

# Socio-Emotional Drivers of Youth Unemployment: The Case of Higher Educated Youth in Sudan



Samantha de Martino, Gabriela Farfán, Lyliana Gayoso, Eiman Osman

JUNE 2022

## Contents

|                                                                                                                   |    |
|-------------------------------------------------------------------------------------------------------------------|----|
| 1. Introduction .....                                                                                             | 3  |
| 2. The Study.....                                                                                                 | 6  |
| 3. Labor markets: unemployment, NEET, and gender inequalities as major challenges .....                           | 8  |
| 3.1. Youth's transition to labor markets.....                                                                     | 8  |
| 3.2. Unemployment .....                                                                                           | 9  |
| 3.3. Not Employed, in Education, nor in Training: The NEET .....                                                  | 10 |
| 3.4. Constraints to finding a job.....                                                                            | 11 |
| 4. Youth aspirations, perceived barriers, and the aspiration-expectation gap .....                                | 12 |
| 4.1. Why should we care about career aspirations of the youth? .....                                              | 13 |
| Box 1 - Aspirations and Expectations of Youth: Definitions.....                                                   | 14 |
| 4.2. High Aspirations but Low Expectations for Professional Occupations.....                                      | 14 |
| 4.3. Gap in Aspirations and Expectations by Gender and Employment status .....                                    | 16 |
| 4.4. Perceived barriers: the role of lack of suitable jobs, credits, and Wasta .....                              | 18 |
| 5. Healthy Mindsets, Beliefs, Soft Skills, and Employment: A Pathway for Youth to Reach Career Aspirations? ..... | 21 |
| 5.1. Mental health and labor market outcomes.....                                                                 | 22 |
| 5.2. Soft skills for labor market success .....                                                                   | 23 |
| Box 2 - Soft Skills Measured .....                                                                                | 25 |
| Core Self-Evaluation Beliefs.....                                                                                 | 25 |
| Socioemotional skills: Emotional Resilience & Self-Management Skills .....                                        | 25 |
| 5.3. Soft skills levels of Sudanese youth in study sample.....                                                    | 26 |
| 5.4. Soft Skills and Aspirations .....                                                                            | 28 |
| 5.5. Soft Skills and Employment.....                                                                              | 29 |
| 6. Discussion, Policy Recommendations, and Conclusion .....                                                       | 30 |
| References .....                                                                                                  | 33 |
| Appendix 1 – Definitions and survey questions for soft skills.....                                                | 37 |
| Appendix 2 – Determinants of unemployed and NEET in the sample.....                                               | 39 |
| Appendix 3 – Regression Results with soft-skills .....                                                            | 42 |

## 1. Introduction

**Sudan's youth population is the country's most valuable asset to pave a path towards sustainable development.** As of 2020, the population under 25 years old represented about 60 percent of the total population in Sudan, and as in many countries in Africa, this population is expected to continue increasing through 2100.<sup>1,2</sup> As the country's age structure transitions to a demographic dividend, the country has a unique opportunity to achieve faster economic growth.<sup>3</sup>

**Yet, young Sudanese are currently underutilized in the labor market.** A recent study by Etang et al. (2021)<sup>4</sup> found that the Sudanese labor market has been characterized by low levels of labor force participation and high unemployment, affecting primarily females and youth. High youth unemployment, however, is not unique to Sudan, but has been a topic of concern across the region in Africa.<sup>5</sup> Furthermore, there is a high rate of youth that are not engaged in any productive activity, i.e., those classified as not in employment, education, or training (NEET). Female youth are more likely to be unemployed or NEET. This underutilization of youth, if not addressed, could jeopardize the country's sustainable development progress.

**To capitalize on the benefits of Sudan's young population, efforts need to be directed to provide quality skills training and employment opportunities for youth.** There is ample empirical evidence that indicates the equitable access of females and youth to labor markets opportunities can lead to the achievement of developed outcomes.<sup>6,7</sup> However, the labor market must first be conducive to providing opportunities to youth. On one hand, this implies addressing structural factors; however, structural factors alone only uncover part of the employment challenges seen in developing countries like Sudan. On the other hand, psychological, social, and behavioral factors such as social norms and mindsets also play an important role in increasing youth's employability. Thus, combining knowledge of structural issues with the exploration of such non-structural barriers that prevent youth's access to the labor market may provide a more comprehensive understanding of the problem.

**Skills mismatches, social norms, and financial credit constraints have been identified as some of the major supply-side barriers to youth employment in African countries.** Numerous studies explore the barriers that prevent youth from realizing their full potential in other African countries. Morsey and Mukasa (2019) indicate that skills and educational mismatches are prevalent across Africa and have high cost for labor markets. The authors find a high proportion of youth who are underskilled and undereducated,<sup>8</sup> which has also been identified as a main cause of youth unemployment. Low investment in human capital is not an exception in Sudan, with as many as 15 percent of the youth between 15 and 24 years old lacking any formal education. Additionally, in Sudan young females are less active in the labor markets: only 25 percent of them participate in the labor market relative to 46

---

<sup>1</sup> Etang, A., Lundvall, J., Osman, E., & Wistrand, J. (2021). *Towards a More Inclusive Economy*. World Bank, Washington DC

<sup>2</sup> UNICEF (2016), SUDAN Country Fact Sheet, New York. URL: <https://www.unicef.org/mena/media/4241/file>

<sup>3</sup> Ibid.

<sup>4</sup> Etang, A., Lundvall, J., Osman, E., & Wistrand, J. (2021). *Towards a More Inclusive Economy*. World Bank, Washington DC

<sup>5</sup> Sumberg, J., Fox, L., Flynn, J., Mader, P., & Oosterom, M. (2021). Africa's "youth employment" crisis is actually a "missing jobs" crisis. *Development Policy Review*, 39(4), 621-643.

<sup>6</sup> Kabeer, N., & Natali, L. (2013). Gender equality and economic growth: Is there a win-win?. *IDS Working Papers*, 2013(417), 1-58.

<sup>7</sup> *World development report 2006: equity and development (English)*. World development report Washington, D.C.: World Bank Group.

<sup>8</sup> Morsy, H., & Mukasa, A. (2019). Youth jobs, skill and educational mismatches in Africa. *Working Paper series No. 326, African Development Bank Group*

percent of young males.<sup>9</sup> A recent study by Etang et al. (2021) find the legal framework, patriarchal norms and customs, and lack of personal connections (*Wasta*), are key factors that disfavor females' absorption into the labor markets.<sup>10</sup>

**This study seeks to contribute to the existing literature in Sudan by analyzing psychological, social, and behavioral drivers of youth employment in combination with key structural issues identified in the country.** In particular, our analysis is based in existing literature on the structural problems that Sudanese youth face to accessing the labor market, and uses a novel dataset to examine the factors that determine youth's career aspirations as well as the factors that serve as barriers to achieve their career aspirations. In addition, the study explores the role of mindsets and soft skills, both as direct determinants of labor market outcomes as well as indirect determinants through their impact on aspirations. Specifically, we measure *mental health* (anxiety), *core self-beliefs*, and job-relevant *soft skills* that moderate the way individuals manage and interact socially in the labor market. *Core self-evaluation beliefs* determine the way individuals perceive their own basic capabilities, and *soft skills* are a set of learned, realized behaviors that allow individuals to effectively manage inter- and intra-personal situations. The aim of this study is to provide a deeper and more comprehensive understanding of the youth unemployment challenge to help identify potential cost-effective interventions that support youth's job search and employability in Sudan.

**Understanding youth's career aspirations and expectations,<sup>11</sup> as well as their perceived and real barriers and constraints, are essential for public policy.** Several studies indicate that high aspirations can lead, at the micro level, to better educational and labor market outcomes, and at the macro level, to more equal and prosperous societies.<sup>12</sup> However, a variety of factors can shape these aspirations, both positively and negatively. For instance, household decisions, social and gender norms, immigrant status, and socioeconomic status can affect individual educational and professional aspirations.<sup>13,14</sup> If well understood, public interventions can seek to provide an enabling environment for achievement of these aspirations.

**Further, recent evidence globally shows that job-relevant soft skills are increasingly in demand and rival demand for technical skills by employers.<sup>15,16,17,18</sup>** Fortunately, soft skills are malleable and can be improved with low-cost interventions.<sup>19</sup> Understanding gaps in soft skills and addressing these gaps with policies and programs have proven successful in other contexts to improve education and

---

<sup>9</sup> Etang, A., Lundvall, J., Osman, E., & Wistrand, J. (2021). Towards a More Inclusive Economy. *World Bank, Washington DC*

<sup>10</sup> Ibid.

<sup>11</sup> Whereby expectations are the career youth expect to achieve given constraints.

<sup>12</sup> Fruttero, A., Muller, N., & Calvo-Gonzalez, O. (2021). The Power and Roots of Aspirations. *Policy Research Working Paper No. 9729*, World Bank, Washington DC

<sup>13</sup> Etang, A., Lundvall, J., Osman, E., & Wistrand, J. (2021). Towards a More Inclusive Economy. *World Bank, Washington DC*

<sup>14</sup> Fruttero, A., Muller, N., & Calvo-Gonzalez, O. (2021). The Power and Roots of Aspirations. *Policy Research Working Paper No. 9729*, World Bank, Washington DC

<sup>15</sup> Deming, D. J. (2017). The growing importance of social skills in the labor market. *The Quarterly Journal of Economics*, 132(4), 1593-1640.;

<sup>16</sup> Almlund, M., A. L. Duckworth, J. J. Heckman, and T. Kautz. 2011. "Personality Psychology and Economics." In *Handbook of the Economics of Education* Vol. 4, ed. E. A. Hanushek. Amsterdam: North Holland.

<sup>17</sup> Bishop, D. T. (2017). The hard truth about soft skills. *Muma Business Review*, 1, 233-239.

<sup>18</sup> Allen, C. A., Bhorat, H., Hill, R., Monnakgotla, J., Oosthuizen, M., & Rooney, C. (2021). *Employment creation potential, labor skills requirements, and skill gaps for young people*. Africa Growth Initiative at Brookings.

<sup>19</sup> Guerra, Nancy; Modecki, Kathryn; Cunningham, Wendy. 2014. Developing Social-Emotional Skills for the Labor Market: The PRACTICE Model. *Policy Research Working Paper, No. 7123*. World Bank Group, Washington, DC.

labor market outcomes of youth.<sup>20,21,22</sup> Further, as the incidence of mental health disorders in youth has increased, the importance of healthy minds for education and labor market outcomes has also received increased attention recently.<sup>23</sup>

**To investigate these issues, we designed a novel questionnaire to be inserted as part of the COVID-19 High-Frequency Phone Surveys (HFPS) conducted in Sudan.** The HFPS is a panel of household surveys initiated in June 2020 as part of an effort to monitor the impact of the COVID-19 pandemic. The HFPS is carried out telephonically. During the implementation of the sixth round, carried out between July and August 2021, one youth aged 15 to 24 years old from each household participating in the panel was randomly selected to answer questions in the youth modules. Given this design, the sample is not representative at the national level, but only speaks of youth living in households with access to mobile phones; members of these households tend to have higher socio-economic status and higher educational attainment than the average household. When comparing the education profile of our youth sample to that of the latest nationally representative survey, we find that our sample is significantly higher educated. Results will therefore only speak to the situation of highly educated youth in Sudan.

**The study reveals several barriers faced by our sample of highly educated young Sudanese which prevent them from realizing their full potential.** While most of our interviewed non-working youth report that they would like to work, over 80 percent of them are not looking for a job or trying to set up a business. Family constraints is the single most important reason for not looking for a job among the NEET (85 percent report family or household responsibilities, and 27 percent report lack of family support), followed by lack of jobs (33 percent), and lack of skills or training (26 percent). Mental health, as measured by the Generalized Anxiety scale, is also a significant factor: close to one quarter NEET youth in our survey screened for severe anxiety. Mental health problems are concerning as they can increase the risk of educational and professional underachievement. Additionally, close to one quarter of the interviewed youth do not expect to achieve their aspired career, with the largest gap observed among those who aspire to a highly skilled professional occupation. These gaps are mainly driven by insufficient job opportunities, financial constraints, and lack of personal connections (*Wasta*), as perceived by youth. Lastly, the unemployed youth in our sample, and youth whose aspired career do not match their expected careers, present lower levels of soft skills relative to their peers. Particularly, capacity for optimism and task management skills were found to be drivers of the aspiration gap. Socio-emotional skills and core self-evaluation skills also negatively correlate with unemployment status.

**The remainder of the study is structured as follows.** The survey and data are described in Section 2. The current labor market context and youth employment challenges are discussed in Section 3. Findings on the measures of youth career aspirations and constraints are discussed in Section 4, and the measure of beliefs and soft skills relevant for labor market success are discussed in Section 5. The

---

<sup>20</sup> AbuJbara, N. A. K., & Worley, J. A. (2018). Leading toward new horizons with soft skills. *On The Horizon-The Strategic Planning Resource for Education Professionals*, 26(3), 247-259.

<sup>21</sup> Sorrenti, G., Zölitz, U., Ribeaud, D., & Eisner, M. (2020). The causal impact of socio-emotional skills training on educational success. *University of Zurich, Department of Economics, Working Paper* 343

<sup>22</sup> Guerra, Nancy; Modecki, Kathryn; Cunningham, Wendy. 2014. Developing Social-Emotional Skills for the Labor Market: The PRACTICE Model. *Policy Research Working Paper*, No. 7123. World Bank Group, Washington, DC.

<sup>23</sup> WHO (2021) "Adolescent mental health" URL: <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>

results point to specific entry points for public policies to lift constraints facing youth in the labor market. We discuss policy recommendations in light of these findings in Section 6.

## 2. The Study

**The study is based on data collected as part of the sixth High-Frequency Phone Survey of Households (HFPS) in Sudan.** This panel series of surveys were designed and conducted by the World Bank across several countries around the world, in an effort to provide timely monitoring of the pandemic and to inform mitigation efforts. As of May of 2022, a total of six rounds of the HFPS have been conducted in Sudan between June 2020 and August 2021. The Sudan HFPS was implemented through live interviews using mobile phones from a call center. The panel sample was randomly selected from a list of registered phone numbers, and the sample size was proportional to the number of registered numbers in each of the 18 states of the country. The survey is longitudinal by design, that is, the initial sample was surveyed again in every subsequent round, though the sample size decreased over time due to attrition. For each household participating in the sixth round of the HFPS, one randomly selected household member between 15 and 24 years old answered questions in the youth modules. The final sample includes 1,626 youth.

**The sixth round of this series, fielded between July and August 2021, was primarily devoted to understanding the challenges of the youth population.** The objective was to unpack some of the psychological, social, and behavioral barriers to youth unemployment in Sudan to ultimately identify interventions that could support youth's job search and employability. The survey included modules on employment and labor market experience, youth's career aspirations and expectations, perceived barriers towards realizing these aspirations, and socioemotional and core self-evaluation skills.

**While phone penetration in Sudan is high (80 percent), cellphone holders tend to be better off than their counterparts.** A comparison of households with and without mobile phones based on the latest nationally representative household survey (the 2014/2015 National Household Budget and Poverty Survey - NHBPS) reveals that households with mobile phones tend to have higher socio-economic status, including higher educational attainment. As a result, the findings from this study may only be interpreted as representative of the population with access to mobile phones, who are relatively better-off than the average Sudanese household.

**Consequently, a comparison between the youth interviewed in this study and a nationally representative sample of youth confirms our sample is not representative at the national level, as our sample captures highly educated youth.** Relative to the 2014/2015 NHBPS, our study sample contains a higher proportion of youth living in urban areas, male youth, and older youth (20 – 24 years old) relative to the nationally representative sample (Table 1). Furthermore, our sample captures youth with higher levels of educational attainment than those observed at the national level. As of 2014/15, as many as 15 percent of the youth aged 15 to 24 years old did not have any formal education, and another 40 percent had not gone beyond primary education. All in all, 70 percent of the youth nationally had less than secondary level education completed. In contrast, over 90 percent of our study sample has completed secondary level education or more. While this difference is partly driven by the over-representation of older urban youth in our study, the differences in educational level remain even if we restrict the sample to those 20-24 living in urban areas.

**Table 1 – Comparison between youth sample and nationally representative sample**

|                          | <b>HFPS Round 6<br/>Youth sample<br/>2021<br/>(Study sample)</b> | <b>NHBPS<br/>2014/2015<br/>(Nationally<br/>representative)</b> |
|--------------------------|------------------------------------------------------------------|----------------------------------------------------------------|
| <b>Area</b>              |                                                                  |                                                                |
| Urban                    | 76.5%                                                            | 36.6%                                                          |
| Rural                    | 23.5%                                                            | 63.4%                                                          |
| <b>Gender</b>            |                                                                  |                                                                |
| Male                     | 62.2%                                                            | 49.0%                                                          |
| Female                   | 37.8%                                                            | 51.0%                                                          |
| <b>Age group</b>         |                                                                  |                                                                |
| Adolescents (15-19)      | 28.8%                                                            | 56.0%                                                          |
| Youth (20-24)            | 71.2%                                                            | 44.0%                                                          |
| <b>Educational level</b> |                                                                  |                                                                |
| Less than secondary      | 6.8%                                                             | 70.3%                                                          |
| Secondary complete       | 31.5%                                                            | 21.2%                                                          |
| Post-secondary diploma   | 22.0%                                                            | 1.0%                                                           |
| Bachelor's degree        | 38.9%                                                            | 5.7%                                                           |
| Other                    | 0.8%                                                             | 1.9%                                                           |
| <b>Employment</b>        |                                                                  |                                                                |
| Employed                 | 20.7%                                                            | 27.1%                                                          |
| Unemployed               | 9.4%                                                             | 7.5%                                                           |
| Inactive                 | 69.9%                                                            | 65.1%                                                          |

Source: Authors' elaboration based on HFPS- Round 6, Youth module 2021 and NHBPS 2015

**The marked differences in the profile of the youth have consequences for the interpretation of the results at the national level, and therefore the findings will only speak to the subpopulation of youth reached by this study.** Nevertheless, it is worth noting that understanding the labor market challenges for this subpopulation is highly relevant in the Sudanese context. Based on the NHBPS 2014/15, unemployment, for example, is substantially higher in urban areas (39 percent versus 15 percent in rural areas) and among the highly educated (57 percent of youth with university degree are unemployed, versus less than 30 percent among those with secondary or less). The incidence of those disengaged from any productive activity, or NEET (i.e., those not in education, employment, or training), is equally important in rural and urban areas (about 30 percent), but it is also higher among those with more education. As many as 45 percent of youth with university degree are classified as NEET in the NHBPS 2014/15. The situation is expected to have worsened in the past few years given the protracted macro-economic crises and the current political instability that the country faces at the time of this study.

### 3. Labor markets: unemployment, NEET, and gender inequalities as major challenges

*As in many countries in Africa, Sudan faces several labor markets challenges. First, the Sudanese labor market in the last decade has been characterized by low levels of labor force participation and unemployment, which has affected primarily females and youth (Etang, et al., 2021).<sup>24</sup> Second, a high proportion of youth in Sudan, particularly females, are at a high risk for being permanently excluded from labor markets, as 3 out of 10 youth were not in employment, education, nor training as of 2015. In this section, we explore labor market outcomes, based on our study sample of highly educated youth in Sudan, to better understand the structural barriers that prevent youth from successfully transitioning to the labor market. Overall, the results of our analysis indicate high levels of unemployment and disengagement among the highly educated youth in our sample, which is similar to national trends documented in previous studies. Our results also reveal gender inequities for the sample of study. In particular, the findings indicate that with respect to their male peers, young females are more likely to be unemployed and disengaged from education and the labor market. Additionally, differences by age indicate that young youth, those between 15 and 19 years old, are also more likely to become NEET. Contrary to representative estimates, unemployment rates in our sample are equally high in rural and urban areas. Notably, most of the youth in our sample are not actively seeking a job nor trying to set up a business, even though they report the desire to work. The main constraint cited is household/family responsibilities.*

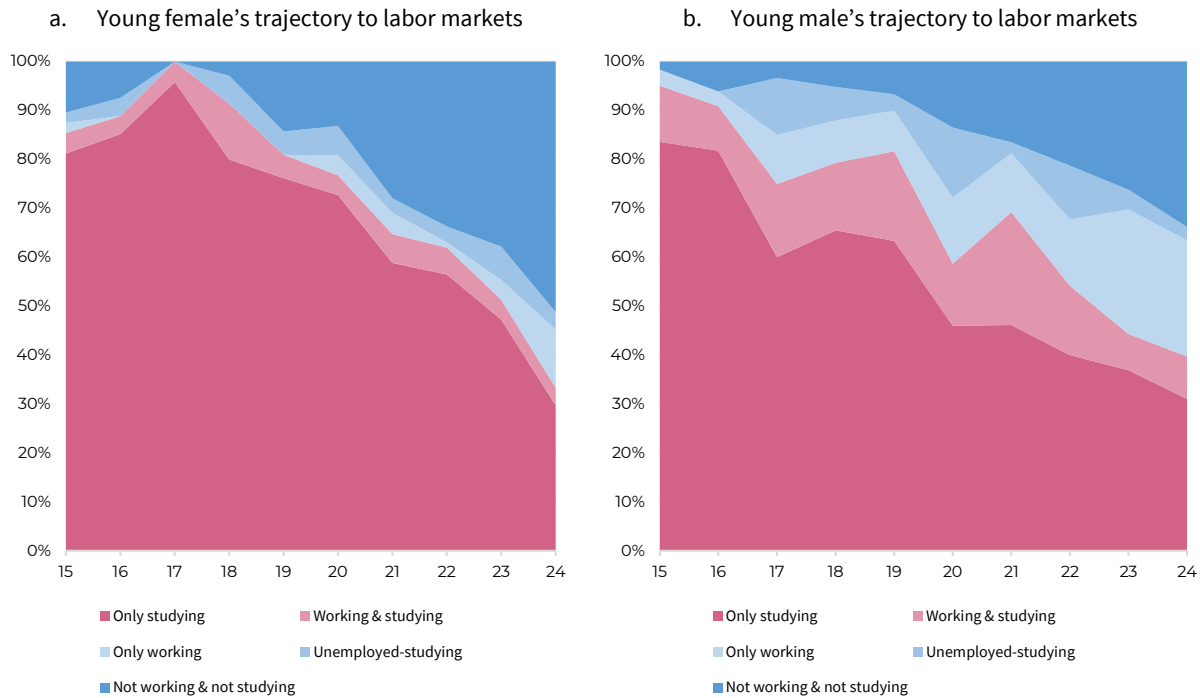
#### 3.1. Youth's transition to labor markets

**Young females in our sample tend to remain in studies longer while young males transition to labor markets at a higher rate.** At age 15, over 80 percent of the youth in the survey sample are only studying, and this drops to just under 30 percent by the time youth reach 24 years of age. The trajectories in between these ages, however, differs between females and males (Figure 1). A high proportion of young females in the sample report to be only studying compared to the proportion of young males. Additionally, females who stop studying are significantly less likely to transition into the labor market relative to males, and instead they become NEET (not in education, employment, or training). The share of young females engaged in the labor market in the sample remains at about 20 percent among those 18 years old and above (Figure 1). In contrast, by age 17, close to 40 percent of male youth in the sample have already transitioned to the labor markets (*the unemployed studying* — those that are working and studying, only working, or seeking for a job while studying).

