.01 | 0.47 | 0.46 | 0.01 |
| ***SD*** | *0.18* | *0.18* | | *0.16* | *0.16* | | *0.18* | *0.18* | |
| Agrees that women's most important role is to cook and take care of her home | 0.52 | 0.47 | 0.05 | 0.64 | 0.57 | 0.07 | 0.54 | 0.49 | 0.05* |
| Agrees that household expenses are the responsibility of the husband | 0.70 | 0.61 | 0.09* | 0.73 | 0.61 | 0.12 | 0.70 | 0.61 | 0.10** |
| Agrees that by nature men and women have different abilities in differenta areas | 0.85 | 0.78 | 0.07** | 0.78 | 0.78 | 0.00 | 0.83 | 0.78 | 0.06** |
| Agrees that at work, men cope better with difficult conditions than women | 0.33 | 0.35 | -0.03 | 0.21 | 0.32 | -0.10 | 0.31 | 0.35 | -0.04 |
| Perceived ability to take decisions alone if desired(score=[0,1]) | 0.72 | 0.66 | 0.05* | 0.72 | 0.64 | 0.08 | 0.72 | 0.66 | 0.06** |
| Perceives women in the community can make their own decisions (score=[0,1]) | 0.71 | 0.75 | -0.04 | 0.71 | 0.76 | -0.05 | 0.71 | 0.75 | -0.04 |
| ***SD*** | *0.27* | *0.23* | | *0.27* | *0.21* | | *0.27* | *0.23* | |
| Attitude towards domestic violence (1= Think it is always justified, 0= Never justified) | 0.07 | 0.09 | -0.02*** | 0.07 | 0.11 | -0.04 | 0.07 | 0.09 | -0.03** |
| ***SD*** | *0.15* | *0.19* | | *0.16* | *0.19* | | *0.15* | *0.19* | |
| N | *1,141.00* | *906.00* | | *222.00* | *187.00* | | *1,363.00* | *1,093.00* | |

**Table 4 continued from previous page**

| | Abidjan | | | Grand Bassam | | | Sample | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Diff | Male | Female | Diff | Male | Female | Diff |

Notes:

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

This table shows the descriptive statistics, i.e., the characteristics of the sample. For each characteristic, we indicate the mean. When the variable is continuous, the standard deviation (SD) is shown in italics below the mean. The acronym EICT stands for Energy or Information Communication and Technology. Attitudes toward gender roles are measured as the ratio of stereotypes to which the respondent agrees, divided by the number of questions on attitudes toward gender roles. Hence, when the variable attitudes toward gender roles is equal to 1, the respondent agrees with all stereotypes. Standard errors are clustered by zone. Due to a low number of clusters (6), we rely on wild bootstrap to compute p-values.

## Empirical Strategy

To examine the factors associated with vocational training choice in EICT, we begin by using the following specification:

$$Y_{ijc} = \beta_0 + \beta_1 X_{ijc} + \beta_2 Z'_{ijc} + \gamma_c + \lambda_j + \epsilon_{ijc} \quad (1)$$

Where $Y_{ijc}$ is a dummy variable for whether respondent $i$, from city $j$ , cohort $c$, chose to request vocational training in EICT. $X_{ijc}$ is a given factor of interest potentially associated with training choice as described in Section B.2, while $Z'_{ijc}$ is a vector of socio-demographic controls. $\gamma_c$ and $\lambda_j$ are cohort and city fixed effects, respectively. In section A each factor, or variable, $X$ is regressed separately, whereas in section B, factors are regressed simultaneously. In both sections, we estimate this model separately for men and women. In addition, standard errors are clustered at the zone level.[8] The parameter of interest, $\beta_1$, indicates the association between a specific factor and vocational training choice in EICT.

## Results

In this section, we present findings of our analysis of the correlation between demand for training in EICT and the following families of factors: sociodemographic characteristics, education and training, employment and income, network, role model and support, and agency and attitudes toward gender roles and domestic violence. We first examine how each of these factors is associated with choosing to train in EICT (two high-paying sectors), separately for men and women, by estimating Equation (1) through an OLS regression. Coefficient estimates for each family of factors are shown in Figures 1 to 6 respectively. We then perform additional analysis to assess the simultaneous influence of all these factors on training choices.

### A Isolated Factors

First, we provide insights obtained from the initial step of our analysis, where each factor is considered individually. This step is important because some variables may be correlated, or one variable may turn out to be a mechanism by which another has an impact. Performing this analysis before assessing the simultaneous influence of all the factors will give a clearer picture.

- **Socio-demographic characteristics:**

[8] Our sample includes six zones in total. Given the low number of clusters, we rely on wild cluster bootstrapping (Cameron et al., 2008)

Men from asset-rich households are six percentage points more likely to apply for training in EICT fields (Figure 3). Furthermore, we see a positive correlation between the proportion of women in the household and men's (not women's) decision to train in EICT. The fact that Energy and ICT are male-dominated sectors could explain this phenomenon. Household members may diversify the sectors in which they work to limit the risk of correlated shocks. Thus, with a higher proportion of women in the household, men would prefer working in male-dominated sectors. A second hypothesis is that men and women may share household tasks unequally. Gender roles are such that women are most often responsible for childcare and household chores. Having more women in the home would ensure that men would not have to do these tasks. As a result, they would benefit from greater flexibility in their choice of training. Conversely, the more children a woman has, the less likely she may be to seek training in MDSs. Increasing the number of children by one standard deviation decreases the probability of opting for EICT training by four percentage points. This suggests that mothers who wish to work may prefer sectors that offer greater flexibility regarding working hours and location. Note that this is not a driving factor for men. This conclusion is consistent with the fact that the burden of household chores falls most heavily on women ( Cassirer and Addati (2007), Clark et al. (2019)).