---

<sup>24</sup> Etang, A., Lundvall, J., Osman, E., & Wistrand, J. (2021). *Towards a More Inclusive Economy*. World Bank, Washington DC

**Figure 1 – Trajectory to labor markets by gender in the sample**



Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

### 3.2. Unemployment

**Youth unemployment is a key policy challenge facing Sudan and the region.** Prior to the pandemic, the youth unemployment rate, while stable, was higher than that of unemployed adults. Furthermore, it was high even by regional standards. According to ILO (2020), as of 2021, youth unemployment was the highest in Northern Africa and Arab States, with 29.6 and 19.7 percent respectively, while Sub-Saharan Africa recorded a youth unemployment rate of 8.2 percent.<sup>25</sup> In Sudan, the ILO estimates a youth unemployment rate of around 36 percent as of 2020 (Figure 2, panel a), ranking it high among country comparators.<sup>26</sup>

**In our sample, female youth are significantly more likely to be unemployed than male youth.** In the study sample, close to 50 percent of the females are unemployed, almost twice the share of males (Figure 2, panel b). Young females are more likely to be unemployed, even after controlling for other characteristics, such as age, area of residence, educational level, and constraints to achieving aspired careers, suggesting the existence of structural factors which prevent young females from becoming employed. See Table A2.1 **Error! Reference source not found.** in the Appendix for regression results. Indeed, a recent study by Etang et al. (2021)<sup>27</sup> indicates that young females in Sudan face higher levels of unemployment relative to males due to, among several reasons, legal frameworks that do not

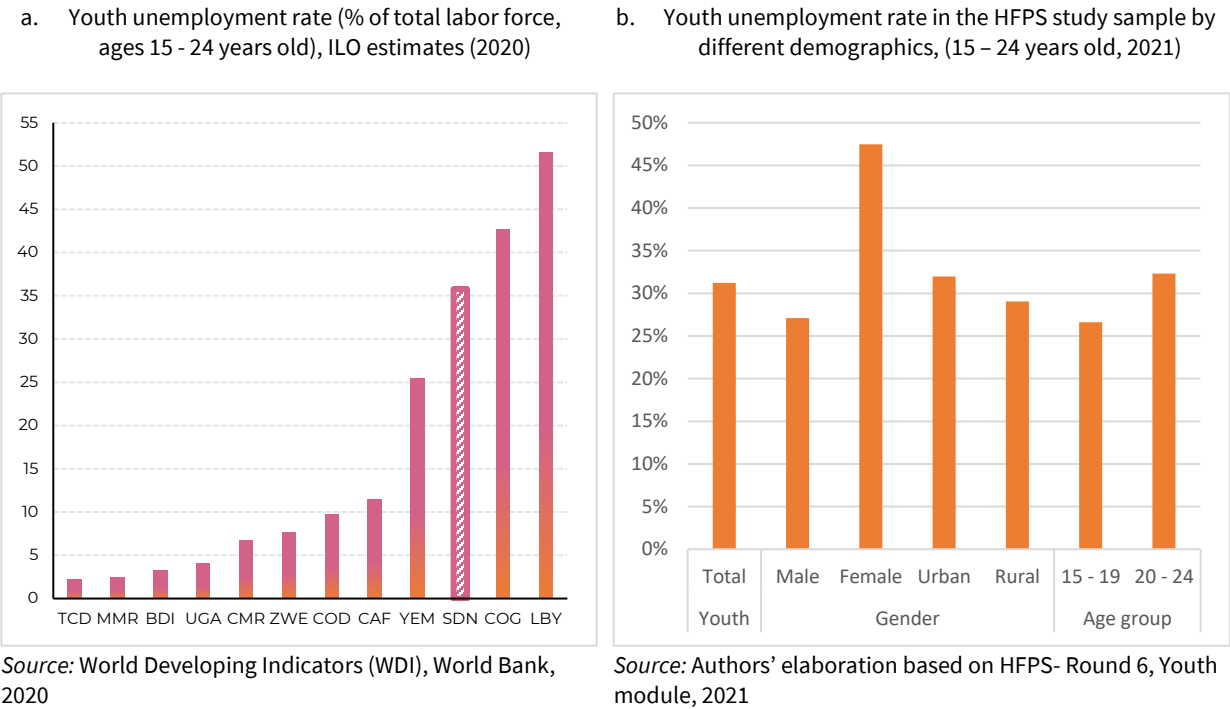
<sup>25</sup> ILO (2020). *Global Employment Trends for Youth 2020: Technology and the future of jobs.* ILO: Geneva.

<sup>26</sup> Comparators taken from the Sudan Systematic Country Diagnostics (unpublished). The country comparators for Sudan include Chad, CAR, Cameroon, Uganda, Democratic Republic of Congo, Congo, Zimbabwe, Myanmar, Burundi, Yemen, and Libya.

<sup>27</sup> Etang, A., Lundvall, J., Osman, E., & Wistrand, J. (2021). *Towards a More Inclusive Economy.* World Bank, Washington DC

support working females, the patriarchal customs and gender norms that affects the role of females in society, and the lack of access to finance.

Figure 2 – Labor Market Indicators



**Contrary to the representative sample where educational attainment and unemployment is higher in urban areas, the distribution among rural and urban youth in our study is very similar.** About 75 percent of the rural youth have post-secondary education, and the high unemployment rate in rural areas therefore suggests that the limited number of high skill jobs is a challenge that spans both urban and rural areas.

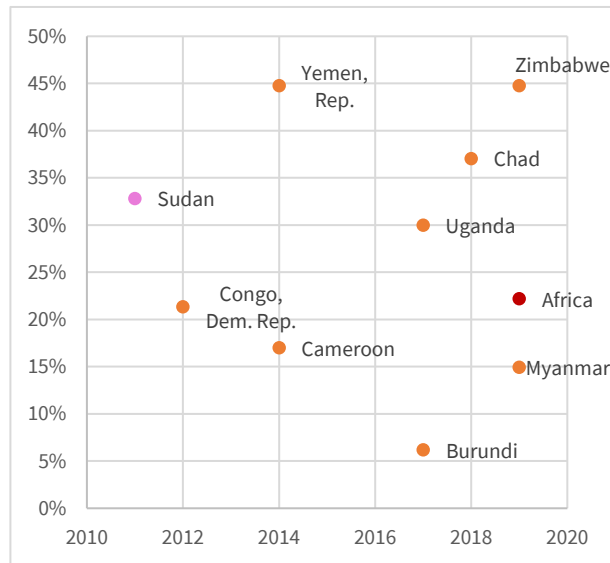
### 3.3. Not Employed, in Education, nor in Training: The NEET

**As in many African countries, there is an urgent need to re-engage with the youth in Sudan.** The proportion of the population between 15 and 24 years old in Sudan that is not employed, in education, nor in training (NEET) was already high at over 30 percent in 2011 (WDI**Error! Reference source not found.**),<sup>28</sup> and it has persisted at similar levels through 2015 (NHBPS). This rate is substantially higher than the Africa and global averages of 20.7 and 22.2 percent, respectively.<sup>29</sup> In our sample, two out of ten youth in Sudan are permanently disengaged from the educational system and the labor market (Figure 3, panel b). If this persists, it can have long lasting consequences for youth and for the country’s sustainable development.

<sup>28</sup> World Development Indicators (WDI), World Bank  
<sup>29</sup> International Labour Office. 2020. Global Employment Trends for Youth 2020, Briefing Note. ILO: Geneva.

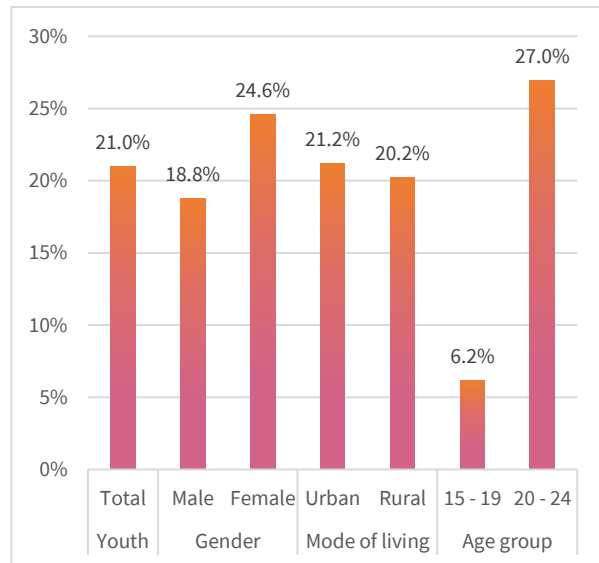
**Figure 3 – Youth Not working, in education, nor training (NEET)**

a. NEET (%), Sudan and comparator countries



Source: Authors' elaboration based on data from the World Development Indicators (WDI). Comparator countries taken from the Sudan Systematic Country Diagnostics (unpublished)

b. NEET rate in the study sample by different demographics



Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

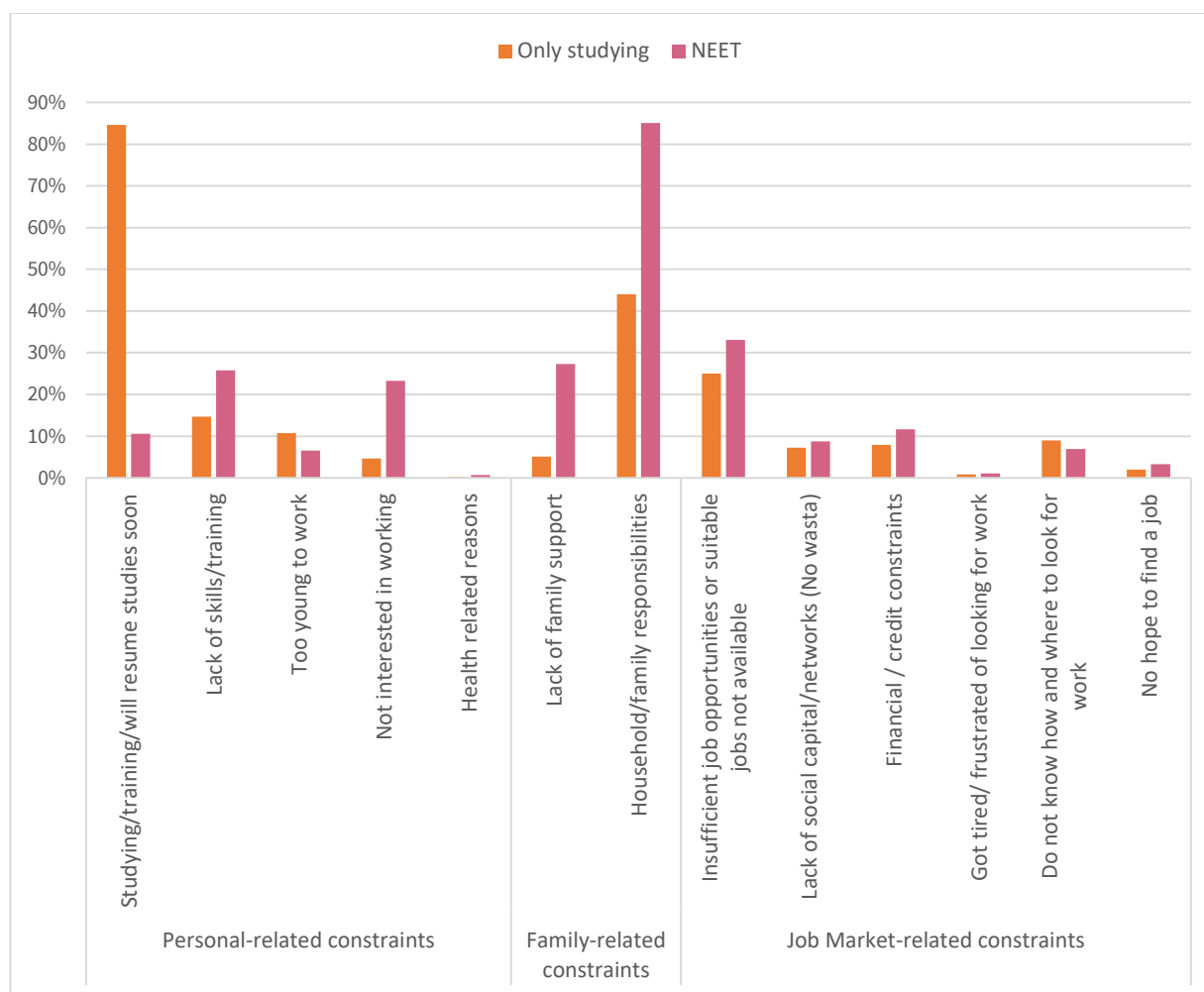
**Females and older youth (20-24) in our sample are at a higher risk of being permanently excluded from the labor market.** Similar to unemployment, the share of NEET among female youth in our sample is 1.3 times that of males, and similar patterns are observed across rural and urban areas (Figure 3, panel b). The female/male gap is robust to controlling for a set of covariates (see Table A2.2 in the Appendix). Lastly, the share of NEET increases with age in our sample. Approximately 27 percent of youth aged between 20 and 24 years old are NEET compared to 6.2 percent of those aged 15 to 19 years old in the study sample.

### 3.4. Constraints to finding a job

**While most of our interviewed non-working youth report the desire to work, over 80 percent are not actively looking for a job nor trying to set up a business. Overwhelmingly, the reason for not doing so is household or family responsibilities.** About 73 percent of those who are only studying and of those who are neither studying nor working (NEET) in the sample of study report that they would like to work. However, only 9 percent and 19 percent of each of these groups, respectively, are actively looking for a job or trying to set up a new business. As expected, the majority of those who are studying cite school as a reason not to look for a job. However, family responsibilities (44 percent) and insufficient job opportunities (25 percent) also stand out as top constraints. More importantly, family constraints are the single most important reason for not looking for a job among the NEET (85 percent report family or household responsibilities, and 27 percent report lack of family support). Lack of jobs

is the second most important reason (at 33 percent), followed closely by lack of skills or training (26 percent). Interestingly, family constraints are more important among male NEET than female NEET; 93 percent and 76 percent, respectively, reported household responsibilities and 34 percent and 20 percent, respectively, reported lack of family support.

**Figure 4 – Reasons for not looking for a job or setting up a business in the study sample (2021)**



Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

## 4. Youth aspirations, perceived barriers, and the aspiration-expectation gap

*A growing field of literature provides evidence that high aspirations, as defined by higher-order future-oriented goals, can drive youth to achieve better educational and labor market outcomes, and in particular when these aspirations are aligned with youth's expectations. Thus, a deeper understanding of youth's career aspirations and the barriers to achieve them are important to identify potential interventions towards increasing youth employability and ensuring youth's access to economic opportunities. In this section, we explore youth's career aspirations, youth's career expectations, and the*

perceived constraints that highly educated youth face in our sample. Additionally, we examine the aspiration-expectation gap that youth experience when their aspired careers are different than what they expect to achieve given the constraints they face. Notably, the highly educated youth in our sample aspire to high skilled careers; however, many do not expect to achieve them. The mismatch is stronger among the unemployed, while the distribution of aspirations and expectations is better aligned among the employed and the inactive. Lack of sufficient job opportunities, access to credit, and personal connections (Wasta) are the main constraints perceived by our study sample. These top constraints do not vary by gender nor employment status.

#### 4.1. Why should we care about career aspirations of the youth?

**We define aspirations broadly as higher-order future-oriented goals that are motivational, malleable, and require resources to achieve them.**<sup>30</sup> Aspirations are distinct from expectations, in that aspirations are measured in absence of constraints, whereas expectations provide the more realistic assumption of what the youth believe is possible to achieve in the labor market.<sup>31</sup>

**Understanding youth aspirations, and the barriers to achieve them, constitute an important potential entry point for program and policy design.** High aspirations, when met equally with expectations, are believed to motivate youth to increase their efforts to achieve better outcomes.<sup>32,33,34,35,36</sup> There is compelling empirical evidence suggesting that higher aspirations, and aspirations that match expectations, are associated with better education and labor market outcomes.<sup>37</sup> When aspirations are unachievable, however, they can generate discouragement and frustration. Furthermore, a large discrepancy between aspirations and expectations has been found to be associated with higher levels of depression, anxiety, and lower motivation, and can lead to suboptimal outcomes.<sup>38</sup>

**This study focuses on career aspirations and expectations to better understand labor market engagement.** To this end, the aspirations/expectations section of the questionnaire was structured around three questions: first, we ask the youth about their preferred career in the absence of any constraints; second, we ask which constraints they perceive to realizing this career; third, we then ask which career they expect to achieve given the cited constraints.<sup>39</sup>

<sup>30</sup> Li, J; De Martino, S., Napolitano, C. (2021). Towards an integrated framework and measure of youth aspirations. *Mimeo*

<sup>31</sup> La Ferrara, E. (2019). Presidential Address: Aspirations, Social Norms, and Development. *Journal of the European Economic Association*, 17(6), 1687-1722.

<sup>32</sup> Fruttero, A., Muller, N., & Calvo-Gonzalez, O. (2021). The Power and Roots of Aspirations. *Policy Research Working Paper No. 9729*; also see Ray 2006; Dalton, Ghosal, and Mani (2016); Ray and Genicot (2020).

<sup>33</sup> Li, J; De Martino, S., Napolitano, C. (2021). Towards an integrated framework and measure of youth aspirations. *Mimeo*

<sup>34</sup> Glewwe, P., Huang, Q., & Park, A. (2017). Cognitive skills, noncognitive skills, and school-to-work transitions in rural China. *Journal of Economic Behavior & Organization*, 134, 141-164.

<sup>35</sup> Favara, M. (2017). Do dreams come true? Aspirations and educational attainments of Ethiopian boys and girls. *Journal of African Economies*, 26(5), 561-583.

<sup>36</sup> Ross, P. H. (2019). Occupation aspirations, education investment, and cognitive outcomes: Evidence from Indian adolescents. *World Development*, 123, 104613.

<sup>37</sup> See also Guyon and Huillery (2020), Beaman et al. (2012), Bernard et al. (2014), Avitabile and Hoyos (2018), Riley (2019), and Ross et al. (2021).

<sup>38</sup> Napolitano, C. M., Hoff, K. A., Ming, C. W. J., Tu, N., & Rounds, J. (2020). Great expectations: Adolescents' intentional self-regulation predicts career aspiration and expectation consistency. *Journal of Vocational Behavior*, 120, 103423.

<sup>39</sup> Measure based on an adaptation of the measure used by Bernard & Tafesse (2014) and Li, J; De Martino, S., Napolitano, C. (2021).

### Box 1: Aspirations and Expectations of Youth, Definitions

#### ASPIRATIONS

Higher-order future-oriented goals that are motivational, malleable, and require resources to achieve them.<sup>40</sup> Aspirations are measured in the absence of constraints.

##### *Career Aspirations*

Measured by asking youth, prior to survey questions on constraints and expectations: “If you could have any career you wanted, what career would you really like to have?”.

#### EXPECTATIONS

Expectations, in comparison to aspirations, are measured in the context of internal constraints (e.g., core self-beliefs) and external constraints (e.g., available job opportunities).

##### *Career Expectations*

Measured to provide a realistic assumption of what the youth believe is possible to achieve in the labor market.<sup>41</sup> This is measured by first asking youth, out of a set of internal and external factors, to what extent each factor is a constraint to realizing their career aspiration. Then the youth is asked “What career do you expect to achieve, given your constraints?”.

#### ASPIRATION-EXPECTATION GAP

Measure of whether aspirations is equal to expectations. If the aspiration-expectation gap is not equal but positive, then the share of youth that reported a given occupation as their aspired career is higher than the share of youth who reported that same occupation as their expected career. If the gap is negative, the converse is true.

## 4.2. High Aspirations but Low Expectations for Professional Occupations

**Most Sudanese youth in our sample aspire to highly skilled careers; however, their expectations do not match their aspirations.** Nearly 60 percent in our sample aspire to a professional occupation, as defined by the international standard classification of occupations (ISCO-08; Figure 5*6*, panel a).<sup>42</sup> In contrast, only 44 percent of the sampled youth expect to achieve a professional career, making the professional occupations the sector with the highest aspiration-expectation gap. Furthermore, the second highest gap is among those who could not specify a concrete career: 14.4 percent of the youth did not report having any expected occupation despite most of them being able to specify an aspirational career. All in all, about one in four youth in the study sample do not expect to achieve their aspired career (Figure 5, panel b).<sup>43</sup> Notably, young males are more likely to experience a mismatch between their aspired and expected careers (35 percent) compared to young females (25 percent).

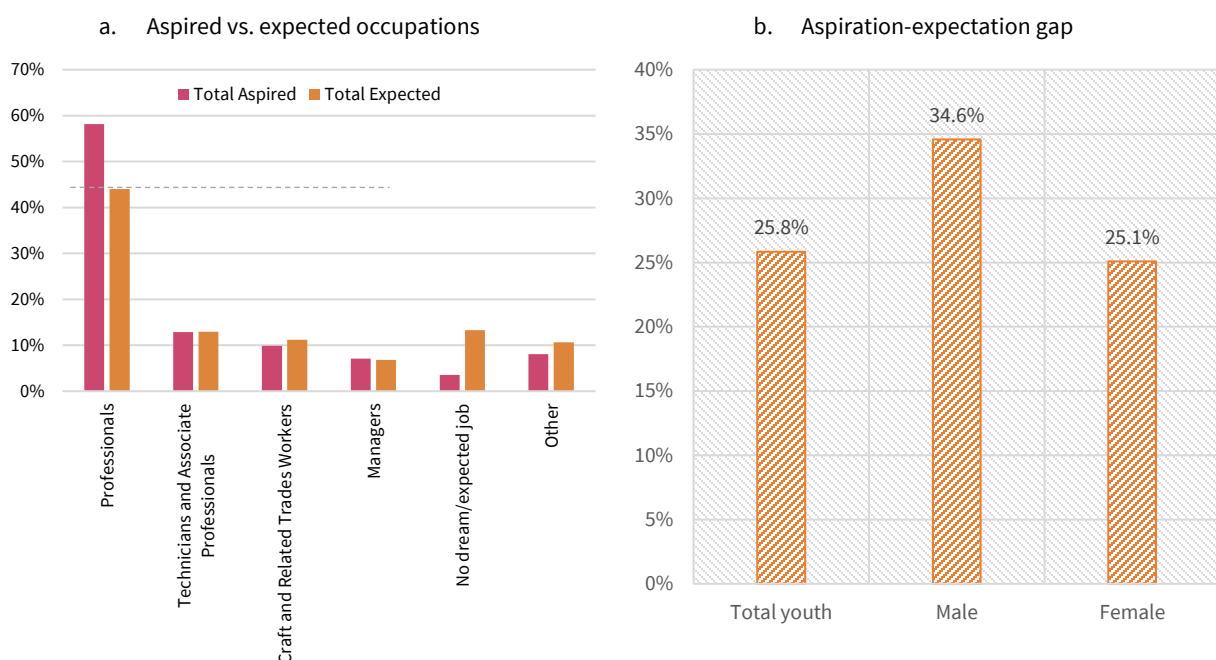
<sup>40</sup> Li, J; De Martino, S., Napolitano, C. (2021). Towards an integrated framework and measure of youth aspirations. *Mimeo*

<sup>41</sup> La Ferrara, E. (2019). Presidential Address: Aspirations, Social Norms, and Development. *Journal of the European Economic Association*, 17(6), 1687–1722. <https://doi.org/10.1093/jeea/jvz057>

<sup>42</sup> According to the classification report of ISCO-08, published by ILO, professionals are categorized as a skills level 3 occupation, which involves the performance of complex technical and practical actions that requires extensive knowledge. URL: [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms\\_172572.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_172572.pdf)

<sup>43</sup> To measure the gap, we subtract expectations from aspirations. If the gap is positive, then the share of youth that reported a given occupation as their aspired career is higher than the share of youth who reported that same occupation as their expected career. If the gap is negative, the converse is true.

**Figure 5 – Aspired occupations vs. Expected occupations in the study sample (2021)**

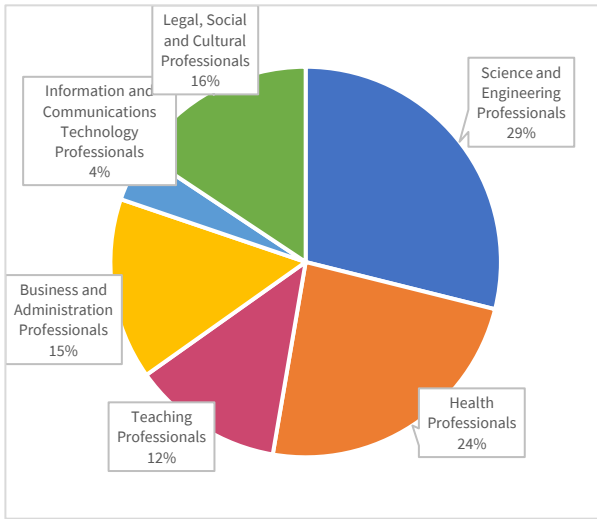


Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

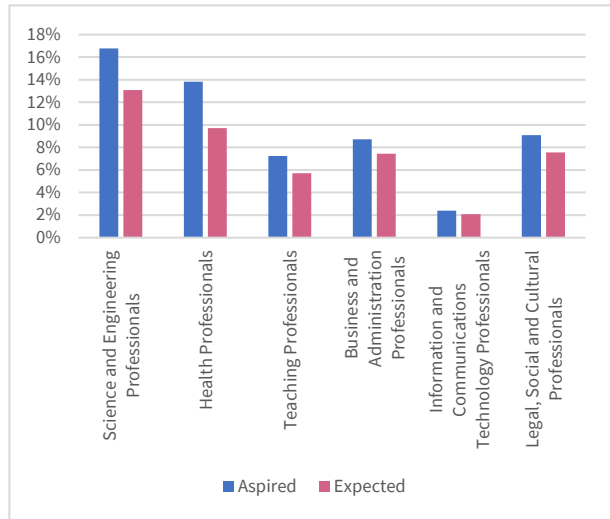
**Within the set of professional occupations, the most aspired careers are in *Science and Engineering* and *Health*, and they also have the highest aspiration-expectations gap among our interviewed sample.** The results of the study indicate that nearly 29 percent of youth in the sample aspire to a career in Science and Engineering (Figure 6). At 24 percent, Health is the second most aspired career. At the same time, these two occupations also explain 60 percent of the aspiration-expectation gap within professional occupations. On the other hand, very few youth in our sample aspire to a career in Information and Communications Technology occupations, and this is also the profession with the smallest aspiration-expectation gap.

**Figure 6 - Aspired and Expected Professional sub-occupations in the study sample (2021)**

a. Distribution of aspirations across sub-occupations



b. Aspired versus expected sub-occupations

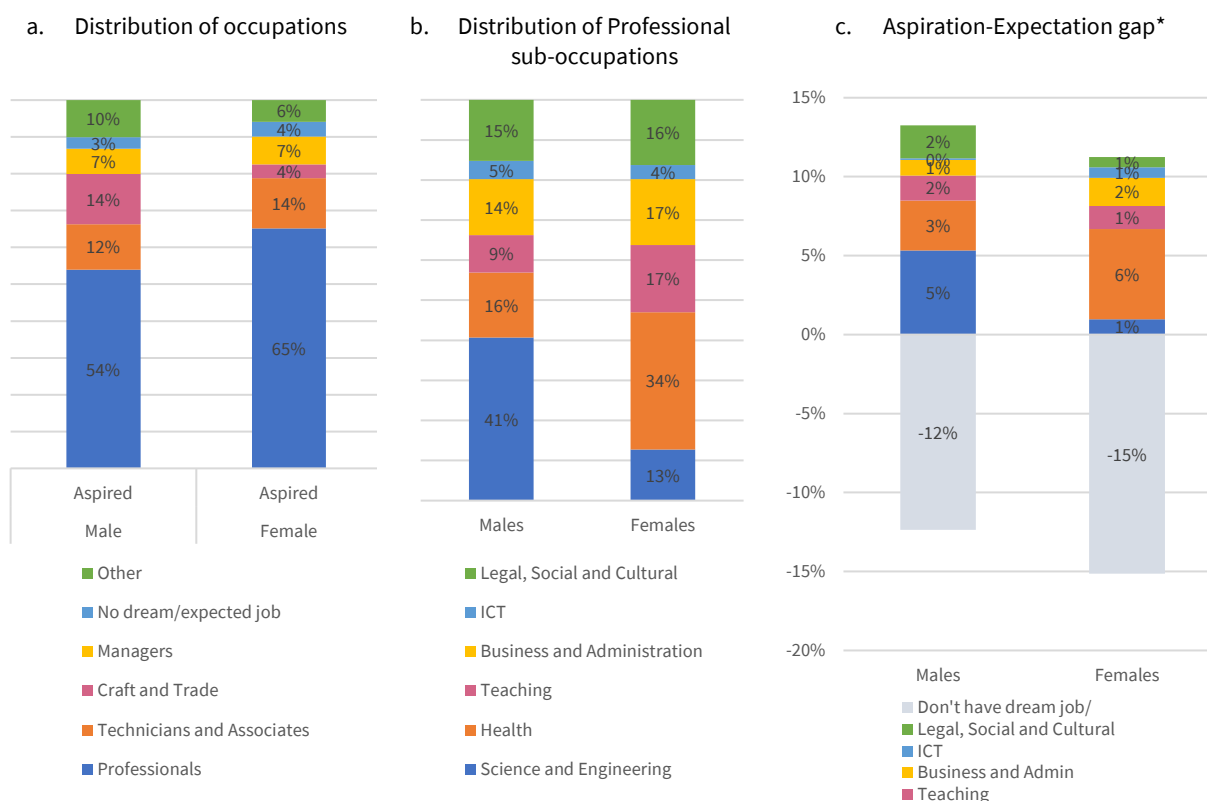


Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

#### 4.3. Gap in Aspirations and Expectations by Gender and Employment status

**The observed gap in *Science and Engineering* among our study sample is largely driven by males, while the observed gap in *Health* is mostly driven by females.** Professional careers are by far the most aspired occupations among both males and females, though they are slightly more prevalent among females: 65 percent of females compared to 54 percent of males reported a professional occupation (Figure 7, panel a). Within professional careers, however, differences across the two groups are more pronounced. *Science and Engineering* is three times more likely to be reported by males (41 percent) relative to females (13 percent). Conversely, 34 percent and 17 percent of females in our sample aspire to work in *Health* and *Teaching* occupations, respectively, compared to 16 percent and 9 percent of males, respectively (Figure 7, panel b). When compared to the careers that these youth expect to have, the largest gaps are observed in the most preferred sub-occupations: *Science and Engineering* for males, and *Health* for females. Consistent with the national average in the sample, the largest mismatch between aspirations and expectations outside of professional careers is driven by the large share of youth who do not report an expected career.

**Figure 7 - Aspired and Expected occupations in the study sample, by gender (2021)**

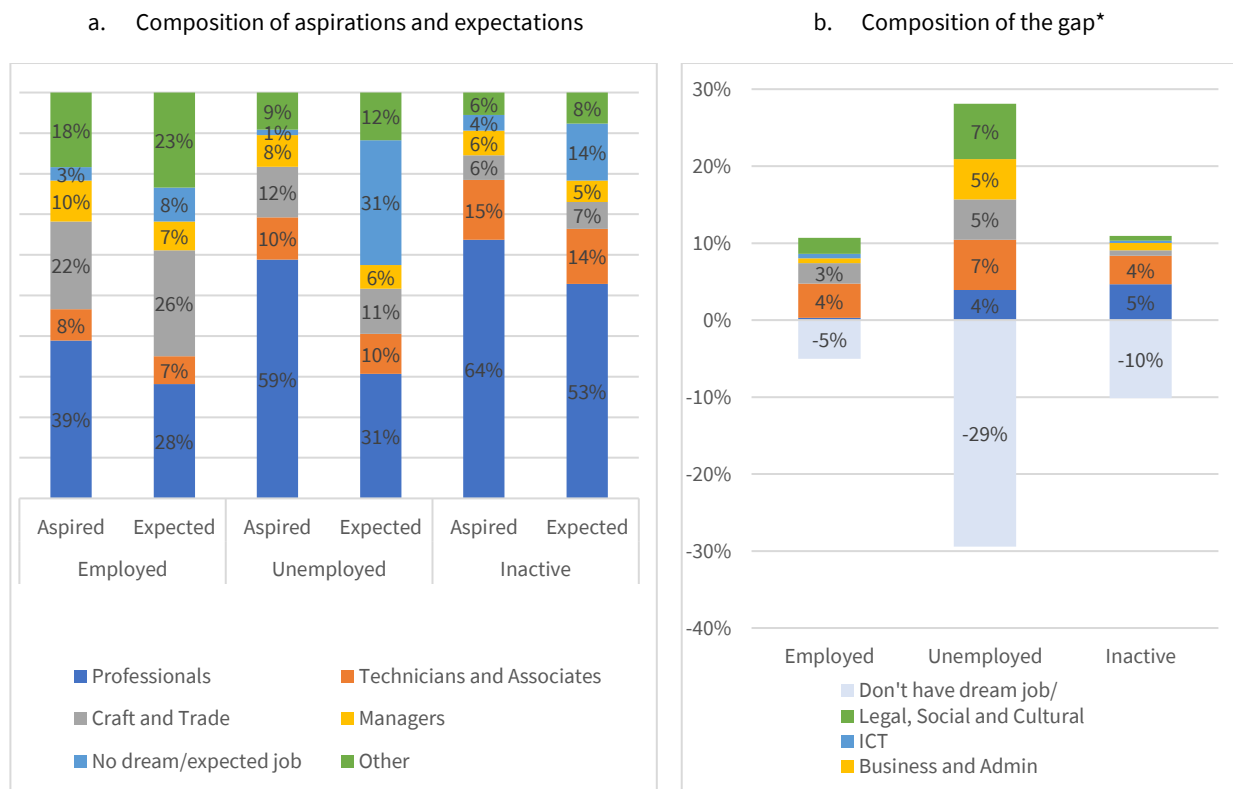


Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

\*The graph only shows the gaps across the professional sub-occupations and the lack of expected/aspired occupation (the two categories that were identified to account for the majority of the mismatch)

**The mismatch between aspirations and expectations changes drastically across labor market status in the study sample.** The distribution of aspirations and expectations in our sample is significantly better aligned among the employed and the inactive, relative to the unemployed (Figure 8). Among the latter, twice as many unemployed youth (about 60 percent) reported aspiring to a career in a professional occupation relative to those who reported expecting so (31 percent). Furthermore, as many as 31 percent of the unemployed did not report a specific occupation when asked about their expected career. It is also noticeable that the inactive (which includes both those who are only studying as well as those who are neither studying nor working) present the highest share of aspired and expected careers in a professional occupation. Those who are already employed, in contrast, present a more balanced distribution of occupations. A decomposition of the gap within the professional occupations does not highlight any particular occupation for any of the three groups.

**Figure 8 - Aspired and Expected occupations in the study sample, labor force status (2021)**



Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

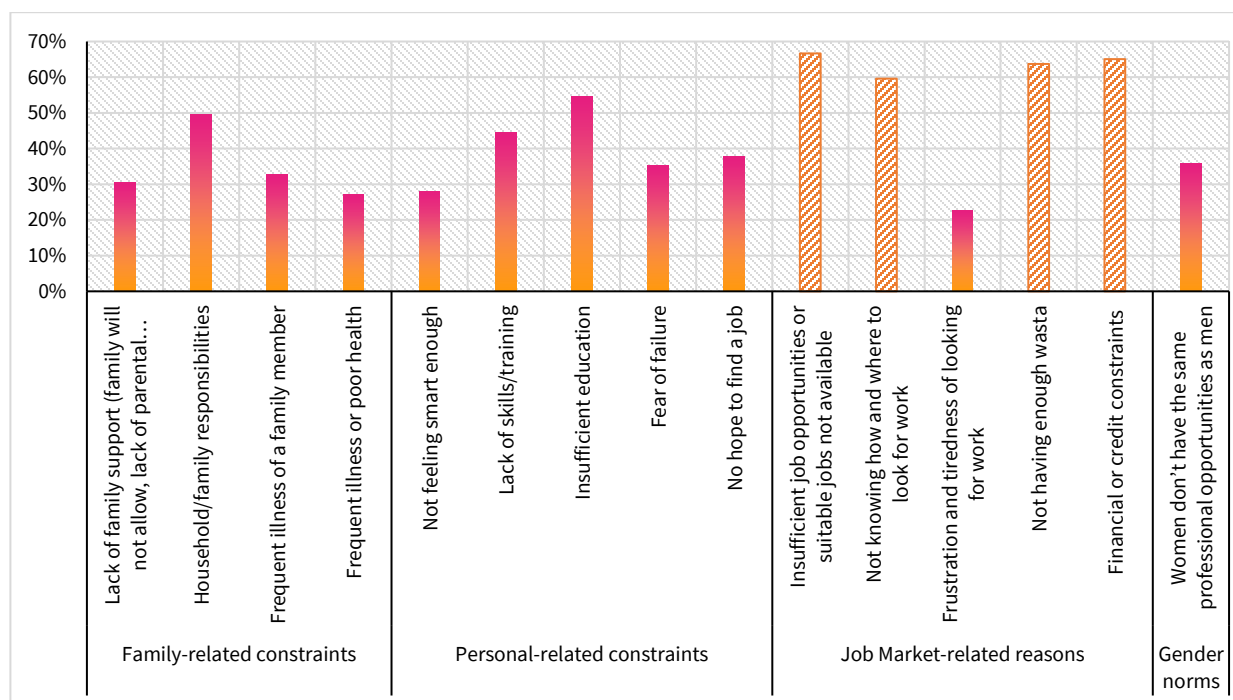
\* The graph only shows the gaps across the professional sub-occupations and the lack of expected/aspired occupation (the two categories that were identified to account for the majority of the mismatch)

#### 4.4. Perceived barriers: the role of lack of suitable jobs, credits, and personal connections (*Wasta*)

**Constraints to realizing youth's aspirations in our sample are multidimensional and refer primarily to the lack of sufficient job opportunities or suitable jobs available, access to credit, and personal connections (*Wasta*).** A study conducted by Etang et al. (2021)<sup>44</sup> identified *Wasta* as one of the most important ways for accessing economic opportunities in Sudan, as it allows for the acquisition of social capital and the access to networks through which people are more likely to find jobs. Our study is consistent with those findings. When asked to report the top constraint, out of a set of 15 varying constraints across family, personal, job market, and gender related categories, all youth in our sample cited job market related constraints in their top three. Nearly 70 percent of the youth interviewed in our study cite insufficient job opportunities or lack of suitable jobs available (Figure 9), 65 percent of youth cited financial or credit constraints, and 61 percent of youth cited not having enough *Wasta*. Not knowing how and where to look for work (60 percent), insufficient education (55 percent), and household/family responsibilities (50 percent) were also highly reported constraints to realizing one's aspiration.

<sup>44</sup> Etang, A., Lundvall, J., Osman, E., & Wistrand, J. (2021). *Towards a More Inclusive Economy*. World Bank, Washington DC

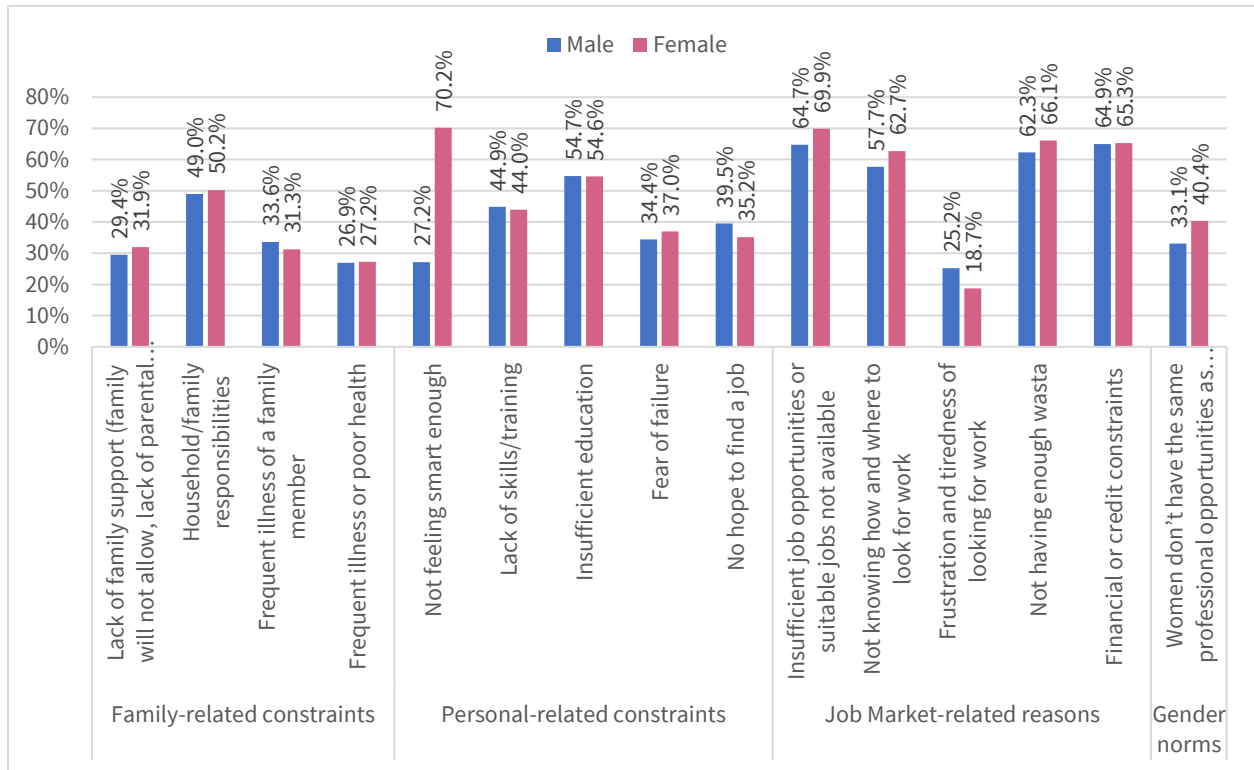
**Figure 9 – Constraints to realizing aspired careers in the study sample (2021)**



Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

**Constraints to realizing aspired careers are similar for young females and males in our sample.** An assessment of constraints by gender shows minimal differences relative to the national average among all interviewed youth. The only exception being that females are significantly more likely to report “not feeling smart enough” as a constraint (70 percent relative to only 27 percent of males, Figure 10). While not in the top three constraints cited by either gender, 40 percent of females and 33 percent of males cited “women don’t have the same professional opportunities as men” as a constraint.

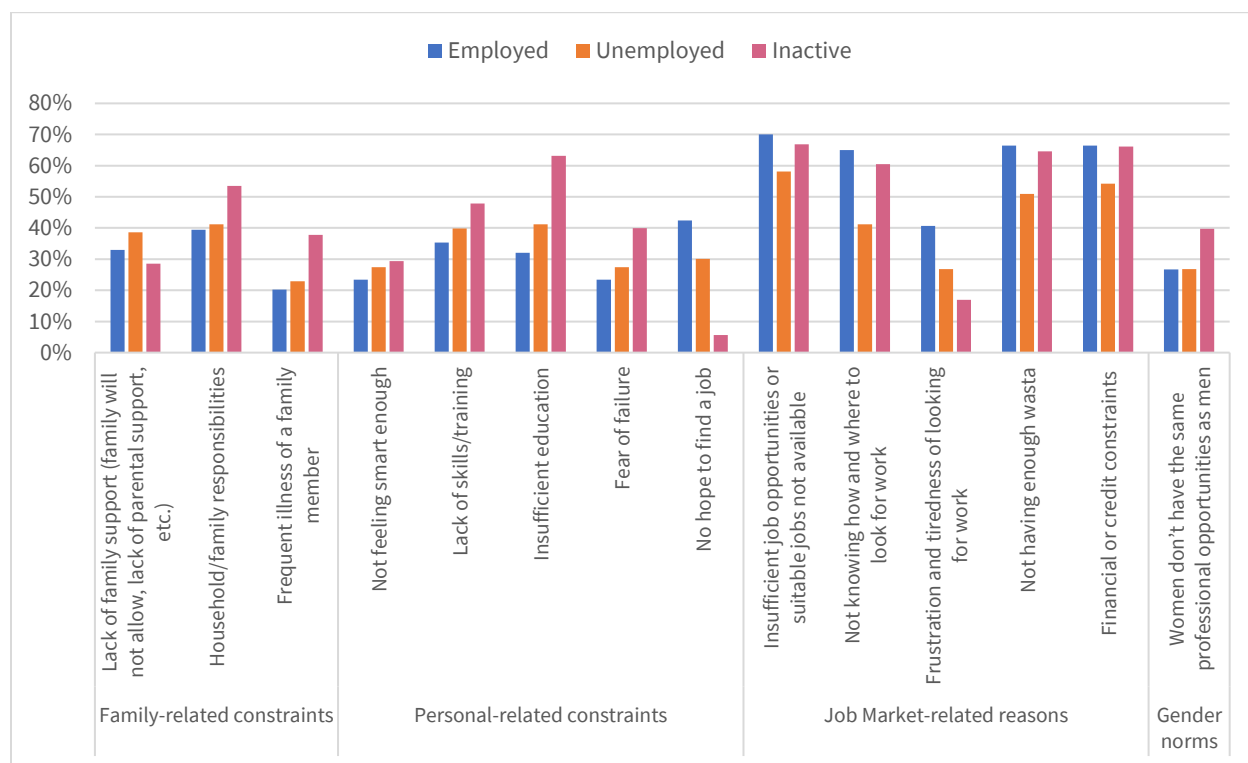
**Figure 10 - Constraints to realizing aspired careers in the study sample, by gender (2021)**



Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

**Within our population of study, the top constraints are not sensitive to differences in employment status.** The top constraints for youth that are inactive and unemployed are the same as those who are employed. Approximately, 67 percent of the inactive, 58 percent of the unemployed, and 70 percent of the employed stated insufficient job opportunities or lack of suitable jobs available as the top constraint (Figure 11). Financial or credit constraints was cited as the second top constraint by the inactive (66 percent), unemployed (54 percent), and employed (66 percent). Finally, not having enough *Wasta* was cited as the top third constraint by the inactive (65 percent), unemployed (51 percent), and employed (66 percent). Insufficient education is also important among the inactive (63 percent), and not knowing how and where to look for work is reported by over 60 percent of the employed and the inactive in the study sample.