- **Education and training**: Some sectors require a minimum level of schooling, specific knowledge, and skills, which are prerequisites for employment and training in these sectors. These requirements are particularly relevant for STEM-related professions. In this context, education, or lack of it, can be a significant barrier to entry. This is the case with the PRO-Jeunes program: candidates interested in applying for vocational training should have a minimum educational level of 3 years for the trade/retail path, 7 years for the Energy path, and 8 years for the ICT path. Moreover, better education before training may increase the chances of success in the field. As a result, it is not surprising to observe that individuals with fewer years of education are significantly less likely to opt for training in EICT (Figure 4). This result stems from the eligibility criteria for training. Increasing education by one standard deviation boosts the probability of seeking training in a high-paying sector such as EICT by 14 percentage points for men and 15 for women. Moreover, we find that men and women in our sample who have already undergone training in EICT are more likely to repeat the experience. This effect is three times more pronounced for women. In contrast, women who have been trained in non MDSs are less likely to seek training in EICT, a male-dominated sector. Interestingly, men with prior training in MDSs but not in EICT are less likely to opt

for the latter. Men may face fewer hurdles in accessing MDSs, leaving the opportunity to specialize.

- **Employement and income**:

  Figure 5 reinforces the previous argument: men who have worked in an MDS other than EICT are significantly less likely to select EICT training. Men favor specialization. Regarding women, only 10% of them worked in MDSs the month before the survey. Consequently, it is difficult to draw any conclusions on this subject. What appears more as a driving factor for women is the type of employment they are in before the training (self- or wage-employed). Self-employed women are 12.9 percentage points more likely to seek training in EICT, while wage-employed men are significantly less likely to do the same (-7.1 percentage points).

- **Network**: We find suggestive evidence of the importance of network size for both genders (Figure 6). For women, the probability of seeking EICT training increases by around 4.6 percentage points when the network size increases by one standard deviation. For men, the effect is twice as small but still significant. In addition, we note a small impact of network composition. Women benefit from having a higher proportion of family members in their network (+3.4 percentage points per sd). For men, the higher the proportion of contacts working in MDSs other than EICT, the less likely they are to specialize in EICT. This further reinforces the hypothesis of a specialization effect among men, extending to their network's influence.

- **Role models and support**: We can see that having a role model is crucial for women (Figure 7). For men, only role models working in EICT significantly incentivize them to train in the same sector (+ 9.6 percentage points). Role models may serve as sources of inspiration and mentoring and can encourage individuals to move into specific fields of activity. Women with mentors, especially male mentors, are more likely to seek vocational training in EICT (+18.5 percentage points). In addition, women who can rely on men outside their families for career advice are 12.7 percentage points more likely to pursue vocational training in this high-paying sector. Our results suggest that men can help facilitate women's entry into more profitable sectors.

- **Agency and attitudes toward gender roles and domestic violence**: We do not find any correlation between agency and attitudes toward domestic violence with training choices (Figure 8). However, we observe a correlation between our index of attitudes toward gender

roles and training choices for men (marginally significant at 10%). In addition, we find that specific attitudes can influence training choices for both men and women. In our sample, 49% of women and 54% of men believe that a woman's most important role is to take care of the household and cook. Women who hold this belief are 18 percentage points less likely to choose training in EICT. Surprisingly, men who hold this belief are also less likely to choose to train in EICT despite the effect being twice as small. The same goes for women and men who agree that household expenses are the husband's responsibility (-11 and -4.5 percentage points respectively). While these findings suggest an influence of norms and beliefs on individuals' training choices, it is important to acknowledge that other factors, such as education and skills, may contribute to the observed association.

These results suggest that women face multiple barriers to entering high-paying sectors that are often male-dominated. To further explore the interplay between factors such as education, training, network, and role models in influencing training choices in EICT, we present estimates from the OLS regression of Equation 1 where all factors are combined, separately for women and men, in Tables 3 and 4 respectively.

## B Combined factors

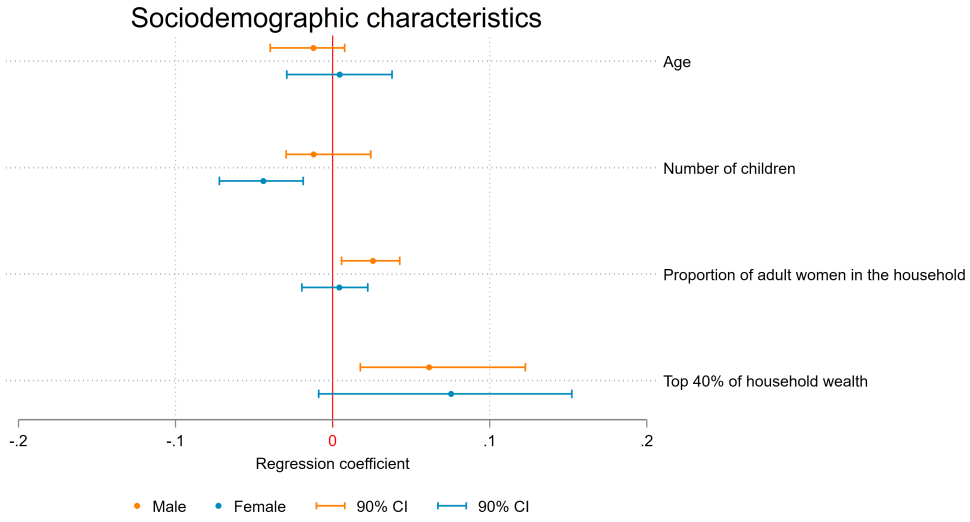
When we introduce all factors simultaneously in the analysis (5 and 6), we observe changes in the correlations between factors and training choices. This underscores the complexity and interplay between factors influencing women's training choices in EICT, a high-paying sector. Notably, the previously observed negative correlation between the number of dependent children and women's training choices becomes non-significant when we control for education. The same goes for household wealth. This indicates that other factors, like education, mitigate the influence of the number of dependent children on training decisions. Similarly, the correlation between network size and women's training choice disappears when controlling for all variables (Table 5, column (6)). It is worth noting that the correlation between network size and men's decisions to train in EICT remains significant at 10% (+3 percentage points). This highlights gender differences in how networks influence training choices, specifically the importance of the type of ties (weak vs strong ties) that can be beneficial given the challenges associated with entry into EICT, a male-dominated and high-paying sector.

Furthermore, the influence of having a male role model on women's training choices remains large (+14 percentage points) and significant at 5%. The same goes for being able to rely on men outside the family for career advice (+7 percentage points).

In contrast, the strong correlation previously observed between education and training choices remains consistent for both genders, even when considering all factors simultaneously. Increasing education by one standard deviation increases the probability of seeking training in EICT by 12 percentage points for women and 14 percentage points for men. Conversely, women with prior training in sectors that are not male-dominated are 16 percentage points less likely to opt for EICT. These findings emphasize the persistent significance of educational background and prior training experiences in shaping women's decisions to seek training in EICT. It is also worth noting that the influence of attitudes toward gender roles, specifically the belief that a woman's most important role relates to domestic tasks, remains large and significant when controlling for other observed factors (-10 percentage points). However, this association disappears for men, suggesting that gender roles primarily act as limiting factors for women's entry into EICT.

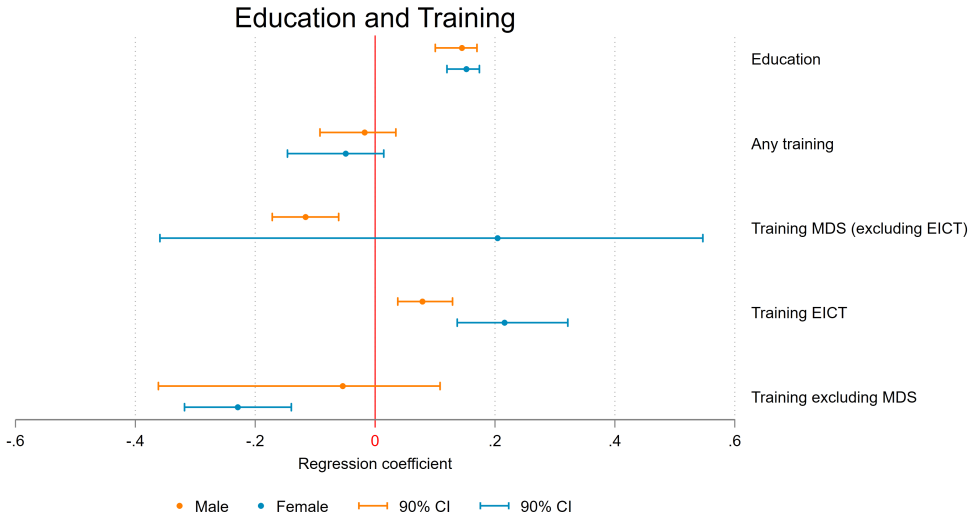
Overall, the simultaneous inclusion of all factors reveals that education, prior training, role models and gender attitudes are predominant in shaping women's training decisions.

Figure 3: Correlation between the choice of training and sociodemographic characteristics



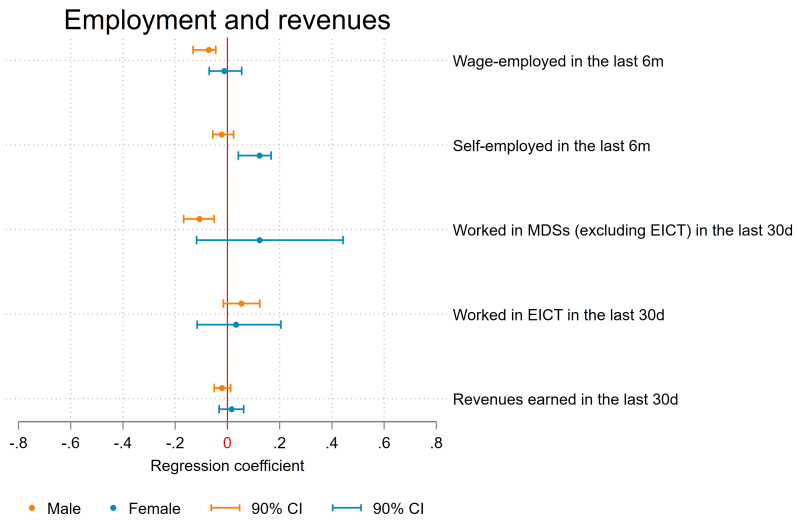

*Notes:* Coefficient estimates from an OLS regression of training choice on socio-demographic characteristics as specified in 1, separately for women and men. Standard errors are clustered by zone. Due to a low number of clusters (6), we rely on wild bootstrapping to compute confidence intervals. We use a standardized z-score for age, number of children and proportion of females in the household. The last variable is a dummy equal to 1 when the respondent belongs to a household in the top 2 quintiles of revenues.