**Figure 11 - Constraints to realizing aspired careers in the study sample, by employment status (2021)**



Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

**These findings reflect that regardless of employment status or gender, youth in the sample study perceive that there are not sufficient job opportunities for them to realize their career aspirations, and that better access to financial means and networks are needed to reach them.**

However, the data does not reveal whether the labor market lacks the professional occupations the youth aspire to (Science and Engineering, Health), and/or whether reaching these professional occupations requires more financial means and networking than the study sample – which already has higher socioeconomic status than the average youth in Sudan- has access to.

## 5. Healthy Mindsets, Beliefs, Soft Skills, and Employment: A Pathway for Youth to Reach Career Aspirations?

*Early years of youth, particularly during adolescence, represent a vital period for the development of the social and emotional skills that can determine long-term socioeconomic outcomes, such as educational and professional achievements.<sup>45</sup> This period of the life cycle, therefore, represent an opportunity for investing in healthy mindsets, beliefs, and skills that can lead youth to achieve their career aspirations. In this section, we examine the incidence of anxiety among the highly educated youth in our sample, and analyze the level of soft skills of the youth, namely core self-evaluation and socioemotional skills, as they relate to labor market outcomes and the aspirations-expectations gap. The results presented in this*

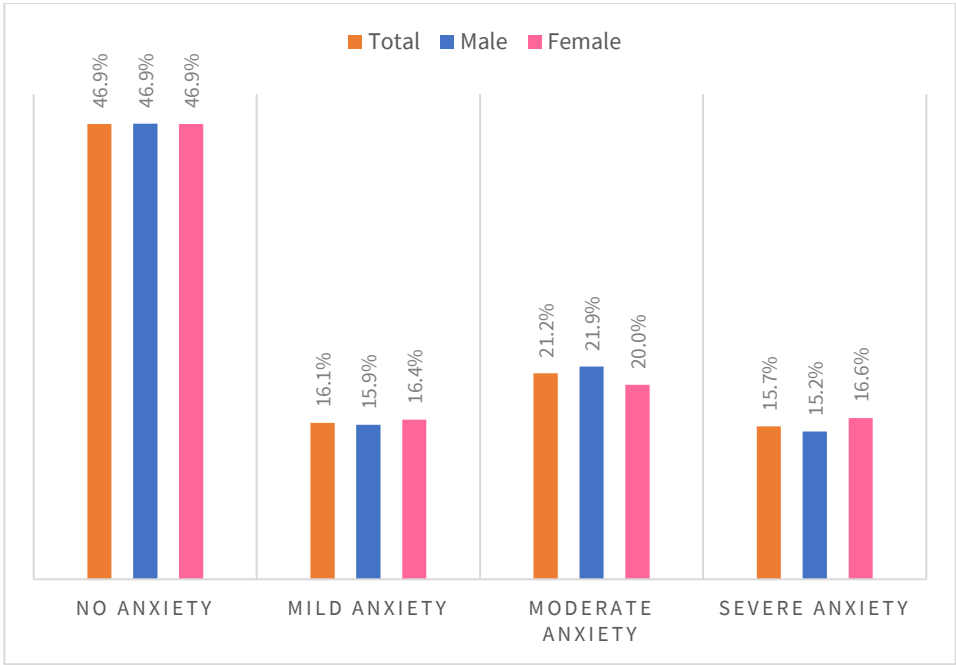
<sup>45</sup> McGorry, P. D., Purcell, R., Hickie, I. B., & Jorm, A. F. (2007). Investing in youth mental health is a best buy. *Medical Journal of Australia*, 187(S7), S5-S7.

section indicate a high level of psychological distress among the study sample, especially among the NEET. Similarly, the unemployed, and to a lesser degree the NEET, show relatively lower levels of soft skills than the rest of the youth in our sample. Lastly, core self-beliefs and socio-emotional skills are statistically significantly correlated with being unemployed and having an aspiration-expectation gap.

5.1. Mental health and labor market outcomes

**To effectively improve youth’s positioning in the labor market, youth must start from an existing healthy mindset to be willing and capable of taking advantage of labor market programs and policies that aim to improve their labor market outcomes.** The survey included a measurement of anxiety to document the incidence of psychological distress among the sampled youth, given our study took place during the COVID-19 pandemic which exacerbated existing labor market challenges. As measured by the Generalized Anxiety Disorder (GAD-7) screening tool,<sup>46,47</sup> nearly 16 percent of youth between 15 to 24 years old in the study sample screened for severe anxiety and another 21 percent screened for moderate anxiety (**Error! Reference source not found.**). The incidence is similar between males and females. These levels correspond to a score of 10 or more, which is the threshold over which additional screening is recommended. If mental health disorders in youth persist, they can threaten not only the youth’s livelihoods and their long-term outcomes but also the country’s development outcomes.

Figure 12 – Anxiety levels by gender in the study sample (2021)



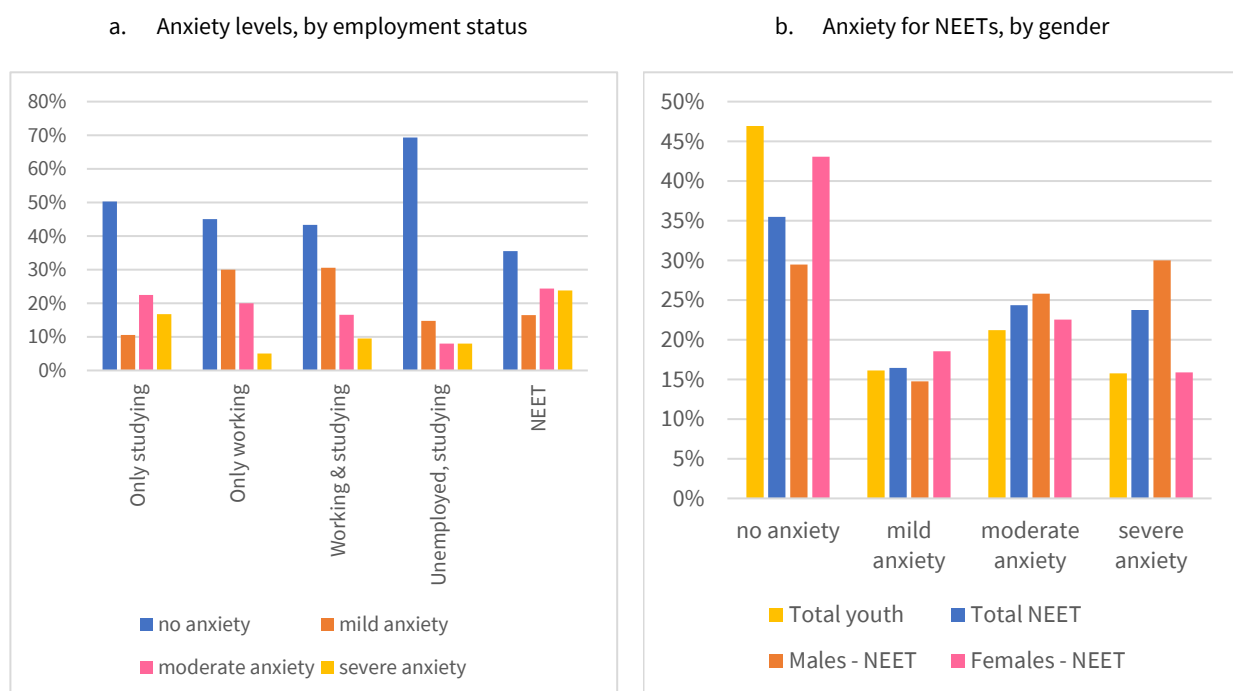
Source: Authors’ elaboration based on HFPS- Round 6, Youth module, 2021

<sup>46</sup>According to the Anxiety & Depression Association of America (ADAA), [General Anxiety Disorder](#) is a common disorder characterized by constant and chronic worrying, nervousness, and tension. People with GAD are characterized by being overly concern for anything. They feel anxious nearly all the time, though they may not even know why. GAD often manifests in physical symptoms like insomnia, stomach upset, restlessness, and fatigue.

<sup>47</sup> The GAD-7 screening tool consists of seven questions, which receive a score based on the reported answer. These scores are then used to calculate the scale score. An example of this can be seen in the following link: [https://adaa.org/sites/default/files/GAD-7\\_Anxiety-updated\\_0.pdf](https://adaa.org/sites/default/files/GAD-7_Anxiety-updated_0.pdf).

**Among our respondents, the experience of severe anxiety is associated with unemployment status and gender.** At 24 percent, severe anxiety is particularly higher among the NEET, followed by those only studying (Figure 13**Error! Reference source not found.**, panel a). Furthermore, male NEET present higher levels of severe anxiety compared to female NEET. These results indicate that this vulnerable population is facing not only barriers to engage in the educational system and labor markets, but also, they are more likely to experience mental health issues. And mental health challenges can, in turn, reinforce or deepen the degree of disengagement. These findings call for early, effective interventions to promote youth mental health and reduce the burden of mental health disorders, with a strong focus on targeted interventions to the NEET, in an effort to increase their engagement and provide support to help them achieve positive life outcomes. If similar health issues are affecting those not captured by the sample study, early health interventions could be even more relevant for the country's youth at large.

**Figure 13 – Anxiety levels by employment status and gender in the study sample (2021)**



Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

## 5.2. Soft skills for labor market success

**To complement the study of mental health, we also measure core self-beliefs and socio-emotional skills that moderate the way individuals manage and interact socially in the labor market.** In this study, we consider two main sets of soft skills, the *core self-evaluation beliefs* that determine the way individuals perceive their own basic capabilities, and *socioemotional skills*, which are a set of learned, realized behaviors that allow individuals to effectively manage inter- and intra-personal situations.

**The purpose of measuring soft skills is multi-fold.** First, soft skills are a pathway to increasing and/or reaching aspirations. Positive beliefs and socio-emotional skills can be reinforcing, whereby those who believe in themselves may have more motivation to master a skill, and alternatively, those who have mastered a skill may then believe in themselves more. Second, soft skills in many economies are rivaling technical skills in their ability to predict employment and earnings.<sup>48,49,50</sup> Importantly, soft skills are malleable and can be developed and improved through work experience and certain types of training.<sup>51,52</sup> For example, activities that develop the youth's sense of belonging and acceptance in the labor market (core self-evaluation) have been found to foster initial motivation, well-being, and self-perception<sup>53,54</sup> and are linked to high performance in the workplace, job dedication, and success in jobs.<sup>55</sup> Thus, the measurement of soft skills serves as a baseline for which to understand whether cost-effective soft skill development programs could be a beneficial support for unemployed youth in Sudan.

---

<sup>48</sup> Almlund, M., A. L. Duckworth, J. J. Heckman, and T. Kautz. 2011. "Personality Psychology and Economics." In *Handbook of the Economics of Education* Vol. 4, ed. E. A. Hanushek. Amsterdam: North Holland.

<sup>49</sup> Allen, C. A., Bhorat, H., Hill, R., Monnakgotla, J., Oosthuizen, M., & Rooney, C. (2021). *Employment creation potential, labor skills requirements, and skill gaps for young people*. Africa Growth Initiative at Brookings.

<sup>50</sup> Bishop, D. T. (2017). The hard truth about soft skills. *Muma Business Review*, 1, 233-239.

<sup>51</sup> Allen, C. A., Bhorat, H., Hill, R., Monnakgotla, J., Oosthuizen, M., & Rooney, C. (2021). *Employment creation potential, labor skills requirements, and skill gaps for young people*. Africa Growth Initiative at Brookings.

<sup>52</sup> Roberts, B. W., Luo, J., Briley, D. A., Chow, P. I., Su, R., & Hill, P. L. (2017). A systematic review of personality trait change through intervention. *Psychological Bulletin*, 143(2), 117.

<sup>53</sup> Walton, G. M., & Cohen, G. L. (2011). A brief social-belonging intervention improves academic and health outcomes of minority students. *Science*, 331(6023), 1447-1451.

<sup>54</sup> Yeage, D.S. et al. (2019). A national experiment reveals where a growth mindset improves achievement. *Nature*, 573(7774), 364-369.

<sup>55</sup> Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: the Big Five revisited. *Journal of Applied Psychology*, 85(6), 869.

## Box 2 - Soft Skills Measured

### Core Self-Evaluation Beliefs

**In this study we measure a set of beliefs that are part of the Core Self Evaluation Scale (CSE), which consider a person's fundamental assessments of themselves, their abilities, and their levels of self-control.**<sup>56</sup> The CSE Scale is comprised of measures including self-esteem, emotional stability, general self-efficacy, and locus of control, which are defined as follows:

- **Self-esteem:** refers to an individual's overall belief of themselves or their confidence in their own abilities.
- **Emotional stability:** refers to an individual's ability to remain calm and composed when facing difficult or challenging situations.
- **General self-efficacy** refers to an individual's belief in their ability or competence to deal with a broad range of situations.<sup>57</sup>
- **Locus of control** refers to an individual's belief of being in control of his or her life.

The empirical evidence suggests that core self-evaluation skills, which comprises self-esteem, stability, self-efficacy, and locus of controls, are important predictors of labor market success,<sup>58</sup> and that those with higher core self-evaluations are particularly more likely to capitalize these advantages into better life outcomes.<sup>59</sup> Furthermore, the evidence suggests that individuals with higher or positive core-self evaluations are not only able to use them to reap benefits in the short-term, but also in the long-term, particularly for individuals in adolescence and youth.<sup>60</sup>

### Socioemotional skills: Emotional Resilience & Self-Management Skills

**We further measure a set of skills that are considered in the Behavioral, Emotional, and Social Skills Inventory (BESSI)**<sup>61</sup>. This scale is defined as the social, emotional, and behavioral skills of any individual, that is, a person's capacities to maintain social relationships, regulate emotions, and manage goal- and learning-directed behaviors.<sup>62</sup> *This is in contrast to the core self-beliefs measured above, whereby CSES are a person's beliefs about themselves, and skills are a measure of how well a person can enact specific behaviors.*

The two domains we selected to measure are Emotional Resilience and Self-Management skills, whereby we measure two subordinate facets within each domain. Emotional Resilience, such as the capacity for optimism, is associated with better labor market outcomes.<sup>63</sup> Self-Management skills are also robust predictors of education and labor market outcomes, even when accounting for the effects of Conscientiousness.<sup>64</sup> Emotional Resilience and Self-Management skills are also thought to be important for realizing one's aspirations. Below, we provide a short description of each of them.

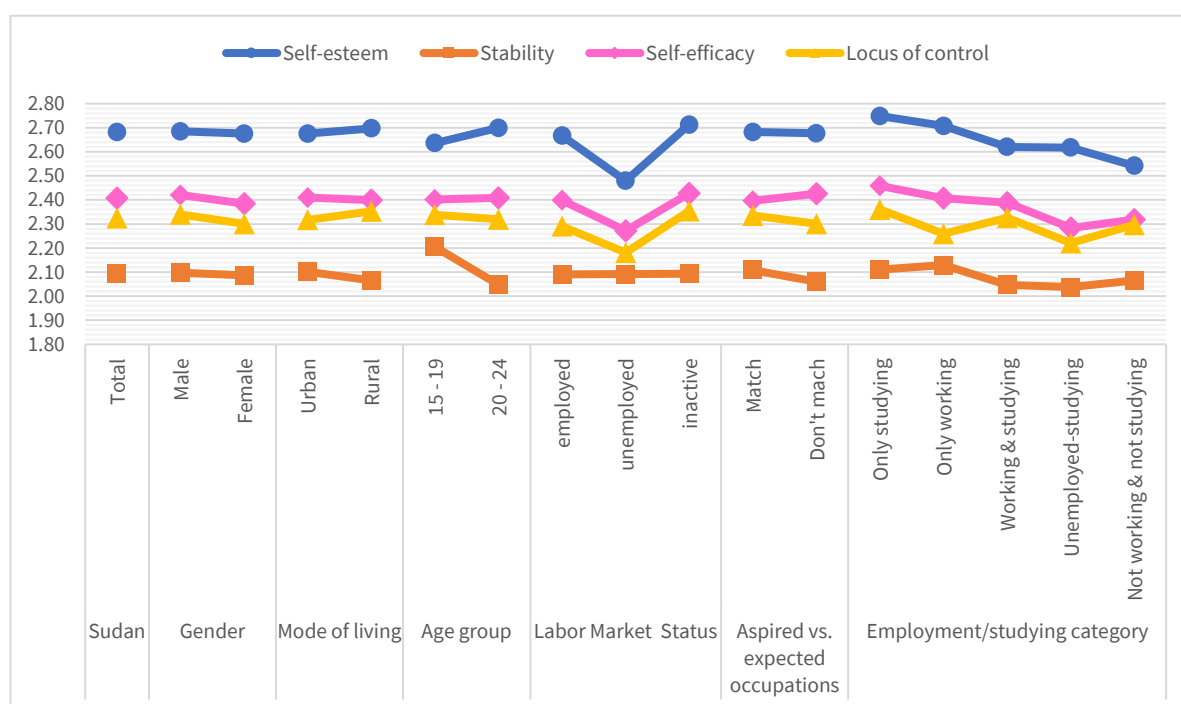
- **Emotional Resilience skills:**
  - **Confidence regulation:** is the capacity to maintain a positive attitude towards oneself.
  - **Capacity for optimism** is the capacity to maintain a positive attitude in difficult circumstances.
- **Self-Management skills:**
  - **Task management:** is the capacity to work persistently to complete tasks and achieve goals.
  - **Goal regulation:** is the capacity to set clear and ambitious personal goals.

The two sets of skills measured in the study were based on a battery of survey questions (See **Error! Reference source not found.** and Table A2.2 for the battery of questions applied during the survey), which were aggregated in individual scores according to validated psychological scales and adapted to the Sudanese context.

### 5.3. Soft skills levels of Sudanese youth in the study sample

**On average, the Sudanese youth in our sample demonstrate positive core self-beliefs, though most self-beliefs are respectively lower among the unemployed and the NEET subsamples.** In the full sample, we find that self-esteem is systematically higher across all population groups than the other measured beliefs, while emotional stability consistently is the relatively lowest score across all skill groups (Figure 14). Self-esteem, self-efficacy and locus of control –all beliefs about oneself that can determine success in labor markets<sup>65</sup>–are relatively lower among the unemployed subsamples, and this finding is statistically significant at the 1 percent level.<sup>66</sup> This is perhaps not surprising as the inability to find and keep a job can be self-defeating.

**Figure 14 - Self-esteem, emotional stability, self-efficacy, and locus of controls scores in the study sample (2021)**



Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

Notes: Scales range from 1 to 3, where 1 is low and 3 is high. Differences between the unemployed relative to their employed and inactive peers are statistically significant at the 1% level for all skills except for emotional stability. Differences by age groups are statistically significant at the 5% level for self-esteem and emotional stability.

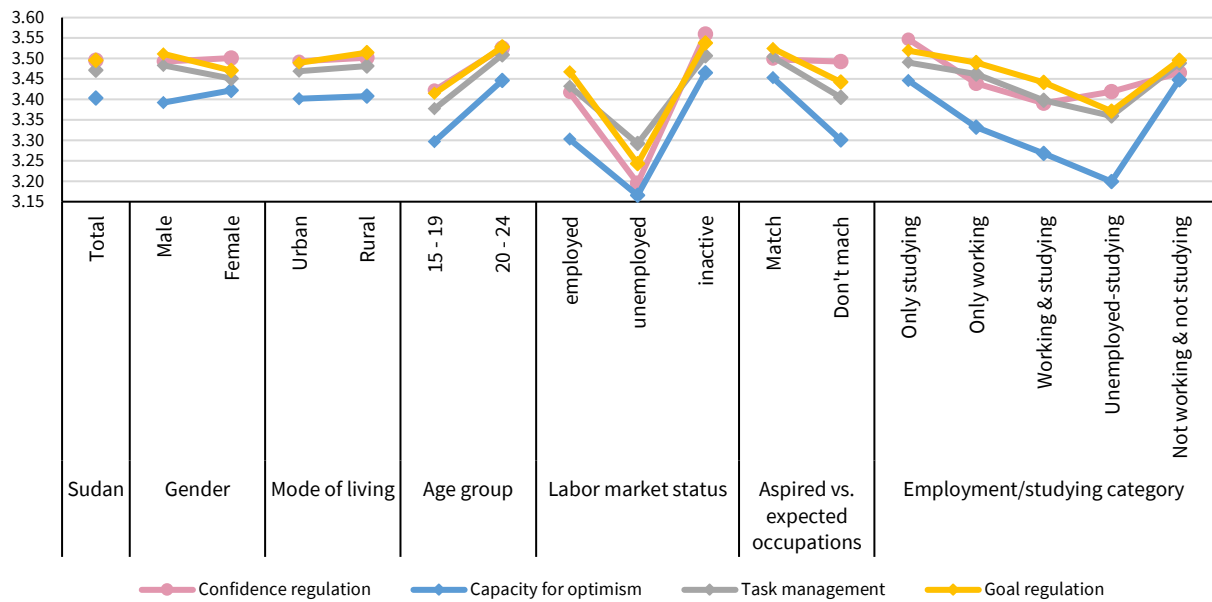
**If core self-beliefs and socio-emotional skills are reinforcing, then we may expect those who are unemployed to also have lower socio-emotional skills. We find in our study sample that similar to core self-beliefs, scores for socio-emotional skills including emotional resilience (confidence regulation, capacity for optimism) and self-management (task management, goal regulation) are relatively lowest among the unemployed subsample** (Figure 15). These findings are statistically significant at the 1 percent level. In fact, we observe larger differences in the measure of socio-

<sup>65</sup> Judge, T. A., & Hurst, C. (2007). Capitalizing on one's advantages: role of core self-evaluations. *Journal of Applied Psychology*, 92(5), 1212.

<sup>66</sup> Note, there is no standard level to compare scores in other settings; rather we analyze the relative differences in skill measures in the sample.

emotional skills than in the set of core self-beliefs. Among the measured sub facets, Sudanese youth in our study scored relatively lowest in capacity for optimism. Notably, youth between 15 and 19 years old, the unemployed youth, and those whose aspired careers do not match their expected careers, tend to score relatively lower than their peers across the skills measured. Several empirical studies demonstrate that lower self-control and motivation are associated with lower levels of internal locus of control, procrastination, and lower job search intensity.<sup>67,68,69</sup>

Figure 15 - Socio-Emotional Skills scores in the study sample(2021)



Source: Authors' elaboration based on HFPS- Round 6, Youth module, 2021

Notes: Scales range from 1 to 4, where 1 is low and 4 is high. Differences between the unemployed relative to their employed and inactive peers are statistically significant at the 1% level for all skills, with differences for capacity for optimism and task management significant at the 5% level. Differences by age groups for all socio-emotional skills are statistically significant at the 1% level.

### 5.4. Soft Skills and Aspirations

**Among the different soft skills measured in the study, capacity for optimism and task management skills were found to matter the most for reducing the aspiration-expectation gap in our study sample.** While all soft skills are negatively associated with the aspirational-expectation gap, and are statistically significant predictors of the aspiration-expectation gap when controlling for a set of covariates, the coefficients for capacity for optimism and task management skills have the largest effect size (**Error! Reference source not found.**). These findings are consistent with an emerging literature that explores the relationship between soft skills and labor market outcomes. For instance,

<sup>67</sup>Krueger, A. B., & Mueller, A. I. (2012). Time use, emotional well-being, and unemployment: Evidence from longitudinal data. *American Economic Review*, 102(3), 594-99.

<sup>68</sup> Cobb-Clark, D. A. (2015). Locus of control and the labor market. *IZA Journal of Labor Economics*, 4(1), 1-19.

<sup>69</sup> DellaVigna, S., & Paserman, M. D. (2005). Job search and impatience. *Journal of Labor Economics*, 23(2), 527-588.

Kaniel et al. (2010)<sup>70</sup> find that more optimistic individuals consistently experience better job search outcomes than their counterparts.

**Table 2 – Correlation between skills and the aspiration-expectation gap in the study sample**

| Variables    | Socioemotional skills |                       |                     |                     | Core self-evaluation skills |                    |                     |                     |                    | CSES                |
|--------------|-----------------------|-----------------------|---------------------|---------------------|-----------------------------|--------------------|---------------------|---------------------|--------------------|---------------------|
|              | Confidence regulation | Capacity for optimism | Task management     | Goal regulation     | SES                         | Self-esteem        | Emotional Stability | Self-efficacy       | Locus of control   |                     |
| Skill        | -0.237***<br>(0.07)   | -0.473***<br>(0.08)   | -0.372***<br>(0.08) | -0.330***<br>(0.08) | -0.486***<br>(0.09)         | -0.237**<br>(0.10) | -0.480***<br>(0.08) | -0.305***<br>(0.11) | -0.252**<br>(0.10) | -0.704***<br>(0.14) |
| Skill*female | 0.108<br>(0.11)       | 0.222<br>(0.14)       | 0.169<br>(0.13)     | 0.141<br>(0.14)     | 0.217<br>(0.15)             | 0.141<br>(0.17)    | -0.080<br>(0.15)    | 0.041<br>(0.18)     | 0.119<br>(0.17)    | -0.006<br>(0.24)    |
| Controls     | Yes                   | Yes                   | Yes                 | Yes                 | Yes                         | Yes                | Yes                 | Yes                 | Yes                | Yes                 |

Source: Authors' estimations based on data from the HFPS- Round 6, Youth module, 2021

Notes: The dependent variable gap is a dummy variable that takes the value of 1 if the youth's aspired career does not match it expected career, and 0 otherwise. SES stands for Socio-emotional Skills Scale, while CSES stands for Core Self-Evaluation Scale. All regressions were estimated using a PROBIT model and contain gender, area of residence, education level of the youth, aspirational constraints, and aspirational drivers. Coefficients are the predicted probability of experiencing an aspirational gap. Robust standard errors are presented in parenthesis. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Of the core self-evaluation skills measured, emotional stability and locus of control show the strongest negative correlation with the youth's career aspirational gap in the study sample.** Based on the results of the regressions presented in Table 2, the coefficients for core self-evaluation skills are statistically significant at the 1 percent level, which suggests that higher scores in these skills are associated with a lower probability of experiencing a gap. Among them, the coefficients for emotional stability and locus of control are higher in magnitude. This finding supports emerging empirical evidence on the relationship between soft skills, such as locus of control, and better labor market outcomes.<sup>71,72,73</sup> For instance, while there is not a consensus on the channels through which locus of control impacts life outcomes, some researchers argue that those who believe to be in control of their lives are more determine to obtain better outcomes, e.g., higher wages, whereas others argue that higher motivation is the moderator.<sup>74</sup>

## 5.5. Soft Skills and Employment

**In our Sudanese youth sample, we find youth with lower scores in core self-evaluation beliefs and socio-emotional skills are more likely to be unemployed or NEET, even after controlling for a set of different covariates.** All four measures of socio-emotional skills and three out of the four core self-evaluation skills are significantly and negatively associated with the probability of being unemployed,

<sup>70</sup> Kaniel, R., Massey, C., & Robinson, D. T. (2010). The importance of being an optimist: Evidence from labor markets (No. w16328). *National Bureau of Economic Research*.

<sup>71</sup> Ng, T. W., Sorensen, K. L., & Eby, L. T. (2006). Locus of control at work: a meta-analysis. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 27(8), 1057-1087.

<sup>72</sup> Cobb-Clark, D.A. Locus of control and the labor market. *IZA J Labor Econ* 4, 3 (2015). <https://doi.org/10.1186/s40172-014-0017-x>

<sup>73</sup> Acosta, P. M. (2018). The role of cognitive and socio-emotional skills in labor markets. *IZA World of Labor*.

<sup>74</sup> Piatek, R., & Pinger, P. (2010). Maintaining (locus of) control? Assessing the impact of locus of control on education decisions and wages. *Assessing the impact of locus of control on education decisions and wages*, 10-093.

and there are not systematic differences between males and females (Table 3 **Table 2**). Lower levels of core self-beliefs including self-esteem and self-efficacy also increase the probability of being NEET among all youth, though the effect is stronger among females (Table 4). These results hold after controlling for a set of covariates. We do not find correlative evidence of socioemotional skills and the NEET on average in our sample; however, the heterogeneity analysis reveals that lower skill levels of females are negatively and significantly correlated with being NEET (Table 4). A full set of regressions to test the robustness of results are found in Tables A3.1 through A3.6 in the Appendix.

**Table 3 – Correlation between skills and unemployment in the study sample**

| Variables    | Socioemotional skills |                       |                   |                     | Core self-evaluation skills |                     |                     |                    |                     | CSES                |
|--------------|-----------------------|-----------------------|-------------------|---------------------|-----------------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
|              | Confidence regulation | Capacity for optimism | Task management   | Goal regulation     | SES                         | Self-esteem         | Emotional Stability | Self-efficacy      | Locus of control    |                     |
| Skill        | -0.169**<br>(0.08)    | -0.185*<br>(0.10)     | -0.183*<br>(0.10) | -0.267***<br>(0.10) | -0.280**<br>(0.11)          | -0.437***<br>(0.13) | -0.0323<br>(0.12)   | -0.362**<br>(0.15) | -0.470***<br>(0.15) | -0.703***<br>(0.22) |
| Skill*female | -0.236<br>(0.23)      | -0.251<br>(0.27)      | -0.117<br>(0.29)  | -0.117<br>(0.24)    | -0.226<br>(0.29)            | 0.0598<br>(0.34)    | 0.412<br>(0.27)     | 0.103<br>(0.32)    | 0.336<br>(0.32)     | 0.615<br>(0.49)     |
| Controls     | Yes                   | Yes                   | Yes               | Yes                 | Yes                         | Yes                 | Yes                 | Yes                | Yes                 | Yes                 |

Source: Authors' estimations based on data from the HFPS- Round 6, Youth module, 2021

Notes: The dependent variable Unemployed is a dummy variable that takes the value of 1 if the youth is unemployed, and 0 if employed. SES stands for Socio-emotional Skills Scale, while CSES stands for Core Self-Evaluation Scale. All regressions were estimated using a PROBIT model and contain gender, area of residence, education level of the youth. Coefficients are the predicted probability of becoming unemployed. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table 4 – Correlation between skills and NEET in the study sample**

| Variables    | Socioemotional skills |                       |                     |                    | Core self-evaluation skills |                     |                     |                   |                  | CSES             |
|--------------|-----------------------|-----------------------|---------------------|--------------------|-----------------------------|---------------------|---------------------|-------------------|------------------|------------------|
|              | Confidence regulation | Capacity for optimism | Task management     | Goal regulation    | SES                         | Self-esteem         | Emotional Stability | Self-efficacy     | Locus of control |                  |
| Skill        | 0.153<br>(0.14)       | 0.0825<br>(0.12)      | 0.055<br>(0.13)     | 0.0278<br>(0.14)   | 0.11<br>(0.15)              | -0.312**<br>(0.13)  | 0.216**<br>(0.11)   | -0.307*<br>(0.16) | 0.123<br>(0.13)  | 0.011<br>(0.20)  |
| Skill*female | -0.359**<br>(0.16)    | -0.452***<br>(0.17)   | -0.442***<br>(0.17) | -0.409**<br>(0.17) | -0.581***<br>(0.20)         | -0.490***<br>(0.19) | 0.396**<br>(0.16)   | -0.104<br>(0.23)  | -0.168<br>(0.20) | -0.128<br>(0.28) |
| Controls     | Yes                   | Yes                   | Yes                 | Yes                | Yes                         | Yes                 | Yes                 | Yes               | Yes              | Yes              |

Source: Authors' estimations based on data from the HFPS- Round 6, Youth module, 2021

Notes: The dependent variable NEET is a dummy variable that takes the value of 1 if the youth is NEET, and 0 if employed. SES stands for Socio-emotional Skills Scale, while CSES stands for Core Self-Evaluation Scale. All regressions were estimated using a PROBIT model and contain gender, area of residence, education level of the youth. Coefficients are the predicted probability of becoming NEET. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**The findings of this study suggest that there is an opportunity to narrow labor market gaps among highly educated youth by improving youth's soft skills.** The results provide evidence that there is room for youth –in particular, the unemployed, NEET, and those with an aspiration-expectations gap - to nurture and enhance their core self-beliefs and socio-emotional skills to ultimately improve their employability in the job market. Indeed, empirical evidence suggests that training in soft skills is

associated with long-term benefits in educational and labor market outcomes.<sup>75</sup> Therefore, early interventions that seek to improve youth's soft skills could be promising in addressing unemployment and disengagement among the highly educated Sudanese youth.

## 6. Discussion, Policy Recommendations, and Conclusion

**The current study identifies several supply-side barriers that highly educated Sudanese youth face in the labor market, including often unobserved drivers, such as aspirations, mindsets, beliefs, and soft skills.** It should be noted that demand-side constraints, which are not analyzed here, are substantial in the Sudanese context. At the time of this study, the country was going through a process of major economic reforms to address the core macroeconomic imbalances that led the country to decline from middle income to low-income country status in 2020. In October 2021, however, a military takeover put the progress at risk, and social and political instability increased significantly.

**Youth unemployment and disengagement from any productive activity are high among our studied population, putting these youth at risk of being permanently excluded from the labor market.** About 3 out of 10 youth in our sample are unemployed, and 1 in 5 are NEET. Over 80 percent of those who are not currently working (both unemployed and NEET) are not actively looking for a job nor trying to set up a business. Overwhelmingly, the reason for not doing so are household or family responsibilities. Active Labor Market Policies (ALMPs) could be designed to make intermediation services available to those with household obligations, such as by making the services available online or through the phone, or by having a day care available at their physical sites. However, to understand how best to alleviate household or family responsibility constraints, further research is needed to identify the constraints specifically, and why these constraints are more important for male NEET than female NEET; the data does not tell us, for example, if the finding reflects economic activities that are not income generating per se (e.g., production for own consumption) or rather if family activities include care for household family members, which might traditionally fall under the responsibility of female household members. Similarly, it would be interesting to explore whether this gender difference is exclusive to the highly educated youth, or whether it extends to the overall youth population in Sudan. Additional key constraints cited include insufficient job opportunities and lack of skills or training. While this study does not generate evidence on demand-side barriers to make recommendations which address insufficient job opportunities, the lack of skills or training can be addressed by ALMPs.

**This study confirms the existence of gender inequities in several dimensions of the labor market documented in literature to-date on Sudan.** With respect to their male peers, young females are more likely to be unemployed and to not transition to the labor market but rather become part of the NEET population. These findings suggest that labor market interventions could be tailored to gender-specific needs to target varying challenges among highly educated young males and females. Specifically, interventions could seek to support young females in the transition to labor markets, for instance by facilitating easy access to information and setting up widely accessible female peer networks to

---

<sup>75</sup>Sorrenti, G., Zölitz, U., Ribeaud, D., & Eisner, M. (2020). The causal impact of socio-emotional skills training on educational success. *University of Zurich, Department of Economics, Working Paper*343.

generate access to connections. These types of interventions will likely be relevant also for the youth not captured in the study sample—the lower educated—as they likely face similar challenges.

**The Sudanese youth in our sample present high levels of psychological distress, which increases the risk of educational and professional underachievement, further exacerbating economic and social exclusion of Sudanese youth.** Our study, which was conducted during the COVID-19 pandemic, reveals the youth in the study sample suffer from poor mental health, with male NEETs more likely to experience moderate and severe anxiety than females. Early years of youth, particularly during adolescence, represent a vital period for the development of the soft skills that can determine long-term socioeconomic outcomes, such as educational and professional achievements.<sup>76</sup> In this context, early, effective interventions for youth in the education system and in ALMPs to promote healthy mental health and to reduce the burden of mental health disorders will be crucial in the years to come.

**Further, highly educated youth face a career aspiration-expectation gap for professional occupations due to the existence of multidimensional barriers such as insufficient job opportunities, financial constraints such as access to credit, and *Wasta*.** These constraints do not differ across employment status nor gender. The labor market may be lacking key areas of demand for potential growth in the economy for which youth aspire to work in, namely *Science and Engineering* and *Health*. Expanding access to networks of people working in these sectors, such as through role model interventions in the education system or in ALMPs, could help lift this constraint. More research is needed to understand the presence of financial constraints such as lack of access to credit, even amongst the study sample which has higher socioeconomic status than the nationally representative sample, to understand how best to address this constraint to help youth achieve their career aspirations.

**The most often reported constraint among females in the study sample is “not feeling smart enough.”** Such barriers have been successfully targeted through Growth Mindset interventions which teach the belief that intelligence is malleable. Activities that develop the youth’s sense of belonging and acceptance in the labor market (such as Growth Mindset and Self-Efficacy) have widely been found to foster initial motivation, well-being, and self-perception<sup>77,78</sup> and are linked to high performance in the workplace, job dedication, and success in jobs.<sup>79</sup> Interventions initially conducted in the United States<sup>80</sup> were then adapted with support from the World Bank for youth in Peru,<sup>81</sup> Indonesia,<sup>82</sup> Cyprus,<sup>83</sup> and South Africa<sup>84</sup> and led to improved education and labor market outcomes.

**Among our highly educated sample, soft skills measured in the study have been found to negatively correlate with the career aspiration-expectation gap and unemployment status. We**

---

<sup>76</sup> McGorry, P. D., Purcell, R., Hickie, I. B., & Jorm, A. F. (2007). Investing in youth mental health is a best buy. *Medical Journal of Australia*, 187(S7), S5-S7.

<sup>77</sup> Walton, G. M., & Cohen, G. L. (2011). A brief social-belonging intervention improves academic and health outcomes of minority students. *Science*, 331(6023), 1447-1451.

<sup>78</sup> Yeager, D. S. et al. (2016). Using design thinking to improve psychological interventions: The case of the growth mindset during the transition to high school. *Journal of Educational Psychology*, 108(3), 374.

<sup>79</sup> Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: the Big Five revisited. *Journal of Applied Psychology*, 85(6), 869.

<sup>80</sup> See Blackwell, Trzesniewski, and Dweck (2007), Paunesku et al. (2015), and Yeager et al. (2019).

<sup>81</sup> Outes-Leon, I., Sánchez, A., & Vakis, R. (2020). The power of believing you can get smarter: The impact of a growth-mindset intervention on academic achievement in Peru. *World Bank Policy Research Working Paper*, 9141.

<sup>82</sup> World Bank. (2020). “*Semua Bisa Pintar*”: *Introducing a Growth Mindset to Indonesia’s Youth: A Behavioral Insights Experiment Activity Completion Report*. Washington D.C.: World Bank.

<sup>83</sup> World Bank. (2020). *Socio-Emotional Skills for Labor Market Outcomes in the Turkish Cypriot Community*. Washington DC: World Bank.

<sup>84</sup> World Bank. (2018). *An incomplete transition: Overcoming the legacy of exclusion in South Africa*. Washington D.C.: World Bank.

find some skills are important for reducing the gap, such as capacity for optimism, task management, emotional stability, and locus of control, and most skills are relatively lower among the unemployed youth in the sample. In light of these findings, policies that seek to address youth unemployment could focus on early interventions that train in *self-management practices*, which target the development of tools such as goal setting and time management, in vocational training programs to help youth effectively pursue their career aspirations. Self-Management training programs could help young people search more effectively for work and maintain motivation in the face of setbacks, as interventions teaching practical goal setting and planning tools have had a positive effect on job search intensity and likelihood of employment.<sup>85</sup> Empirical evidence suggests that effective time management is positively associated with better academic performance, better health, psychological well-being, and job satisfaction and performance.<sup>86</sup> In contrast, time management is negatively associated with anxiety, stress, and somatic tensions.<sup>87</sup> The World Bank eMBED team (2020) investigated trainings in socio-emotional skills such as Growth Mindset and self-management (goal setting, time management) with youth in Cyprus and found that they can boost self-efficacy, reduce anxiety levels, and realign expectations and aspirations.<sup>88</sup>

**Investing early in human capital is crucial to generate opportunities for the youth, to enable them to enter the workforce with the skills, guidance, and resources needed for productive and decent employment.** For this to be realized, reducing gender inequities, and developing positive mindsets and soft skills relevant for the labor market are key entry points for low-cost program intervention. Early interventions may also be relevant for the youth not captured in this sample –the lower educated and younger youth– as it is likely they face many of the same challenges identified in this study, such as lack of credit constraints and *Wasta*. Finally, youth-specific interventions should be accompanied by interventions that tackle broader structural issues as these can have synergistic outcomes for youth and the general population.<sup>89</sup>

---

<sup>85</sup> Gallagher, M. W., & Lopez, S. J. (2009). Positive expectancies and mental health: Identifying the unique contributions of hope and optimism. *The Journal of Positive Psychology*, 4(6), 548-556.

<sup>86</sup> Aeon, B., & Aguinis, H. (2017). It's about time: New perspectives and insights on time management. *Academy of Management Perspectives*, 31(4), 309-330.

<sup>87</sup> Sorrenti, G., Zölitz, U., Ribeaud, D., & Eisner, M. (2020). The causal impact of socio-emotional skills training on educational success. *University of Zurich, Department of Economics, Working Paper* 343.

<sup>88</sup> The World Bank. (2020). *Socio-Emotional Skills for Labor Market Outcomes in the Turkish Cypriot Community*. <https://elibrary.worldbank.org/doi/abs/10.1596/34104>

<sup>89</sup> Sumberg, J., Fox, L., Flynn, J., Mader, P., & Oosterom, M. (2021). Africa's "youth employment" crisis is actually a "missing jobs" crisis. *Development Policy Review*, 39(4), 621-643.

## References

- A, L., Scholz, U., & R., S. (2005). The general self-efficacy scale: multicultural validation studies. *J Psychol*, 139(5), 439-457. doi:10.3200/JRLP.139.5.439-457
- AbuJbara, N. A., & Worley, J. A. (2018). Leading toward new horizons with soft skills. *On The Horizon-The Strategic Planning Resource for Education Professionals*, 26(3), 247-259.
- Acosta, P. M. (2018). *The role of cognitive and socio-emotional skills in labor markets*. IZA World of Labor.
- Aeon, B., & Aguinis, H. (2017). It's about time: New perspectives and insights on time management. *Academy of Management Perspectives*, 31(4), 309-330.
- Allen, C. A., Bhorat, H., Hill, R., Monnakgotla, J., Oosthuizen, M., & Rooney, C. (2021). *Employment creation potential, labor skills requirements, and skill gaps for young people*. Africa Growth Initiative at Brookings.
- Almlund, M., Duckworth, A. L., Heckman, J., & Kautz, T. (2011). Personality Psychology and Economics. In *Handbook of the Economics of Education* (Vol. 4, pp. 1 - 181). Elsevier.
- Avitabile, C., & De Hoyos, R. (2018). The Heterogeneous effect of information on student performance: evidence from a randomized control trial in Mexico. *Journal of Development Economics*, 135, 318-348.
- Beaman, L., Duflo, E., Pande, R., & Topalova, P. (2012). Female leadership raises aspirations and educational attainment for girls: A policy experiment in India. *Science*, 335(6068), 582-586.
- Bernard, T., & Seyoum Taffesse, A. (2014). Aspirations: An approach to measurement with validation using Ethiopian data. *Journal of African Economies*, 23(2), 189-224.
- Bishop, D. T. (2017). The hard truth about soft skills. *Muma Business Review*, 1, 233-239.
- Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development*, 78(1), 246-263.
- Cobb-Clark, D. A. (2015). Locus of control and the labor market. *IZA Journal of Labor Economics*, 4(1), 1 - 19.
- Cobb-Clark, D. A. (2015). Locus of control and the labor market. *IZA Journal of Labor Economics* 4, 1, 1-19.
- Dalton, P. S., Ghosal, S., & Mani, A. (2016). Poverty and aspirations failure. *The Economic Journal*, 126(590), 165-188.
- DellaVigna, S., & Paserman, M. D. (2005). Job search and impatience. *Journal of Labor Economics*, 23(2), 527-588.
- Deming, D. J. (2017). The growing importance of social skills in the labor market. *The Quarterly Journal of Economics*, 132(4), 1593-1640.
- Etang, A., Lundvall, J., Osman, E., & Wistrand, J. (2021). *Towards a More Inclusive Economy*. Washington D.C.: World Bank.
- Favara, M. (2017). Do dreams come true? Aspirations and educational attainments of Ethiopian boys and girls. *Journal of African Economies*, 26(5), 561-583.
- Fruttero, A., Muller, N., & Calvo-Gonzalez, O. (2021). The Power and Roots of Aspirations. *Policy Research Working Paper No. 9729*.