Figure 4: Correlation between the choice of training, education, and past training



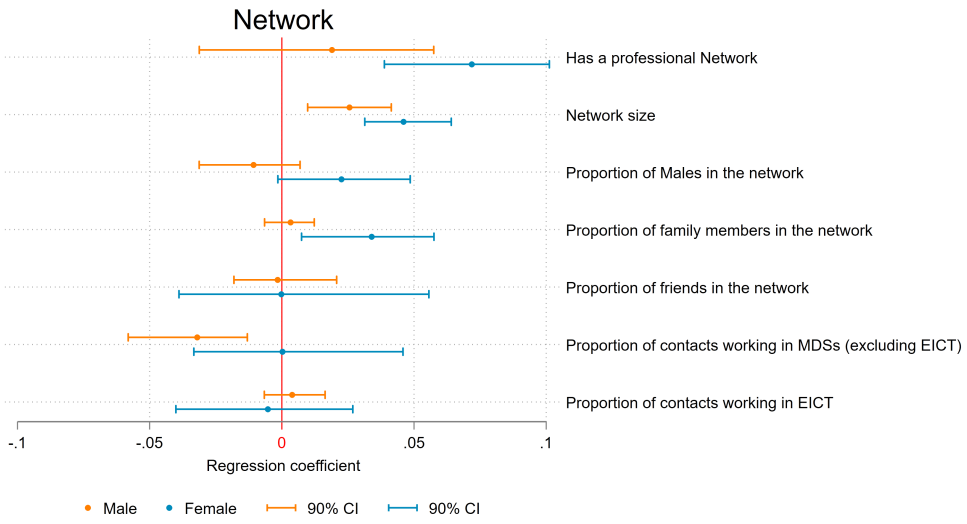

*Notes:* Coefficient estimates from an OLS regression of training choice on education, and past training as specified in 1, separately for women and men. Standard errors are clustered by zone. Due to a low number of clusters (6), we rely on wild bootstrapping to compute confidence intervals. We use a standardized z-score for education. The other variables are dummies indicating whether the respondent received any training in the past or trained in a specific sector. The acronym EICT stands for Energy or Information, Communication, and Technology

Figure 5: Correlation between the choice of training, employment and revenues



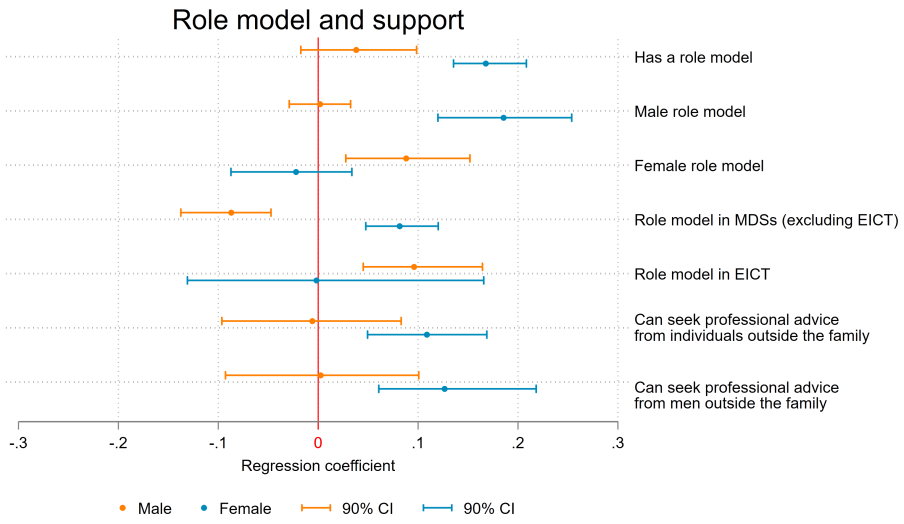

*Notes:* Coefficient estimates from an OLS regression of training choice on employment characteristics and revenues, as specified in 1, separately for women and men. Standard errors are clustered by zone. Due to a low number of clusters (6), we rely on wild bootstrapping to compute confidence intervals. All variables are dummies. The variable "Wage-employed in the last 6m" indicates whether the respondent worked for someone during the last 6 months in exchange for a salary, a commission, or compensation. The acronym MDSs stands for male-dominated sectors, while EICT stands for Energy or Information, Communication, and Technology.