- Gallagher, M. W., & Lopez, S. J. (2009). Positive expectancies and mental health: Identifying the unique contributions of hope and optimism. *The Journal of Positive Psychology*, 4(6), 548-556.
- Genicot, G., & Ray, D. (2020). Aspirations and Economic Behavior. *Annual Review of Economics*, 12, 715-746.
- Glewwe, P., Huang, Q., & Park, A. (2017). Cognitive skills, noncognitive skills, and school-to-work transitions in rural China. *Journal of Economic Behavior & Organization*, 134, 141-164.
- Guerra, N., Modecki, K., & Cunningham, W. (2014). Developing Social-Emotional Skills for the Labor Market: The PRACTICE Model. *Policy Research Working Paper*, No. 7123.
- Guyon, N., & Huillery, E. (2021). Biased aspirations and social inequality at school: Evidence from french teenagers. *The Economic Journal*, 131(634), 745-796.
- Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: the Big Five revisited. *Journal of Applied Psychology*, 85(6), 869.
- ILO. (2020). *Global employment trends for youth 2020: Technology and the future of jobs*. Geneva: International Labour Office.
- Judge, T. A., & Hurst, C. (2007). Capitalizing on one's advantages: role of core self-evaluations. *Journal of Applied Psychology*, 92(5), 1212.
- Judge, T. A., & Hurst, C. (2008). How the rich (and happy) get richer (and happier): relationship of core self-evaluations to trajectories in attaining work success. *Journal of Applied Psychology*, 93(4), 849.
- Judge, T. A., Locke, E. A., & Durham, C. C. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior*, 19, 151– 188.
- Kabeer, N., & Natali, L. (2013). Gender equality and economic growth: Is there a win-win? *IDS Working Papers*, 1 - 58.
- Kaniel, R., Massey, C., & Robinson, D. (2010). The Importance of Being an Optimist: Evidence from Labor Markets. *National Bureau of Economic Research Working Paper No. 16328*. .
- Krueger, A. B., & Mueller, A. I. (2012). Time use, emotional well-being, and unemployment: Evidence from longitudinal data. *American Economic Review*, 102(3), 594-599.
- La Ferrara, E. (2019). Presidential Address: Aspirations, Social Norms, and Development. *Journal of the European Economic Association*, 17(6), 1687-1722.
- Li, J., De Martino, S., & Napolitano, C. (2021). Towards an integrated framework and measure of youth aspirations. *Mimeo*.
- McGorry, P. D., Purcell, R., Hickie, I. B., & Jorm, A. F. (2007). Investing in youth mental health is a best buy. *Medical Journal of Australia*, 187(S7), S5-S7.
- Morsy, H., & Mukasa, A. (2019). Youth jobs, skill and educational mismatches in Africa. *Working Paper series No. 326, African Development Bank Group*.
- Napolitano, C. M., Hoff, K. A., Ming, C. W., Tu, N., & Rounds, J. (2020). Great expectations: Adolescents' intentional self-regulation predicts career aspiration and expectation consistency. *Journal of Vocational Behavior*, 120, 103423.

- Napolitano, C. M., Sewell, M. N., Soto, C. J., Yoon, H., & Roberts, B. W. (2021). Social, emotional, and behavioral skills: An integrative model of the skills associated with success during adolescence and across the life span. *Frontiers in Education*, 679561.
- Ng, T. W., Sorensen, K. L., & Eby, L. T. (2006). Locus of control at work: a meta-analysis,. *The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 27(8), 1057-1087.
- Outes-Leon, I., Sánchez, A., & Vakis, R. (2020). The power of believing you can get smarter: The impact of a growth-mindset intervention on academic achievement in Peru. *World Bank Policy Research Working Paper*, 9141.
- Paunesku, D., Walton, G. M., Romero, C., Smith, E. N., Yeager, D. S., & Dweck, C. S. (2015). Mind-set interventions are a scalable treatment for academic underachievement. *Psychological Science*, 26(6), 784-793.
- Piatek, R., & Pinger, P. (2010). Maintaining (locus of) control? Assessing the impact of locus of control on education decisions and wages. *ZEW - Centre for European Economic Research Discussion Paper No. 10-093*. Retrieved from <https://ssrn.com/abstract=1739746>
- Ray, D. (2006). Aspirations, poverty, and economic change. In *Understanding Poverty* (pp. 409-421). Oxford University Press.
- Riley, E. (2019). Role models in movies: the impact of Queen of Katwe on students' educational attainment. *The Review of Economics and Statistics*, 1- 48.
- Roberts, B. W., Luo, J., Briley, D. A., Chow, P. I., Su, R., & Hill, P. L. (2017). A systematic review of personality trait change through intervention. *Psychological Bulletin*, 143(2), 117.
- Ross, P. H. (2019). Occupation aspirations, education investment, and cognitive outcomes: Evidence from Indian adolescents. *World Development*, 123, 104613.
- Ross, P. H., Glewwe, P., Prudencio, D., & Wydick, B. (2021). Developing educational and vocational aspirations through international child sponsorship: Evidence from Kenya, Indonesia, and Mexico. *World Development*, 140, 105336.
- Sorrenti, G., Zölitz, U., Ribeaud, D., & Eisner, M. (2020). The causal impact of socio-emotional skills training on educational success. *University of Zurich, Department of Economics, Working Paper 343*.
- Sumberg, J., Fox, L., Flynn, J., Mader, P., & Oosterom, M. (2021). Africa’s “youth employment” crisis is actually a “missing jobs” crisis. *Development Policy Review*, 39(4), 621-643.
- UNICEF. (2016). SUDAN Country Fact Sheet. Retrieved from <https://www.unicef.org/mena/media/4241/file>
- Walton, G. M., & Cohen, G. L. (2011). A brief social-belonging intervention improves academic and health outcomes of minority students. *Science*, 331(6023), 1447-1451.
- WHO. (2021). Adolescent mental health. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>
- World Bank. (2018). *An incomplete transition: Overcoming the legacy of exclusion in South Africa*. Washington D.C. : World Bank.
- World Bank. (2020). “Semua Bisa Pintar”: Introducing a Growth Mindset to Indonesia’s Youth: A Behavioral Insights Experiment Activity Completion Report. Washington D.C.: World Bank. Retrieved from

<https://documents1.worldbank.org/curated/en/497881597398712165/pdf/Semua-Bisa-Pintar-Introducing-a-Growth-Mindset-to-Indonesia-s-Youth-A-Behavioral-Insights-Experiment-Activity-Completion-Report.pdf>

World Bank. (2020). *Socio-Emotional Skills for Labor Market Outcomes in the Turkish Cypriot Community*. Washington DC: World Bank. Retrieved from <https://elibrary.worldbank.org/doi/abs/10.1596/34104>

Yeage, D.S. et al. (2019). A national experiment reveals where a growth mindset improves achievement. *Nature*, 573(7774), 364-369.

Yeager, D. S. et al. (2016). Using design thinking to improve psychological interventions: The case of the growth mindset during the transition to high school. *Journal of Educational Psychology*, 108(3), 374.

## Appendix 1 – Definitions and survey questions for soft skills

Table A1.1 - Socio-emotional skills questions

| SOCIO EMOTIONAL SKILLS SCALE (SES) QUESTIONS                                                                                                                                                             |                 |               |             |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|-------------|-----------|
| Now I'm going to read a list of activities or things you could do. For each one, please indicate <i>how well you can do that thing</i> .                                                                 |                 |               |             |           |
| For example, how well can you follow the instructions for a task? Note that <b>how well</b> you can do something may be different from <b>how often</b> you do it, or <b>how much you like</b> to do it. |                 |               |             |           |
| For each activity, you should rate <i>how well</i> you can do that thing selecting one of the following 4 options: not at all well, not very well, pretty well, very well.                               |                 |               |             |           |
| READ OPTIONS AFTER EACH STATEMENT                                                                                                                                                                        |                 |               |             |           |
|                                                                                                                                                                                                          | Not at all well | Not very well | Pretty well | Very well |
| <b>1. Confidence Regulation</b>                                                                                                                                                                          |                 |               |             |           |
| How well can you ...?                                                                                                                                                                                    |                 |               |             |           |
| a. Find things to like about yourself?                                                                                                                                                                   | 1               | 2             | 3           | 4         |
| b. Have confidence in yourself?                                                                                                                                                                          | 1               | 2             | 3           | 4         |
| c. Find reasons to feel good about yourself?                                                                                                                                                             | 1               | 2             | 3           | 4         |
| d. Respect yourself?                                                                                                                                                                                     | 1               | 2             | 3           | 4         |
| e. See your strengths?                                                                                                                                                                                   | 1               | 2             | 3           | 4         |
| f. See your good qualities?                                                                                                                                                                              | 1               | 2             | 3           | 4         |
| <b>2. Capacity for Optimism</b>                                                                                                                                                                          |                 |               |             |           |
| How well can you ....?                                                                                                                                                                                   |                 |               |             |           |
| a. Stop yourself from feeling pessimistic?                                                                                                                                                               | 1               | 2             | 3           | 4         |
| b. Look on the bright side of things?                                                                                                                                                                    | 1               | 2             | 3           | 4         |
| c. Stay in a good mood?                                                                                                                                                                                  | 1               | 2             | 3           | 4         |
| d. Stay positive when something bad happens?                                                                                                                                                             | 1               | 2             | 3           | 4         |
| e. Keep a positive attitude?                                                                                                                                                                             | 1               | 2             | 3           | 4         |
| f. Stay optimistic when things go wrong?                                                                                                                                                                 | 1               | 2             | 3           | 4         |
| <b>3. Task Management</b>                                                                                                                                                                                |                 |               |             |           |
| How well can you ...?                                                                                                                                                                                    |                 |               |             |           |
| a. Keep working until a task is finished?                                                                                                                                                                | 1               | 2             | 3           | 4         |
| b. Get started on tasks?                                                                                                                                                                                 | 1               | 2             | 3           | 4         |
| c. Focus on your work?                                                                                                                                                                                   | 1               | 2             | 3           | 4         |
| d. Keep yourself from getting distracted?                                                                                                                                                                | 1               | 2             | 3           | 4         |
| e. Work efficiently, without wasting time?                                                                                                                                                               | 1               | 2             | 3           | 4         |
| f. Concentrate on a task?                                                                                                                                                                                | 1               | 2             | 3           | 4         |
| <b>4. Goal Regulation</b>                                                                                                                                                                                |                 |               |             |           |
| How well can you...?                                                                                                                                                                                     |                 |               |             |           |
| a. Set clear goals?                                                                                                                                                                                      | 1               | 2             | 3           | 4         |
| b. Make plans to achieve a goal?                                                                                                                                                                         | 1               | 2             | 3           | 4         |
| c. Focus on your most important goals?                                                                                                                                                                   | 1               | 2             | 3           | 4         |
| d. Work hard to succeed?                                                                                                                                                                                 | 1               | 2             | 3           | 4         |
| e. Work toward your goals?                                                                                                                                                                               | 1               | 2             | 3           | 4         |
| f. Set high standards for yourself?                                                                                                                                                                      | 1               | 2             | 3           | 4         |

**Table A1.2 – Core self-evaluation skills questions**

| <b>CORE SELF-EVALUATION SCALE (CSES) QUESTIONS</b>                                                                                                                                                                                                                                 |                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Now I'm going to read a few statements that may or may not apply to you, and I want you to tell me whether you agree, you are neutral, or you disagree.                                                                                                                            |                                                |
| a. You are confident you get the success you have worked for in life                                                                                                                                                                                                               | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| b. Sometimes you feel depressed (R)                                                                                                                                                                                                                                                | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| c. When you try something, you generally succeed.                                                                                                                                                                                                                                  | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| d. Sometimes when you fail you feel worthless (R)                                                                                                                                                                                                                                  | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| e. You complete tasks successfully                                                                                                                                                                                                                                                 | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| f. Sometimes, you do not feel in control of your work (R)                                                                                                                                                                                                                          | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| g. Overall, you are satisfied with yourself                                                                                                                                                                                                                                        | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| h. You are filled with doubts about your competence (R)                                                                                                                                                                                                                            | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| i. Your decisions and actions impact what happens in your life                                                                                                                                                                                                                     | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| j. You do not feel in control of your success in your career (R)                                                                                                                                                                                                                   | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| k. You are capable of coping with most of your problems                                                                                                                                                                                                                            | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| l. There are times when things look pretty bleak and hopeless to you (R)                                                                                                                                                                                                           | Disagree.....1<br>Neutral.....2<br>Agree.....3 |
| <p>Additionally, after every question, the following was asked:</p> <p><i>If 1 (disagree) or 3 (agree)</i></p> <p>Would you say that you 'somewhat disagree (agree) or strongly disagree (agree)?</p> <p>Somewhat disagree (agree)....1</p> <p>Strongly disagree (agree).....2</p> |                                                |

## Appendix 2 – Determinants of unemployed and NEET in the sample

Table A2.1 - Regression results for the unemployed

| Dependent variable: Unemployed                     |                     |                     |                     |
|----------------------------------------------------|---------------------|---------------------|---------------------|
| Variables                                          | Model 1             | Model 2             | Model 3             |
| Female                                             | 0.473***<br>(0.15)  | 0.444***<br>(0.15)  | 1.020**<br>(0.43)   |
| Rural                                              | -0.102<br>(0.14)    | -0.0784<br>(0.15)   | 0.105<br>(0.16)     |
| Female * rural                                     |                     |                     | -0.849**<br>(0.36)  |
| <b>Age_group (15 - 19) - Reference group</b>       |                     |                     |                     |
| Age_group (20 - 24)                                | -0.15<br>(0.18)     | -0.092<br>(0.18)    | -0.107<br>(0.21)    |
| Age_group (20 -24) *female                         |                     |                     | 0.0427<br>(0.42)    |
| <b>Secondary or less - Reference group</b>         |                     |                     |                     |
| Post-secondary diploma                             | 0.678***<br>(0.18)  | 0.713***<br>(0.18)  | 0.849***<br>(0.21)  |
| Bachelor's degree and more                         | 0.639***<br>(0.15)  | 0.584***<br>(0.15)  | 0.614***<br>(0.17)  |
| Post-secondary diploma * female                    |                     |                     | -0.626<br>(0.45)    |
| Bachelor's degree and more * female                |                     |                     | -0.154<br>(0.39)    |
| <b>Aspiration constraints (individual dummies)</b> |                     |                     |                     |
| Lack of wasta                                      |                     | -0.231<br>(0.15)    | -0.309*<br>(0.18)   |
| Credit/financial constraints                       |                     | -0.108<br>(0.15)    | -0.0576<br>(0.17)   |
| Insufficient job opportunities                     |                     | -0.166<br>(0.14)    | -0.0784<br>(0.17)   |
| Lack of wasta*female                               |                     |                     | 0.202<br>(0.37)     |
| Credit/financial constraints*female                |                     |                     | -0.0295<br>(0.36)   |
| Insufficient job opportunities*female              |                     |                     | -0.474<br>(0.35)    |
| Constant                                           | -0.872***<br>(0.16) | -0.589***<br>(0.19) | -0.703***<br>(0.22) |
| <b>Observations</b>                                | <b>489</b>          | <b>486</b>          | <b>486</b>          |
| <b>R-square</b>                                    | <b>0.0617</b>       | <b>0.078</b>        | <b>0.0927</b>       |

Source: Authors' calculations based on HFPS- Round 6, Youth module, 2021.

Notes: The dependent variable unemployed is a dummy variable that takes the value of 1 if the youth is unemployed, and 0 if employed. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All models were run with a probit model. To interpret the coefficients, marginal effects need to be calculated.

**Table A2.2 - Regression results for the NEET**

| Dependent variable: NEET                                |                     |                     |                     |                     |                     |                     |                     |
|---------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Variables                                               | Model 1             | Model 2             | Model 3             | Model 4             | Model 5             | Model 6             | Model 7             |
| Female                                                  | 0.951***<br>(0.12)  | 0.970***<br>(0.12)  | 1.401***<br>(0.37)  | 1.010***<br>(0.16)  | 0.948**<br>(0.47)   | 1.048***<br>(0.16)  | 1.031**<br>(0.48)   |
| Rural                                                   | -0.139<br>(0.12)    | -0.123<br>(0.12)    | -0.0871<br>(0.15)   | -0.311*<br>(0.18)   | -0.406*<br>(0.23)   | -0.334*<br>(0.18)   | -0.450*<br>(0.24)   |
| Female * rural                                          |                     |                     | -0.116<br>(0.27)    |                     | 0.466<br>(0.41)     |                     | 0.457<br>(0.42)     |
| <b>Job search constraints (all dummies)</b>             |                     |                     |                     |                     |                     |                     |                     |
| Lack of skills                                          |                     |                     |                     | 0.683***<br>(0.26)  | 0.596**<br>(0.27)   |                     |                     |
| Lack of family support                                  |                     |                     |                     | 1.297***<br>(0.29)  | 1.243***<br>(0.31)  |                     |                     |
| Household/family responsibilities                       |                     |                     |                     | 1.343***<br>(0.16)  | 1.227***<br>(0.19)  |                     |                     |
| Lack of skills*female                                   |                     |                     |                     |                     | -                   |                     |                     |
| Lack of family support*female                           |                     |                     |                     |                     | -                   |                     |                     |
| Household/family responsibilities*female                |                     |                     |                     |                     | 0.775**<br>(0.39)   |                     |                     |
| <b>Alternative Job search constraints (all dummies)</b> |                     |                     |                     |                     |                     |                     |                     |
| Household/family responsibilities                       |                     |                     |                     |                     |                     | 1.340***<br>(0.16)  | 1.248***<br>(0.19)  |
| Suitable jobs not available                             |                     |                     |                     |                     |                     | 0.251<br>(0.17)     | 0.195<br>(0.20)     |
| Lack of family support                                  |                     |                     |                     |                     |                     | 1.043***<br>(0.30)  | 1.076***<br>(0.35)  |
| Lack of skills                                          |                     |                     |                     |                     |                     | 0.544**<br>(0.26)   | 0.449*<br>(0.27)    |
| Not interested in working                               |                     |                     |                     |                     |                     | 0.620**<br>(0.26)   | 0.422<br>(0.33)     |
| Household/family responsibilities*female                |                     |                     |                     |                     |                     |                     | 1.123***<br>(0.42)  |
| Suitable jobs not available*female                      |                     |                     |                     |                     |                     |                     | 0.722<br>(0.45)     |
| Not interested in working*female                        |                     |                     |                     |                     |                     |                     | 1.269*<br>(0.69)    |
| Constant                                                | -0.859***<br>(0.15) | -1.031***<br>(0.18) | -1.152***<br>(0.23) | -1.296***<br>(0.20) | -1.344***<br>(0.25) | -1.313***<br>(0.21) | -1.384***<br>(0.26) |
| <b>Observations</b>                                     | <b>676</b>          | <b>671</b>          | <b>671</b>          | <b>459</b>          | <b>424</b>          | <b>461</b>          | <b>428</b>          |
| <b>R-square</b>                                         | <b>0.107</b>        | <b>0.1109</b>       | <b>0.1223</b>       | <b>0.3809</b>       | <b>0.3626</b>       | <b>0.3858</b>       | <b>0.3846</b>       |

Source: Authors' calculations based on HFPS- Round 6, Youth module, 2021. Notes: The dependent variable NEET is a dummy variable that takes the value of 1 if the youth is NEET, and 0 if employed. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All models were run with a probit model. To interpret the coefficients, marginal effects need to be calculated.