Figure 6: Correlation between the choice of training and network



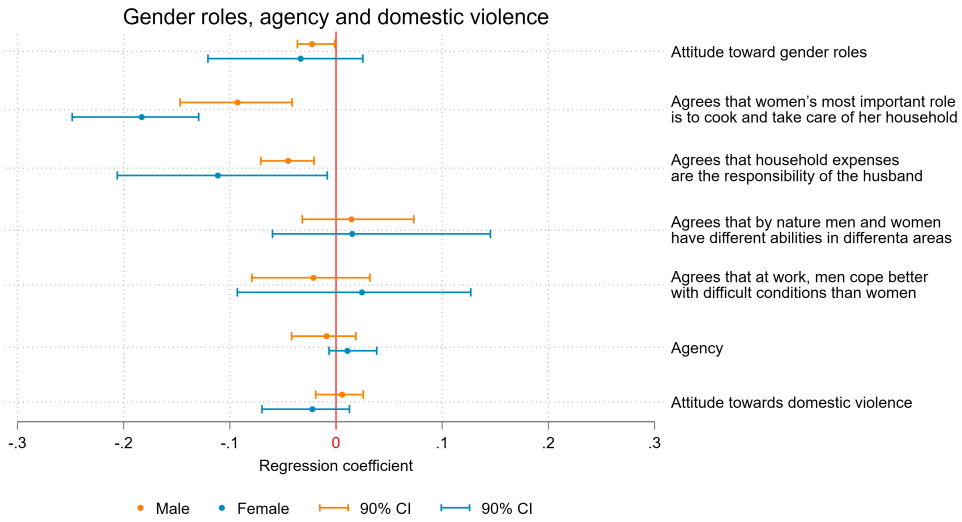

*Notes:* Coefficient estimates from an OLS regression of training choice on network characteristics, as specified in 1, separately for women and men. Standard errors are clustered by zone. Due to a low number of clusters (6), we rely on wild bootstrapping to compute confidence intervals. We use a standardized z-score for network size and proportions. The other variables are dummies. The acronym MDSs stands for male-dominated sectors, while EICT stands for Energy or Information, Communication, and Technology.

Figure 7: Correlation between the choice of training, role models and support




*Notes:* Coefficient estimates from an OLS regression of training choice on role models and support, as specified in 1, separately for women and men. Standard errors are clustered by zone. Due to a low number of clusters (6), we rely on wild bootstrapping to compute confidence intervals. All variables are dummies. The acronym MDSs stands for male-dominated sectors, while EICT stands for Energy or Information, Communication, and Technology.

Figure 8: Correlation between the choice of training, agency, attitudes toward gender roles and domestic violence




*Notes:* Coefficient estimates from an OLS regression of training choice on agency, attitudes toward gender roles and domestic violence, as specified in 1, separately for women and men. Standard errors are clustered by zone. Due to a low number of clusters (6), we rely on wild bootstrapping to compute confidence intervals. We use a standardized z-score for agency, attitudes toward gender roles and domestic violence (other variables are dummies). A higher score means a higher agency, a conservative attitude towards gender roles and a higher tendency to justify domestic violence.

Table 5: Correlates of women's training choices in ICT and energy

| | Chose the ICT or the energy vocational training | | | | | |
|---|---|---|---|---|---|---|
| VARIABLES | (1) | (2) | (3) | (4) | (5) | (6) |
| **Sociodemographic characteristics** | | | | | | |
| Age of the respondent (z-score) | 0.017 | 0.018 | 0.018 | 0.008 | -0.003 | -0.020 |
| | (0.013) | (0.011) | (0.011) | (0.010) | (0.012) | (0.011) |
| Number of dependent children (z-score) | -0.047** | -0.054** | -0.053** | -0.048** | -0.042** | -0.026 |
| | (0.009) | (0.008) | (0.009) | (0.010) | (0.011) | (0.014) |
| Proportion of adult women in the household (z-score) | 0.001 | 0.004 | 0.008 | 0.006 | 0.005 | 0.006 |
| | (0.007) | (0.010) | (0.008) | (0.008) | (0.008) | (0.010) |
| Household wealth index by cohort (zscore) | 0.031 | 0.031 | 0.027 | 0.022 | 0.022 | 0.022 |
| | (0.015) | (0.016) | (0.014) | (0.013) | (0.015) | (0.013) |
| **Employment and revenues** | | | | | | |
| Self-employed in MDSs (excluding EICT) in the last 30 days | | 0.536** | 0.535** | 0.445** | 0.419** | 0.389** |
| | | (0.066) | (0.071) | (0.089) | (0.071) | (0.053) |
| Self-employed in EICT in the last 30 days | | 0.009 | 0.009 | 0.013 | 0.014 | 0.001 |
| | | (0.062) | (0.062) | (0.056) | (0.060) | (0.053) |
| Self-employed but not in MDSs in the last 30 days | | 0.098** | 0.089* | 0.089* | 0.083* | 0.087* |
| | | (0.027) | (0.026) | (0.029) | (0.031) | (0.024) |
| Wage-employed in MDSs (excluding EICT) in the last 30 days | | 0.052 | 0.050 | 0.028 | 0.017 | 0.003 |
| | | (0.107) | (0.106) | (0.102) | (0.104) | (0.093) |
| Wage-employed in EICT in the last 30 days | | 0.041 | 0.049 | -0.064 | -0.030 | -0.230 |
| | | (0.284) | (0.288) | (0.284) | (0.261) | (0.305) |
| Wage-employed but not in MDSs in the last 30 days | | -0.127 | -0.127 | -0.104 | -0.096 | -0.053 |

**Table 5 continued from previous page**

| | Chose the ICT or the energy vocational training | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | | (0.113) | (0.111) | (0.108) | (0.113) | (0.100) |
| **Network** | | | | | | |
| Network size (z-score) | | | 0.028** | 0.021* | 0.016 | 0.019 |
| | | | (0.008) | (0.009) | (0.013) | (0.019) |
| Proportion of male contacts in the network (z-score) | | | 0.007 | 0.000 | 0.004 | 0.002 |
| | | | (0.018) | (0.015) | (0.013) | (0.013) |
| Proportion of family members in the network (z-score) | | | 0.012 | 0.014 | 0.013 | 0.014 |
| | | | (0.019) | (0.020) | (0.017) | (0.018) |
| Proportion of contacts working in EICT in the network (z-score) | | | -0.013 | -0.017 | -0.018 | -0.021 |
| | | | (0.016) | (0.014) | (0.013) | (0.016) |
| **Role model and support** | | | | | | |
| Has a male role model | | | | 0.199* | 0.187* | 0.136* |
| | | | | (0.016) | (0.014) | (0.018) |
| Has a female role model | | | | 0.064 | 0.060 | 0.042 |
| | | | | (0.030) | (0.029) | (0.029) |
| Outside the family, can seek professional advice from men only | | | | 0.125** | 0.118** | 0.074** |
| | | | | (0.040) | (0.032) | (0.033) |
| Outside the family, can seek professional advice from women only | | | | 0.014 | 0.025 | 0.018 |
| | | | | (0.031) | (0.028) | (0.039) |

**Table 5 continued from previous page**

| | Chose the ICT or the energy vocational training | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Outside the family, can seek professional advice from men and women | | | | 0.064 | 0.065 | 0.026 |
| | | | | (0.049) | (0.052) | (0.068) |
| **Gender roles , agency and attitudes toward domestic violence** | | | | | | |
| Agrees that women's most important role is to cook and take care of her household | | | | | -0.140* | -0.104** |
| | | | | | (0.028) | (0.034) |
| Agrees that household expenses are the responsibility of the husband | | | | | -0.036 | -0.029 |
| | | | | | (0.054) | (0.047) |
| Agency (z-score) | | | | | 0.011 | 0.012 |
| | | | | | (0.010) | (0.010) |
| Attitudes towards domestic violence (z-score) | | | | | -0.007 | -0.001 |
| | | | | | (0.014) | (0.013) |
| **Education and training** | | | | | | |
| Education (z-score) | | | | | | 0.116** |
| | | | | | | (0.019) |
| Had training in MDS (excluding EICT) | | | | | | 0.095 |
| | | | | | | (0.132) |
| Had a training in EICT | | | | | | 0.117 |
| | | | | | | (0.041) |
| Had training but not in MDS | | | | | | -0.163* |
| | | | | | | (0.044) |

**Table 5 continued from previous page**

| | Chose the ICT or the energy vocational training | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Observations | 1093 | 1093 | 1093 | 1093 | 1093 | 1093 |
| Cohort FE | YES | YES | YES | YES | YES | YES |
| City FE | YES | YES | YES | YES | YES | YES |

*N*otes:

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1 .

Standard errors are clustered by zone. Due to a low number of clusters (6), we rely on wild bootstrap to compute p-values. For each column, we include sociodemographic controls (respondent age, marital status, number of dependent children, proportion of female adults in the household, household wealth index). The acronym EICT stands for Energy or Information Communication and Technology.

Table 6: Correlates of men's training choices in ICT and energy

| | Chose the ICT or the energy vocational training | | | | | |
|---|---|---|---|---|---|---|
| VARIABLES | (1) | (2) | (3) | (4) | (5) | (6) |
| **Sociodemographic characteristics** | | | | | | |
| Age of the respondent (z-score) | -0.011 | -0.008 | -0.009 | -0.011 | -0.015 | -0.033** |
| | (0.012) | (0.010) | (0.010) | (0.011) | (0.010) | (0.008) |
| Number of dependent children (z-score) | -0.008 | -0.010 | -0.010 | -0.012 | -0.010 | -0.006 |
| | (0.012) | (0.012) | (0.012) | (0.013) | (0.011) | (0.012) |
| Proportion of adult women in the household (z-score) | 0.016 | 0.013 | 0.008 | 0.006 | 0.008 | 0.007 |
| | (0.012) | (0.012) | (0.014) | (0.014) | (0.015) | (0.014) |
| Household wealth index by cohort (zscore) | 0.034 | 0.032 | 0.030 | 0.028 | 0.028 | 0.016 |
| | (0.024) | (0.022) | (0.022) | (0.022) | (0.023) | (0.020) |
| **Employment and revenues** | | | | | | |
| Self-employed in MDSs (excluding EICT) in the last 30 days | | -0.125 | -0.126 | -0.127 | -0.125 | -0.094 |
| | | (0.057) | (0.058) | (0.057) | (0.058) | (0.058) |
| Self-employed in EICT in the last 30 days | | 0.044 | 0.047 | 0.046 | 0.039 | 0.025 |
| | | (0.032) | (0.032) | (0.034) | (0.032) | (0.028) |
| Self-employed but not in MDSs in the last 30 days | | -0.055 | -0.057 | -0.065* | -0.068** | -0.067** |
| | | (0.034) | (0.034) | (0.032) | (0.031) | (0.020) |
| Wage-employed in MDSs (excluding EICT) in the last 30 days | | -0.093 | -0.095 | -0.093 | -0.085 | -0.057 |
| | | (0.055) | (0.055) | (0.053) | (0.050) | (0.047) |
| Wage-employed in EICT in the last 30 days | | -0.046 | -0.046 | -0.043 | -0.035 | -0.005 |
| | | (0.058) | (0.059) | (0.057) | (0.057) | (0.057) |
| Wage-employed but not in MDSs in the last 30 days | | 0.093** | 0.091* | 0.087* | 0.085* | 0.052 |