Appendix 3 – Regression Results with soft-skills **Table A3.1 - Regression Results for Unemployed considering socioemotional skills**

| Dependent variable:<br>UNEMPLOYED |                        |                        |                        |                       |                        |                        |                        |                        |                        |                         |                         |                        |                   |                        |                        |                         |                        |                        |
|-----------------------------------|------------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|------------------------|-------------------|------------------------|------------------------|-------------------------|------------------------|------------------------|
| Variables/ Models                 | Confidence             |                        |                        | Capacity for optimism |                        |                        | Task Management        |                        |                        | Goal regulation         |                         |                        | All skills        |                        |                        | SES'                    |                        |                        |
|                                   | 1                      | 2                      | 3                      | 1                     | 2                      | 3                      | 1                      | 2                      | 3                      | 1                       | 2                       | 3                      | 1                 | 2                      | 3                      | 1                       | 2                      | 3                      |
| Confidence                        | -<br>0.188**<br>(0.08) | -<br>0.169**<br>(0.08) | -0.157*<br>(0.09)      |                       |                        |                        |                        |                        |                        |                         |                         |                        | -0.051<br>(0.13)  | -0.016<br>(0.14)       | -0.016<br>(0.14)       |                         |                        |                        |
| Confidence*female                 |                        | -0.236<br>(0.23)       | -0.155<br>(0.23)       |                       |                        |                        |                        |                        |                        |                         |                         |                        |                   | -0.257<br>(0.36)       | -0.188<br>(0.36)       |                         |                        |                        |
| Capacity for optimism             |                        |                        |                        | -0.189*<br>(0.10)     | -0.185*<br>(0.10)      | -0.172*<br>(0.10)      |                        |                        |                        |                         |                         |                        | -0.036<br>(0.14)  | -0.062<br>(0.14)       | -0.053<br>(0.15)       |                         |                        |                        |
| Capacity*female                   |                        |                        |                        |                       | -0.251<br>(0.27)       | -0.106<br>(0.30)       |                        |                        |                        |                         |                         |                        |                   | -0.134<br>(0.42)       | 0.021<br>(0.46)        |                         |                        |                        |
| Task management                   |                        |                        |                        |                       |                        |                        | -<br>0.192**<br>(0.10) | -0.183*<br>(0.10)      | -0.171<br>(0.11)       |                         |                         |                        | 0.011<br>(0.15)   | 0.024<br>(0.16)        | 0.013<br>(0.16)        |                         |                        |                        |
| Task management*female            |                        |                        |                        |                       |                        |                        |                        | -0.117<br>(0.29)       | -0.002<br>(0.31)       |                         |                         |                        |                   | 0.116<br>(0.43)        | 0.199<br>(0.44)        |                         |                        |                        |
| Goal Regulation                   |                        |                        |                        |                       |                        |                        |                        |                        |                        | -<br>0.272***<br>(0.09) | -<br>0.267***<br>(0.10) | -<br>0.250**<br>(0.10) | -0.219<br>(0.14)  | -0.237<br>(0.15)       | -0.218<br>(0.15)       |                         |                        |                        |
| Goal Regulation*female            |                        |                        |                        |                       |                        |                        |                        |                        |                        |                         | -0.117<br>(0.24)        | -0.091<br>(0.27)       |                   | 0.099<br>(0.39)        | -0.074<br>(0.43)       |                         |                        |                        |
| SES (one construct)               |                        |                        |                        |                       |                        |                        |                        |                        |                        |                         |                         |                        |                   |                        |                        | -<br>0.296***<br>(0.11) | -<br>0.280**<br>(0.11) | -<br>0.263**<br>(0.12) |
| SES*female                        |                        |                        |                        |                       |                        |                        |                        |                        |                        |                         |                         |                        |                   |                        |                        |                         | -0.226<br>(0.29)       | -0.119<br>(0.32)       |
| Female                            | 0.474**<br>*           | 1.583*<br>(0.85)       | 1.464*<br>(0.85)       | 0.459**<br>*          | 1.648*<br>(0.96)       | 1.330<br>(1.03)        | 0.463**<br>*           | 1.199<br>(1.04)        | 1.001<br>(1.07)        | 0.471***<br>(0.15)      | 1.220<br>(0.91)         | 1.290<br>(0.97)        | 0.477**<br>*      | 1.394<br>(1.09)        | 1.138<br>(1.14)        | 0.478***<br>(0.15)      | 1.578<br>(1.05)        | 1.364<br>(1.09)        |
| Rural                             | -0.114<br>(0.15)       | 0.056<br>(0.16)        | 0.073<br>(0.16)        | -0.090<br>(0.15)      | 0.079<br>(0.16)        | 0.092<br>(0.16)        | -0.086<br>(0.15)       | 0.074<br>(0.16)        | 0.088<br>(0.16)        | -0.091<br>(0.15)        | 0.070<br>(0.16)         | 0.085<br>(0.16)        | -0.100<br>(0.15)  | 0.067<br>(0.16)        | 0.082<br>(0.16)        | -0.104<br>(0.15)        | 0.060<br>(0.16)        | 0.075<br>(0.16)        |
| Female * rural                    |                        | -<br>0.838**<br>(0.35) | -<br>0.849**<br>(0.37) |                       | -<br>0.816**<br>(0.34) | -<br>0.840**<br>(0.36) |                        | -<br>0.763**<br>(0.34) | -<br>0.791**<br>(0.36) |                         | -0.782**<br>(0.35)      | -<br>0.778**<br>(0.36) |                   | -<br>0.849**<br>(0.36) | -<br>0.855**<br>(0.39) |                         | -<br>0.781**<br>(0.35) | -<br>0.794**<br>(0.36) |
| Lack of wasta                     |                        |                        |                        |                       |                        |                        |                        |                        |                        |                         |                         |                        |                   |                        |                        |                         |                        |                        |
| Credit/financial constraints      | -0.278*<br>(0.15)      |                        | -0.341*<br>(0.18)      | -0.255*<br>(0.15)     |                        | -0.326*<br>(0.18)      | -0.255*<br>(0.15)      |                        | -0.334*<br>(0.18)      | -0.276*<br>(0.16)       |                         | -0.350*<br>(0.18)      | -0.281*<br>(0.16) |                        | -0.349*<br>(0.18)      | -0.277*<br>(0.15)       |                        | -0.346*<br>(0.18)      |
| Insufficient job opportunities    | -0.063<br>(0.15)       |                        | -0.026<br>(0.17)       | -0.070<br>(0.15)      |                        | -0.030<br>(0.17)       | -0.068<br>(0.15)       |                        | -0.019<br>(0.17)       | -0.037<br>(0.15)        |                         | 0.014<br>(0.18)        | -0.035<br>(0.15)  |                        | 0.012<br>(0.18)        | -0.044<br>(0.15)        |                        | -0.004<br>(0.17)       |
| Constant                          | -0.116<br>(0.15)       |                        | -0.044<br>(0.17)       | -0.113<br>(0.15)      |                        | -0.035<br>(0.17)       | -0.131<br>(0.15)       |                        | -0.056<br>(0.17)       | -0.107<br>(0.15)        |                         | -0.039<br>(0.17)       | -0.097<br>(0.15)  |                        | -0.028<br>(0.17)       | -0.095<br>(0.15)        |                        | -0.027<br>(0.17)       |
| Observations                      | 485                    | 488                    | 485                    | 485                   | 488                    | 485                    | 485                    | 488                    | 485                    | 485                     | 488                     | 485                    | 485               | 488                    | 485                    | 485                     | 488                    | 485                    |
| R-square                          | 0.0868                 | 0.0866                 | 0.101                  | 0.0837                | 0.084                  | 0.0983                 | 0.0839                 | 0.081                  | 0.0972                 | 0.091                   | 0.0897                  | 0.1048                 | 0.0916            | 0.0926                 | 0.1061                 | 0.0896                  | 0.089                  | 0.1031                 |

Source: Authors' calculations based on HFPS- Round 6, Youth module, 2021.

*Notes:* The dependent variable Unemployed is a dummy variable that takes the value of 1 if the youth is unemployed, and 0 if employed. Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . All models were run with a probit model. To interpret the coefficients, marginal effects need to be calculated. All regressions contain age and education variables, as well as interactions of constraints with being female not reported here. \*SES stands for Socio-Emotional Skills Scale.

**Table A3.2 - Regression Results for the Unemployed considering Core self-evaluation skills**

| Dependent variable:<br>UNEMPLOYED           |                   |                        |                        |                     |                  |                       |                       |                  |                       |                   |                        |                        |                   |                  |                   |                   |                        |                        |  |
|---------------------------------------------|-------------------|------------------------|------------------------|---------------------|------------------|-----------------------|-----------------------|------------------|-----------------------|-------------------|------------------------|------------------------|-------------------|------------------|-------------------|-------------------|------------------------|------------------------|--|
| Self-esteem                                 |                   |                        |                        | Emotional stability |                  |                       | General Self-efficacy |                  |                       |                   | Locus of control       |                        |                   | All skills       |                   |                   | CSES*                  |                        |  |
| Variables\Models                            | 1                 | 2                      | 3                      | 1                   | 2                | 3                     | 1                     | 2                | 3                     | 1                 | 2                      | 3                      | 1                 | 2                | 3                 | 1                 | 2                      | 3                      |  |
| Self-esteem                                 | -<br>0.391**<br>* | -<br>0.437**<br>*      | -<br>0.426**<br>*      |                     |                  |                       |                       |                  |                       |                   |                        |                        | -<br>0.302**      | -<br>0.320*<br>* | -<br>0.318*<br>*  |                   |                        |                        |  |
|                                             | (0.13)            | (0.13)                 | (0.14)                 |                     |                  |                       |                       |                  |                       |                   |                        |                        | (0.13)            | (0.15)           | (0.15)            |                   |                        |                        |  |
| Self-esteem*female                          |                   | 0.060<br>(0.34)        | 0.270<br>(0.36)        |                     |                  |                       |                       |                  |                       |                   |                        |                        |                   | -0.069<br>(0.36) | 0.151<br>(0.37)   |                   |                        |                        |  |
| Stability                                   |                   |                        |                        | 0.124<br>(0.11)     | -0.032<br>(0.12) | 0.009<br>(0.13)       |                       |                  |                       |                   |                        |                        | 0.215*<br>(0.12)  | 0.059<br>(0.13)  | 0.088<br>(0.14)   |                   |                        |                        |  |
| Stability*female                            |                   |                        |                        |                     | 0.412<br>(0.27)  | 0.454<br>(0.28)       |                       |                  |                       |                   |                        |                        |                   | 0.389<br>(0.27)  | 0.415<br>(0.29)   |                   |                        |                        |  |
| General Self-efficacy                       |                   |                        |                        |                     |                  |                       | -<br>0.322*<br>*      | -<br>0.362*<br>* | -<br>0.337*<br>*      |                   |                        |                        |                   | -0.223<br>(0.16) | -0.157<br>(0.18)  | -0.146<br>(0.18)  |                        |                        |  |
| Gral. Self-efficacy*female                  |                   |                        |                        |                     |                  |                       |                       | 0.103<br>(0.32)  | 0.156<br>(0.33)       |                   |                        |                        |                   | -0.149<br>(0.36) | -0.131<br>(0.38)  |                   |                        |                        |  |
| Locus of control                            |                   |                        |                        |                     |                  |                       |                       |                  |                       | -<br>0.358**<br>* | -<br>0.470**<br>*      | -<br>0.453**<br>*      |                   | -0.204<br>(0.15) | 0.314*<br>(0.17)  | -0.306*<br>(0.17) |                        |                        |  |
| Locus of control*female                     |                   |                        |                        |                     |                  |                       |                       |                  |                       |                   | 0.336<br>(0.32)        | 0.392<br>(0.33)        |                   | 0.350<br>(0.37)  | 0.339<br>(0.38)   |                   |                        |                        |  |
| CSES (one construct)                        |                   |                        |                        |                     |                  |                       |                       |                  |                       |                   |                        |                        |                   |                  |                   | -<br>0.493*<br>*  | -<br>0.703**<br>*      | -<br>0.661**<br>*      |  |
|                                             |                   |                        |                        |                     |                  |                       |                       |                  |                       |                   |                        |                        |                   |                  |                   | (0.20)            | (0.22)                 | (0.23)                 |  |
| CSES*female                                 |                   |                        |                        |                     |                  |                       |                       |                  |                       |                   |                        |                        |                   |                  |                   |                   | 0.615                  | 0.875*                 |  |
| Female                                      | 0.503**<br>*      | 0.689<br>(0.98)        | 0.349<br>(0.99)        | 0.463*<br>**        | 0.014<br>(0.63)  | 0.220<br>(0.67)       | 0.470*<br>**          | 0.510<br>(0.80)  | 0.631<br>(0.82)       | 0.456**<br>*      | 0.072<br>(0.79)        | 0.178<br>(0.84)        | 0.547**<br>*      | -0.163<br>(1.23) | -0.549<br>(1.25)  | 0.458*<br>**      | -0.629<br>(1.17)       | -0.900<br>(1.18)       |  |
| Rural                                       | -0.112<br>(0.15)  | 0.053<br>(0.16)        | 0.069<br>(0.16)        | -0.069<br>(0.15)    | 0.090<br>(0.16)  | 0.105<br>(0.16)       | -0.126<br>(0.15)      | 0.041<br>(0.16)  | 0.051<br>(0.16)       | -0.084<br>(0.15)  | 0.087<br>(0.16)        | 0.098<br>(0.16)        | -0.126<br>(0.15)  | 0.040<br>(0.16)  | 0.053<br>(0.17)   | -0.117<br>(0.15)  | 0.048<br>(0.16)        | 0.058<br>(0.16)        |  |
| Female * rural                              |                   | -<br>0.801**<br>(0.34) | -<br>0.808**<br>(0.36) |                     | -<br>0.800*<br>* | -<br>0.797*<br>*      |                       | -<br>0.807*<br>* | -<br>0.815*<br>*      |                   | -<br>0.828**<br>(0.34) | -<br>0.839**<br>(0.36) |                   | -<br>0.781*<br>* | -<br>0.761*<br>*  |                   | -<br>0.793**<br>(0.34) | -<br>0.794**<br>(0.35) |  |
| Aspiration constraints (individual dummies) |                   |                        |                        |                     |                  |                       |                       |                  |                       |                   |                        |                        |                   |                  |                   |                   |                        |                        |  |
| Lack of wasta                               |                   |                        |                        |                     |                  |                       |                       |                  |                       |                   |                        |                        |                   |                  |                   |                   |                        |                        |  |
|                                             | -0.263*<br>(0.15) |                        | -0.358*<br>(0.18)      | -0.234<br>(0.15)    |                  | -<br>0.309*<br>(0.18) | -0.248<br>(0.16)      |                  | -<br>0.319*<br>(0.18) | -0.222<br>(0.16)  |                        | -0.310*<br>(0.19)      | -0.265*<br>(0.16) |                  | -0.351*<br>(0.19) | -0.241<br>(0.16)  |                        | -0.329*<br>(0.19)      |  |
| Credit/financial constraints                | -0.091            |                        | -0.019                 | -0.127              |                  | -0.059                | -0.068                |                  | -0.013                | -0.129            |                        | -0.066                 | -0.111            |                  | -0.031            | -0.076            |                        | 0.005                  |  |

|                                |               |              |               |              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
|--------------------------------|---------------|--------------|---------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Insufficient job opportunities | (0.15)        |              | (0.18)        | (0.15)       |               | (0.17)        | (0.15)        |               | (0.17)        | (0.15)        |               | (0.18)        | (0.15)        |               | (0.18)        | (0.15)        |               | (0.18)        |
|                                | -0.086        |              | -0.006        | -0.179       |               | -0.079        | -0.140        |               | -0.058        | -0.132        |               | -0.040        | -0.090        |               | 0.000         | -0.107        |               | -0.009        |
| Constant                       | (0.15)        |              | (0.17)        | (0.15)       |               | (0.17)        | (0.15)        |               | (0.17)        | (0.15)        |               | (0.17)        | (0.15)        |               | (0.18)        | (0.15)        |               | (0.17)        |
|                                |               |              | 0.251         |              |               | 0.215         |               |               | 0.194         |               |               | 0.209         |               |               | 0.232         |               |               | 0.225         |
| <b>Observations</b>            | <b>486</b>    | <b>489</b>   | <b>486</b>    | <b>486</b>   | <b>489</b>    | <b>486</b>    | <b>486</b>    | <b>489</b>    | <b>486</b>    | <b>486</b>    | <b>489</b>    | <b>486</b>    | <b>486</b>    | <b>489</b>    | <b>486</b>    | <b>486</b>    | <b>489</b>    | <b>486</b>    |
| <b>R-square</b>                | <b>0.0938</b> | <b>0.094</b> | <b>0.1089</b> | <b>0.080</b> | <b>0.0784</b> | <b>0.0988</b> | <b>0.0877</b> | <b>0.0851</b> | <b>0.1014</b> | <b>0.0889</b> | <b>0.0887</b> | <b>0.1058</b> | <b>0.1065</b> | <b>0.1092</b> | <b>0.1247</b> | <b>0.0884</b> | <b>0.0919</b> | <b>0.1079</b> |

Source: Authors' calculations based on HFPS- Round 6, Youth module, 2021.

Notes: The dependent variable Unemployed is a dummy variable that takes the value of 1 if the youth is unemployed, and 0 if employed. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All models were run with a probit model. To interpret the coefficients, marginal effects need to be calculated. All regressions contain age and education variables, as well as interactions of constraints with being female not reported here. \*CSES stands for Core Self-Evaluation Scale.

**Table A3.3 - Regression Results for NEET considering socioemotional skills**

| Dependent variable: NEET                 |                    |                    |                    | Confidence         |                    |                    | Capacity for optimism |                    |                    | Task management    |                    |                    | Goal Regulation    |                    |                    | All skills         |                    |                   | SES' |  |  |
|------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|------|--|--|
| Variables                                | Model 1            | Model 2            | Model 3            | Model 1            | Model 2            | Model 3            | Model 1               | Model 2            | Model 3            | Model 1            | Model 2            | Model 3            | Model 1            | Model 2            | Model 3            | Model 1            | Model 2            | Model 3           |      |  |  |
| Confidence                               | 0.153<br>(0.14)    | 0.005<br>(0.07)    | 0.119<br>(0.14)    |                    |                    |                    |                       |                    |                    |                    |                    |                    | 0.257<br>(0.21)    | -0.084<br>(0.11)   | 0.203<br>(0.21)    |                    |                    |                   |      |  |  |
| Confidence*female                        | -0.359**<br>(0.16) | -0.173<br>(0.11)   | -0.289*<br>(0.16)  |                    |                    |                    |                       |                    |                    |                    |                    |                    | -0.142<br>(0.25)   | 0.008<br>(0.17)    | -0.118<br>(0.25)   |                    |                    |                   |      |  |  |
| Capacity for optimism                    |                    |                    |                    | 0.083<br>(0.12)    | 0.085<br>(0.08)    | 0.061<br>(0.12)    |                       |                    |                    |                    |                    |                    | 0.003<br>(0.15)    | 0.099<br>(0.12)    | 0.004<br>(0.16)    |                    |                    |                   |      |  |  |
|                                          |                    |                    |                    | -<br>(0.17)        |                    |                    |                       |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                   |      |  |  |
| Capacity*female                          |                    |                    |                    | 0.452***<br>(0.17) | -0.209<br>(0.14)   | -0.338**<br>(0.17) |                       |                    |                    |                    |                    |                    | -0.202<br>(0.23)   | 0.000<br>(0.21)    | -0.116<br>(0.23)   |                    |                    |                   |      |  |  |
| Task management                          |                    |                    |                    |                    |                    |                    | 0.055<br>(0.13)       | 0.100<br>(0.09)    | 0.035<br>(0.13)    |                    |                    |                    | -0.012<br>(0.21)   | 0.149<br>(0.14)    | -0.017<br>(0.21)   |                    |                    |                   |      |  |  |
|                                          |                    |                    |                    |                    |                    |                    | -<br>(0.17)           |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                   |      |  |  |
| Task management*female                   |                    |                    |                    |                    |                    |                    | 0.442***<br>(0.17)    | -0.331**<br>(0.13) | -0.362**<br>(0.17) |                    |                    |                    | -0.236<br>(0.26)   | -0.300<br>(0.20)   | -0.197<br>(0.27)   |                    |                    |                   |      |  |  |
| Goal Regulation                          |                    |                    |                    |                    |                    |                    |                       |                    |                    | 0.028<br>(0.14)    | 0.012<br>(0.09)    | 0.016<br>(0.14)    | -0.161<br>(0.21)   | -0.075<br>(0.13)   | -0.127<br>(0.22)   |                    |                    |                   |      |  |  |
| Goal Regulation*female                   |                    |                    |                    |                    |                    |                    |                       |                    |                    | -0.409**<br>(0.17) | -0.230*<br>(0.13)  | -0.343*<br>(0.18)  | -0.027<br>(0.26)   | -0.041<br>(0.20)   | -0.057<br>(0.27)   |                    |                    |                   |      |  |  |
| SEB (one construct)                      |                    |                    |                    |                    |                    |                    |                       |                    |                    |                    |                    |                    |                    |                    |                    | 0.110<br>(0.15)    | 0.063<br>(0.10)    | 0.082<br>(0.15)   |      |  |  |
|                                          |                    |                    |                    |                    |                    |                    |                       |                    |                    |                    |                    |                    |                    |                    |                    | -<br>(0.20)        |                    | -<br>(0.20)       |      |  |  |
| SEB*female                               |                    |                    |                    |                    |                    |                    |                       |                    |                    |                    |                    |                    |                    |                    |                    | 0.581***<br>(0.20) | -0.325**<br>(0.15) | 0.475**<br>(0.20) |      |  |  |
|                                          |                    |                    |                    |                    |                    |                    |                       |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    | 1.908**<br>*      |      |  |  |
| Female                                   | 1.531**<br>(0.64)  | 1.169***<br>(0.42) | 1.339**<br>(0.62)  | 1.742***<br>(0.61) | 1.262***<br>(0.49) | 1.441**<br>(0.61)  | 1.729***<br>(0.60)    | 1.664***<br>(0.49) | 1.536**<br>(0.61)  | 1.640***<br>(0.63) | 1.352***<br>(0.48) | 1.486**<br>(0.64)  | 2.265***<br>(0.74) | 1.665***<br>(0.55) | 1.947***<br>(0.73) | 2.197***<br>(0.71) | 1.647***<br>(0.53) | -<br>(0.71)       |      |  |  |
|                                          |                    |                    |                    |                    |                    |                    |                       |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    | -                 |      |  |  |
| Rural                                    | -0.284*<br>(0.16)  | -0.116<br>(0.12)   | -0.326**<br>(0.16) | -0.273*<br>(0.16)  | -0.113<br>(0.12)   | -0.319**<br>(0.16) | -0.273*<br>(0.16)     | -0.113<br>(0.12)   | -0.320**<br>(0.16) | -0.275*<br>(0.16)  | -0.116<br>(0.12)   | -0.321**<br>(0.16) | -0.287*<br>(0.16)  | -0.116<br>(0.12)   | -0.329**<br>(0.16) | -0.276*<br>(0.16)  | -0.114<br>(0.12)   | 0.321**<br>(0.16) |      |  |  |
| Female * rural                           | 0.459**<br>(0.23)  | 0.189<br>(0.18)    | 0.511**<br>(0.23)  | 0.453**<br>(0.23)  | 0.181<br>(0.18)    | 0.509**<br>(0.23)  | 0.450**<br>(0.23)     | 0.191<br>(0.18)    | 0.508**<br>(0.23)  | 0.472**<br>(0.23)  | 0.204<br>(0.18)    | 0.529**<br>(0.23)  | 0.479**<br>(0.23)  | 0.203<br>(0.18)    | 0.533**<br>(0.23)  | 0.463**<br>(0.23)  | 0.194<br>(0.18)    | 0.519**<br>(0.23) |      |  |  |
| Job search constraints (all dummies)     |                    |                    |                    |                    |                    |                    |                       |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                   |      |  |  |
| Lack of skills                           | 0.305*<br>(0.16)   |                    |                    | 0.294*<br>(0.16)   |                    |                    | 0.287*<br>(0.16)      |                    |                    | 0.288*<br>(0.16)   |                    |                    | 0.311*<br>(0.16)   |                    |                    | 0.293*<br>(0.16)   |                    |                   |      |  |  |
| Lack of family support                   | 1.491***<br>(0.20) |                    |                    | 1.503***<br>(0.20) |                    |                    | 1.500***<br>(0.20)    |                    |                    | 1.504***<br>(0.20) |                    |                    | 1.499***<br>(0.20) |                    |                    | 1.496***<br>(0.20) |                    |                   |      |  |  |
| Household/family responsibilities        | 0.677***<br>(0.13) |                    |                    | 0.675***<br>(0.14) |                    |                    | 0.682***<br>(0.14)    |                    |                    | 0.690***<br>(0.14) |                    |                    | 0.710***<br>(0.15) |                    |                    | 0.671***<br>(0.14) |                    |                   |      |  |  |
| Lack of skills*female                    | -0.441<br>(0.29)   |                    |                    | -0.414<br>(0.29)   |                    |                    | -0.341<br>(0.29)      |                    |                    | -0.388<br>(0.29)   |                    |                    | -0.367<br>(0.29)   |                    |                    | -0.380<br>(0.29)   |                    |                   |      |  |  |
|                                          | -<br>(0.30)        |                    |                    |                    |                    |                    |                       |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                   |      |  |  |
| Lack of family support*female            | 0.808***<br>(0.30) |                    |                    | -0.750**<br>(0.30) |                    |                    | -0.749**<br>(0.30)    |                    |                    | -0.768**<br>(0.30) |                    |                    | -0.706**<br>(0.30) |                    |                    | -0.748**<br>(0.30) |                    |                   |      |  |  |
| Household/family responsibilities*female | 0.314              |                    |                    | 0.377*             |                    |                    | 0.330                 |                    |                    | 0.342*             |                    |                    | 0.347*             |                    |                    | 0.364*             |                    |                   |      |  |  |