**Table 6 continued from previous page**

| | Chose the ICT or the energy vocational training | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| | | (0.037) | (0.038) | (0.039) | (0.039) | (0.033) |
| **Network** | | | | | | |
| Network size (z-score) | | | 0.040** | 0.037** | 0.037** | 0.033** |
| | | | (0.014) | (0.014) | (0.014) | (0.012) |
| Proportion of male contacts in the network (z-score) | | | -0.027 | -0.025* | -0.025 | -0.030 |
| | | | (0.016) | (0.015) | (0.016) | (0.017) |
| Proportion of family members in the network (z-score) | | | -0.009 | -0.008 | -0.008 | -0.005 |
| | | | (0.006) | (0.006) | (0.007) | (0.006) |
| Proportion of contacts working in EICT in the network (z-score) | | | 0.003 | 0.002 | 0.001 | -0.004 |
| | | | (0.007) | (0.008) | (0.008) | (0.010) |
| **Role model and support** | | | | | | |
| Has a male role model | | | | 0.018 | 0.007 | -0.023 |
| | | | | (0.027) | (0.026) | (0.028) |
| Has a female role model | | | | 0.080 | 0.061 | 0.058 |
| | | | | (0.044) | (0.043) | (0.046) |
| Outside the family, can seek professional advice from men only | | | | -0.051 | -0.053 | -0.047 |
| | | | | (0.063) | (0.061) | (0.055) |
| Outside the family, can seek professional advice from women only | | | | -0.045 | -0.055 | -0.032 |
| | | | | (0.036) | (0.041) | (0.035) |

**Table 6 continued from previous page**

| | Chose the ICT or the energy vocational training | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Outside the family, can seek professional advice from men and women | | | | 0.036 | 0.033 | 0.018 |
| | | | | (0.041) | (0.040) | (0.045) |
| **Gender roles , agency and attitudes toward domestic violence** | | | | | | |
| Agrees that women's most important role is to cook and take care of her household | | | | | -0.081** | -0.024 |
| | | | | | (0.028) | (0.025) |
| Agrees that household expenses are the responsibility of the husband | | | | | -0.015 | -0.001 |
| | | | | | (0.013) | (0.013) |
| Agency (z-score) | | | | | 0.006 | -0.000 |
| | | | | | (0.016) | (0.015) |
| Attitudes towards domestic violence (z-score) | | | | | 0.009 | 0.016 |
| | | | | | (0.009) | (0.009) |
| **Education and training** | | | | | | |
| Education (z-score) | | | | | | 0.141* |
| | | | | | | (0.010) |
| Had training in MDS (excluding EICT) | | | | | | -0.036* |
| | | | | | | (0.017) |
| Had a training in EICT | | | | | | 0.040 |
| | | | | | | (0.029) |
| Had training but not in MDS | | | | | | -0.064 |
| | | | | | | (0.108) |

**Table 6 continued from previous page**

| | Chose the ICT or the energy vocational training | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Observations | 1363 | 1363 | 1363 | 1363 | 1363 | 1363 |
| Cohort FE | YES | YES | YES | YES | YES | YES |
| City FE | YES | YES | YES | YES | YES | YES |

*N*otes:

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1 .

Standard errors are clustered by zone. Due to a low number of clusters (6), we rely on wild bootstrap to compute p-values. For each column, we include sociodemographic controls (respondent age, marital status, number of dependent children, proportion of female adults in the household, household wealth index). The acronym EICT stands for Energy or Information Communication and Technology.

## Conclusion

This paper provides an overview of the drivers behind women's vocational training choices in high-paying sectors. Our results suggest that specific attitudes toward gender roles may hinder women's entry into these sectors. Women who perceive their primary role as caretakers of domestic tasks are less likely to opt for training in energy and ICT, two high-paying sectors that are male-dominated. Addressing these social norms and promoting changes in gender attitudes are crucial for encouraging women to move into more lucrative sectors.

Furthermore, our analysis shows the importance of education and previous training in MDSs. Education is a prerequisite for accessing training. Education and previous exposure through training not only equip women (and men) with the necessary knowledge and skills but also have the potential to transform their self-perceptions and attitudes. Enhancing educational opportunities can empower youth to challenge traditional gender roles and seek training in high-paying sectors such as EICT.

In addition, the study emphasizes the importance of social networks and role models. Women with male role models are more likely to choose training in EICT. Surrounding oneself with the right people provides support, guidance, and potential endorsements, possibly increasing women's confidence and opportunities in these sectors.

These results provide useful insights for policies seeking to improve women's access to training in better-remunerated occupations. Nevertheless, it is important to point out the study's limitations. First, the findings presented are based on correlations, and no causal relationships can be inferred. Moreover, further investigation is needed to understand additional mechanisms that influence women's training choices, such as women's expectations of discrimination in MDSs and the types of discrimination they fear. Exploring whether support from men primarily offers relevant advice or serves as a mechanism for women to gain credibility and validation within MDSs would also be valuable.

To conclude, this study sheds light on the factors influencing women's (and men's) demand for vocational training in the energy and ICT sectors, two high-paying male-dominated sectors. It emphasizes the importance of addressing conservative attitudes toward gender roles, promoting education and training opportunities, and fostering a supportive environment through role models, among other strategies. Future research should continue to explore these topics to develop further effective interventions that create equal opportunities for women in lucrative sectors.

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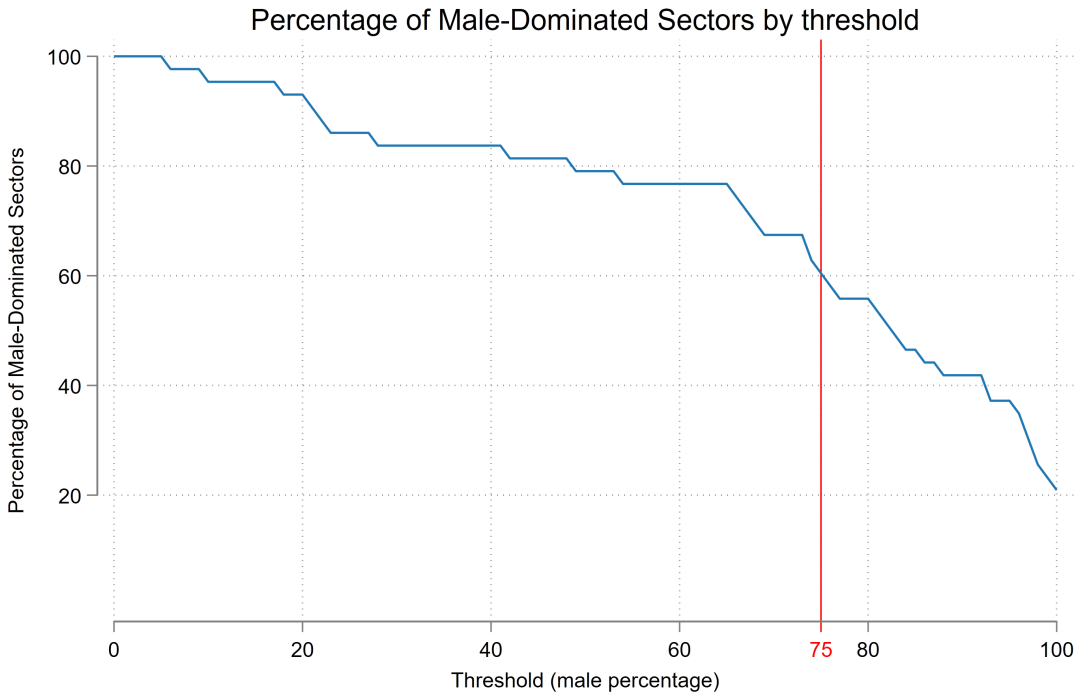
# Appendix A

Figure A.1: Robustness check for the classification of male-dominated sectors




*N*otes: This figure shows the percentage of sectors classified as male-dominated sectors. Our reference threshold is 75%. In other words, using the reference threshold, any sector that is at least 75% male is considered a male-dominated sector.

Table A.1: Survey questions: agency, gender attitude and attitude towards domestic violence

| Measurement | Survey question | Possible answers |
|---|---|---|
| Agency | When a decision is made in the household to personally pursue an entrepreneurial activity, who usually makes the decision?<br><br>When a decision is made in the household about your business, who usually makes the decision?<br><br>When a decision is made in the household for the purchase of durable goods, or exceptional household expenses, who usually makes the decision?<br><br>When a decision is made in the household for minor household expenses (daily food, etc.), who usually makes the decision?<br><br>When a decision is made in the household to manage a serious health issue affecting you, who usually makes the decision?<br><br>When a decision is made in the household to manage a serious health issue affecting you, who usually makes the decision?<br><br>When a decision is made in the household about what tasks you will perform on a given day, who usually makes the decision? | 1. Myself<br>2. My spouse<br>3. My spouse and myself<br>4. My mother<br>5 . My father<br>6. My parents (my father and mother) / a family member<br>7. My parents /family member and myself<br>8. My in-laws<br>9. My in-laws and myself<br>10. Other (specify) |
| Gender attitude | By nature, men and women are good at different things.<br><br>At work, men can handle difficult conditions better than women. | 1. Strongly disagree<br>2. Disagree<br>3. Agree<br>4. Strongly agree |

| Measurement | Survey question | Possible answers |
|---|---|---|
| | The most important role of women is to take care of the home and to cook.<br><br>Household expenses are the responsibility of the husband, although his wife may help him. | |
| Attitude towards domestic violence | In your opinion, is it justified for a husband to hit or beat his wife if she burns the food?<br><br>In your opinion, is it right for a husband to hit or beat his wife if she argues with him?<br><br>In your opinion, is it right for a husband to hit or beat his wife if she goes out without telling him?<br><br>In your opinion, is it right for a husband to hit or beat his wife if she neglects the children?<br><br>In your opinion, is it right for a husband to hit or beat his wife if she refuses to have sex with him?<br><br>In your opinion, is it right for a husband to hit or beat his wife if she talks about protecting herself from AIDS? | 1. Yes<br><br>2. No |