|                                                     |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
|-----------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                                                     | (0.20)       |              |              | (0.20)       |              |              | (0.20)       |              |              | (0.20)       |              |              | (0.21)       |              |              | (0.20)       |              |              |
| <b>Aspiration constraints (individual dummies)</b>  |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
| Lack of wasta                                       |              | 0.188        |              |              | 0.190        |              |              | 0.191        |              |              | 0.188        |              |              | 0.177        |              |              | 0.192        |              |
|                                                     |              | (0.14)       |              |              | (0.14)       |              |              | (0.14)       |              |              | (0.14)       |              |              | (0.14)       |              |              | (0.14)       |              |
| Credit/financial constraints                        |              | -0.114       |              |              | -0.125       |              |              | -0.129       |              |              | -0.116       |              |              | -0.123       |              |              | -0.123       |              |
|                                                     |              | (0.14)       |              |              | (0.14)       |              |              | (0.14)       |              |              | (0.14)       |              |              | (0.14)       |              |              | (0.14)       |              |
| Insufficient job opportunities                      |              | 0.288**      |              |              | 0.273**      |              |              | 0.268**      |              |              | 0.287**      |              |              | 0.264*       |              |              | 0.277**      |              |
|                                                     |              | (0.13)       |              |              | (0.14)       |              |              | (0.14)       |              |              | (0.13)       |              |              | (0.14)       |              |              | (0.14)       |              |
| Lack of wasta*female                                |              | -0.188       |              |              | -0.157       |              |              | -0.150       |              |              | -0.170       |              |              | -0.163       |              |              | -0.174       |              |
|                                                     |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |
| Credit/financial constraints*female                 |              | -0.157       |              |              | -0.154       |              |              | -0.150       |              |              | -0.180       |              |              | -0.164       |              |              | -0.148       |              |
|                                                     |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |
| Insufficient job opportunities*female               |              | -0.032       |              |              | -0.036       |              |              | -0.012       |              |              | -0.015       |              |              | 0.008        |              |              | -0.004       |              |
|                                                     |              | (0.21)       |              |              | (0.22)       |              |              | (0.22)       |              |              | (0.22)       |              |              | (0.22)       |              |              | (0.22)       |              |
| <b>Other labor market constraints (all dummies)</b> |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |              |
| Household/family responsibilities                   |              |              | 0.701***     |              |              | 0.696***     |              |              | 0.702***     |              |              | 0.707***     |              |              | 0.728***     |              |              | 0.695**<br>* |
|                                                     |              |              | (0.14)       |              |              | (0.15)       |              |              | (0.15)       |              |              | (0.15)       |              |              | (0.15)       |              |              | (0.15)       |
| Suitable jobs not available                         |              |              | 0.136        |              |              | 0.152        |              |              | 0.154        |              |              | 0.158        |              |              | 0.137        |              |              | 0.147        |
|                                                     |              |              | (0.14)       |              |              | (0.14)       |              |              | (0.15)       |              |              | (0.14)       |              |              | (0.15)       |              |              | (0.14)       |
| Lack of family support                              |              |              | 1.272***     |              |              | 1.278***     |              |              | 1.280***     |              |              | 1.282***     |              |              | 1.281***     |              |              | 1.275**<br>* |
|                                                     |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |
| Lack of skills                                      |              |              | 0.205        |              |              | 0.196        |              |              | 0.191        |              |              | 0.192        |              |              | 0.212        |              |              | 0.195        |
|                                                     |              |              | (0.16)       |              |              | (0.16)       |              |              | (0.16)       |              |              | (0.16)       |              |              | (0.17)       |              |              | (0.16)       |
| Not interested in working                           |              |              | 0.736***     |              |              | 0.740***     |              |              | 0.736***     |              |              | 0.737***     |              |              | 0.726***     |              |              | 0.739**<br>* |
|                                                     |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |
| Household/family responsibilities*female            |              |              | 0.232        |              |              | 0.274        |              |              | 0.241        |              |              | 0.265        |              |              | 0.249        |              |              | 0.269        |
|                                                     |              |              | (0.21)       |              |              | (0.21)       |              |              | (0.21)       |              |              | (0.21)       |              |              | (0.22)       |              |              | (0.21)       |
| Suitable jobs not available*female                  |              |              | -0.215       |              |              | -0.244       |              |              | -0.213       |              |              | -0.237       |              |              | -0.200       |              |              | -0.190       |
|                                                     |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |              |              | (0.23)       |
| Lack of family support*female                       |              |              | -0.772**     |              |              | -0.717**     |              |              | -0.703**     |              |              | -0.735**     |              |              | -0.680**     |              |              | 0.716**      |
|                                                     |              |              | (0.32)       |              |              | (0.33)       |              |              | (0.33)       |              |              | (0.32)       |              |              | (0.33)       |              |              | (0.32)       |
| Lack of skills*female                               |              |              | -0.393       |              |              | -0.372       |              |              | -0.324       |              |              | -0.351       |              |              | -0.341       |              |              | -0.353       |
|                                                     |              |              | (0.29)       |              |              | (0.29)       |              |              | (0.29)       |              |              | (0.29)       |              |              | (0.30)       |              |              | (0.29)       |
| Not interested in working*female                    |              |              | 0.182        |              |              | 0.145        |              |              | 0.158        |              |              | 0.162        |              |              | 0.153        |              |              | 0.156        |
|                                                     |              |              | (0.31)       |              |              | (0.31)       |              |              | (0.32)       |              |              | (0.32)       |              |              | (0.32)       |              |              | (0.32)       |
| Constant                                            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | -            | 2.315**<br>* |
|                                                     | 2.485***     | 1.869***     | 2.450***     | 2.223***     | 2.124***     | 2.242***     | 2.135***     | 2.177***     | 2.159***     | 2.046***     | 1.894***     | 2.096***     | 2.266***     | 2.118***     | 2.260***     | 2.325***     | 2.060***     |              |
|                                                     | (0.55)       | (0.29)       | (0.54)       | (0.46)       | (0.31)       | (0.47)       | (0.47)       | (0.33)       | (0.47)       | (0.51)       | (0.32)       | (0.52)       | (0.58)       | (0.36)       | (0.58)       | (0.56)       | (0.35)       | (0.56)       |
| <b>Observations</b>                                 | <b>1309</b>  | <b>1611</b>  | <b>1316</b>  | <b>1309</b>  | <b>1611</b>  | <b>1316</b>  | <b>1309</b>  | <b>1611</b>  | <b>1316</b>  | <b>1309</b>  | <b>1611</b>  | <b>1316</b>  | <b>1309</b>  | <b>1611</b>  | <b>1316</b>  | <b>1309</b>  | <b>1611</b>  | <b>1316</b>  |
| <b>R-square</b>                                     | <b>0.288</b> | <b>0.117</b> | <b>0.304</b> | <b>0.290</b> | <b>0.117</b> | <b>0.305</b> | <b>0.292</b> | <b>0.119</b> | <b>0.307</b> | <b>0.291</b> | <b>0.118</b> | <b>0.306</b> | <b>0.296</b> | <b>0.121</b> | <b>0.310</b> | <b>0.292</b> | <b>0.118</b> | <b>0.307</b> |

Source: Authors' calculations based on HFPS- Round 6, Youth module, 2021.

*Notes:* The dependent variable NEET is a dummy variable that takes the value of 1 if the youth is NEET, and 0 if employed. Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . All models were run with a probit model. To interpret the coefficients, marginal effects need to be calculated. All regressions contain age and education variables not reported here. \*SES stands for Socio-Emotional Skills Scale.

**Table A3.4 - Regression Results for the NEET considering Core self-evaluation skills**

| Dependent variable: NEET                    |                             |                             |                             |                        |                   |                   |                        |                             |                   |                        |                   |                   |                        |                             |                             |                        |                             |                   |
|---------------------------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------|-------------------|-------------------|------------------------|-----------------------------|-------------------|------------------------|-------------------|-------------------|------------------------|-----------------------------|-----------------------------|------------------------|-----------------------------|-------------------|
| Variables                                   | Self-esteem                 |                             |                             | Emotional stability    |                   |                   | General self-efficacy  |                             |                   | Locus of control       |                   |                   | All skills             |                             |                             | CSES <sup>1</sup>      |                             |                   |
|                                             | Model 1                     | Model 2                     | Model 3                     | Model 1                | Model 2           | Model 3           | Model 1                | Model 2                     | Model 3           | Model 1                | Model 2           | Model 3           | Model 1                | Model 2                     | Model 3                     | Model 1                | Model 2                     | Model 3           |
| Self-esteem                                 | -<br>0.312**<br>(0.13)      | -<br>0.450**<br>*<br>(0.10) | -<br>0.272**<br>(0.14)      |                        |                   |                   |                        |                             |                   |                        |                   |                   | -0.225<br>(0.15)       | -<br>0.405**<br>*<br>(0.11) | -0.215<br>(0.15)            |                        |                             |                   |
| Self-esteem*female                          | -<br>0.490**<br>*<br>(0.19) | -<br>-0.176<br>(0.16)       | -<br>0.512**<br>*<br>(0.19) |                        |                   |                   |                        |                             |                   |                        |                   |                   | -<br>0.513**<br>(0.22) | -0.208<br>(0.18)            | -<br>0.479**<br>(0.22)      |                        |                             |                   |
| Stability                                   |                             |                             |                             | 0.216**<br>(0.11)      | -0.045<br>(0.07)  | 0.250**<br>(0.11) |                        |                             |                   |                        |                   |                   | 0.291**<br>(0.12)      | -0.024<br>(0.08)            | 0.308**<br>(0.12)           |                        |                             |                   |
| Stability*female                            |                             |                             |                             | 0.396**<br>(0.16)      | 0.253**<br>(0.11) | 0.382**<br>(0.16) |                        |                             |                   |                        |                   |                   | 0.398**<br>(0.18)      | 0.275**<br>(0.13)           | 0.407**<br>(0.18)           |                        |                             |                   |
| General Self-efficacy                       |                             |                             |                             |                        |                   |                   | -0.307*<br>(0.16)      | -<br>0.422**<br>*<br>(0.11) | -0.222<br>(0.17)  |                        |                   |                   | 0.607**<br>*<br>(0.19) | -<br>0.356**<br>*<br>(0.14) | -<br>0.542**<br>*<br>(0.19) |                        |                             |                   |
| Gral. Self-efficacy*female                  |                             |                             |                             |                        |                   |                   | -0.104<br>(0.23)       | 0.113<br>(0.18)             | -0.125<br>(0.24)  |                        |                   |                   | 0.283<br>(0.29)        | 0.222<br>(0.23)             | 0.278<br>(0.30)             |                        |                             |                   |
| Locus of control                            |                             |                             |                             |                        |                   |                   |                        |                             |                   | 0.123<br>(0.13)        | 0.017<br>(0.10)   | 0.179<br>(0.14)   | 0.329*<br>(0.17)       | 0.314**<br>*<br>(0.12)      | 0.317*<br>(0.17)            |                        |                             |                   |
| Locus of control*female                     |                             |                             |                             |                        |                   |                   |                        |                             |                   | -0.168<br>(0.20)       | -0.153<br>(0.17)  | -0.262<br>(0.20)  | -0.255<br>(0.25)       | -0.260<br>(0.20)            | -0.362<br>(0.26)            |                        |                             |                   |
| CSES (one construct)                        |                             |                             |                             |                        |                   |                   |                        |                             |                   |                        |                   |                   |                        |                             |                             | 0.011<br>(0.20)        | -<br>0.434**<br>*<br>(0.15) | 0.121<br>(0.21)   |
| CSES*female                                 |                             |                             |                             |                        |                   |                   |                        |                             |                   |                        |                   |                   |                        |                             |                             | -0.128<br>(0.28)       | 0.108<br>(0.23)             | -0.189<br>(0.29)  |
| Female                                      | 1.501**<br>*<br>(0.53)      | 1.007**<br>(0.44)           | 1.613**<br>*<br>(0.54)      | -0.645<br>(0.50)       | 0.006<br>(0.36)   | -0.553<br>(0.51)  | 0.537<br>(0.58)        | 0.300<br>(0.47)             | 0.656<br>(0.61)   | 0.722<br>(0.54)        | 0.972**<br>(0.47) | 1.002*<br>(0.55)  | 0.518<br>(0.73)        | 0.518<br>(0.60)             | 0.716<br>(0.75)             | 0.629<br>(0.75)        | 0.310<br>(0.60)             | 0.845<br>(0.77)   |
| Rural                                       | -0.261<br>(0.16)            | -0.121<br>(0.12)            | -0.307*<br>(0.16)           | -0.282*<br>(0.16)      | -0.117<br>(0.12)  | 0.329**<br>(0.16) | -0.267<br>(0.16)       | -0.139<br>(0.12)            | -0.315*<br>(0.16) | -0.282*<br>(0.16)      | -0.117<br>(0.12)  | 0.333**<br>(0.16) | -0.284*<br>(0.17)      | -0.148<br>(0.12)            | 0.338**<br>(0.17)           | -0.274*<br>(0.16)      | -0.122<br>(0.12)            | 0.325**<br>(0.16) |
| Female * rural                              | 0.451**<br>(0.23)           | 0.200<br>(0.18)             | 0.522**<br>(0.23)           | 0.466**<br>(0.23)      | 0.195<br>(0.18)   | 0.520**<br>(0.23) | 0.440*<br>(0.23)       | 0.206<br>(0.18)             | 0.498**<br>(0.23) | 0.449**<br>(0.23)      | 0.181<br>(0.18)   | 0.509**<br>(0.23) | 0.502**<br>(0.24)      | 0.245<br>(0.19)             | 0.576**<br>(0.24)           | 0.442**<br>(0.23)      | 0.184<br>(0.18)             | 0.501**<br>(0.23) |
| <b>Job search constraints (all dummies)</b> |                             |                             |                             |                        |                   |                   |                        |                             |                   |                        |                   |                   |                        |                             |                             |                        |                             |                   |
| Lack of skills                              | 0.270*<br>(0.16)            |                             |                             | 0.342**<br>(0.17)      |                   |                   | 0.253<br>(0.16)        |                             |                   | 0.305*<br>(0.16)       |                   |                   | 0.320*<br>(0.17)       |                             |                             | 0.289*<br>(0.16)       |                             |                   |
| Lack of family support                      | 1.435**<br>*<br>(0.21)      |                             |                             | 1.531**<br>*<br>(0.21) |                   |                   | 1.454**<br>*<br>(0.20) |                             |                   | 1.504**<br>*<br>(0.21) |                   |                   | 1.367**<br>*<br>(0.22) |                             |                             | 1.509**<br>*<br>(0.20) |                             |                   |

|                                                         |                   |         |              |              |         |              |                   |        |              |                   |         |              |              |         |              |                   |        |              |
|---------------------------------------------------------|-------------------|---------|--------------|--------------|---------|--------------|-------------------|--------|--------------|-------------------|---------|--------------|--------------|---------|--------------|-------------------|--------|--------------|
| Household/family responsibilities                       | 0.767**<br>*      |         |              | 0.853**<br>* |         |              | 0.690**<br>*      |        |              | 0.710**<br>*      |         |              | 0.970**<br>* |         |              | 0.700**<br>*      |        |              |
|                                                         | (0.14)            |         |              | (0.16)       |         |              | (0.13)            |        |              | (0.13)            |         |              | (0.16)       |         |              | (0.14)            |        |              |
| Lack of skills*female                                   | -0.328            |         |              | -0.207       |         |              | -0.401            |        |              | -0.458            |         |              | -0.071       |         |              | -0.452            |        |              |
|                                                         | (0.29)            |         |              | (0.31)       |         |              | (0.28)            |        |              | (0.29)            |         |              | (0.31)       |         |              | (0.29)            |        |              |
| Lack of family support*female                           | -<br>0.815**<br>* |         |              | -<br>0.685** |         |              | -<br>0.792**<br>* |        |              | -<br>0.834**<br>* |         |              | -0.556*      |         |              | -<br>0.850**<br>* |        |              |
|                                                         | (0.30)            |         |              | (0.32)       |         |              | (0.30)            |        |              | (0.30)            |         |              | (0.33)       |         |              | (0.30)            |        |              |
| Household/family responsibilities*female                | 0.324             |         |              | 0.357        |         |              | 0.284             |        |              | 0.273             |         |              | 0.352        |         |              | 0.275             |        |              |
|                                                         | (0.21)            |         |              | (0.22)       |         |              | (0.20)            |        |              | (0.20)            |         |              | (0.23)       |         |              | (0.20)            |        |              |
| <b>Aspiration constraints (individual dummies)</b>      |                   |         |              |              |         |              |                   |        |              |                   |         |              |              |         |              |                   |        |              |
| Lack of wasta                                           |                   | 0.122   |              |              | 0.176   |              |                   | 0.116  |              |                   | 0.191   |              |              | 0.124   |              |                   | 0.106  |              |
|                                                         |                   | (0.13)  |              |              | (0.14)  |              |                   | (0.14) |              |                   | (0.14)  |              |              | (0.14)  |              |                   | (0.14) |              |
| Credit/financial constraints                            |                   | -0.067  |              |              | -0.113  |              |                   | -0.081 |              |                   | -0.115  |              |              | -0.041  |              |                   | -0.092 |              |
|                                                         |                   | (0.14)  |              |              | (0.14)  |              |                   | (0.14) |              |                   | (0.14)  |              |              | (0.14)  |              |                   | (0.14) |              |
| Insufficient job opportunities                          |                   | 0.325** |              |              | 0.275** |              |                   | 0.232* |              |                   | 0.291** |              |              | 0.297** |              |                   | 0.238* |              |
|                                                         |                   | (0.13)  |              |              | (0.13)  |              |                   | (0.13) |              |                   | (0.13)  |              |              | (0.13)  |              |                   | (0.13) |              |
| Lack of wasta*female                                    |                   | -0.166  |              |              | -0.110  |              |                   | -0.124 |              |                   | -0.174  |              |              | -0.140  |              |                   | -0.116 |              |
|                                                         |                   | (0.23)  |              |              | (0.24)  |              |                   | (0.23) |              |                   | (0.23)  |              |              | (0.23)  |              |                   | (0.23) |              |
| Credit/financial constraints*female                     |                   | -0.170  |              |              | -0.184  |              |                   | -0.203 |              |                   | -0.181  |              |              | -0.195  |              |                   | -0.194 |              |
|                                                         |                   | (0.23)  |              |              | (0.23)  |              |                   | (0.23) |              |                   | (0.23)  |              |              | (0.24)  |              |                   | (0.23) |              |
| Insufficient job opportunities*female                   |                   | 0.006   |              |              | -0.024  |              |                   | -0.028 |              |                   | -0.084  |              |              | 0.074   |              |                   | -0.030 |              |
|                                                         |                   | (0.22)  |              |              | (0.22)  |              |                   | (0.21) |              |                   | (0.22)  |              |              | (0.22)  |              |                   | (0.21) |              |
| <b>Alternative Job search constraints (all dummies)</b> |                   |         |              |              |         |              |                   |        |              |                   |         |              |              |         |              |                   |        |              |
| Household/family responsibilities                       |                   |         | 0.764**<br>* |              |         | 0.896**<br>* |                   |        | 0.704**<br>* |                   |         | 0.733**<br>* |              |         | 1.000**<br>* |                   |        | 0.733**<br>* |
|                                                         |                   |         | (0.15)       |              |         | (0.17)       |                   |        | (0.14)       |                   |         | (0.14)       |              |         | (0.17)       |                   |        | (0.15)       |
| Suitable jobs not available                             |                   |         | 0.197        |              |         | 0.155        |                   |        | 0.167        |                   |         | 0.152        |              |         | 0.177        |                   |        | 0.153        |
|                                                         |                   |         | (0.15)       |              |         | (0.15)       |                   |        | (0.15)       |                   |         | (0.15)       |              |         | (0.15)       |                   |        | (0.15)       |
| Lack of family support                                  |                   |         | 1.248**<br>* |              |         | 1.301**<br>* |                   |        | 1.267**<br>* |                   |         | 1.277**<br>* |              |         | 1.198**<br>* |                   |        | 1.295**<br>* |
|                                                         |                   |         | (0.23)       |              |         | (0.23)       |                   |        | (0.23)       |                   |         | (0.23)       |              |         | (0.24)       |                   |        | (0.23)       |
| Lack of skills                                          |                   |         | 0.173        |              |         | 0.247        |                   |        | 0.169        |                   |         | 0.209        |              |         | 0.211        |                   |        | 0.207        |
|                                                         |                   |         | (0.16)       |              |         | (0.17)       |                   |        | (0.16)       |                   |         | (0.16)       |              |         | (0.17)       |                   |        | (0.16)       |
| Not interested in working                               |                   |         | 0.657**<br>* |              |         | 0.778**<br>* |                   |        | 0.668**<br>* |                   |         | 0.759**<br>* |              |         | 0.649**<br>* |                   |        | 0.754**<br>* |
|                                                         |                   |         | (0.23)       |              |         | (0.24)       |                   |        | (0.23)       |                   |         | (0.24)       |              |         | (0.23)       |                   |        | (0.24)       |
| Household/family responsibilities*female                |                   |         | 0.285        |              |         | 0.285        |                   |        | 0.216        |                   |         | 0.197        |              |         | 0.308        |                   |        | 0.191        |
|                                                         |                   |         | (0.21)       |              |         | (0.23)       |                   |        | (0.21)       |                   |         | (0.21)       |              |         | (0.23)       |                   |        | (0.21)       |
| Suitable jobs not available*female                      |                   |         | -0.089       |              |         | -0.349       |                   |        | -0.257       |                   |         | -0.282       |              |         | -0.100       |                   |        | -0.284       |
|                                                         |                   |         | (0.23)       |              |         | (0.23)       |                   |        | (0.23)       |                   |         | (0.22)       |              |         | (0.23)       |                   |        | (0.23)       |
| Lack of family support*female                           |                   |         | -<br>0.788** |              |         | -0.649*      |                   |        | -<br>0.757** |                   |         | -<br>0.779** |              |         | -0.562       |                   |        | -<br>0.801** |
|                                                         |                   |         | (0.32)       |              |         | (0.34)       |                   |        | (0.32)       |                   |         | (0.33)       |              |         | (0.34)       |                   |        | (0.33)       |

|                                  |                   |              |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |              |                   |                   |              |                   |
|----------------------------------|-------------------|--------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------|-------------------|-------------------|--------------|-------------------|
| Lack of skills*female            |                   |              | -0.405            |                   |                   | -0.128            |                   |                   | -0.385            |                   |                   | -0.408            |                   |              | -0.137            |                   |              | -0.410            |
|                                  |                   |              | (0.29)            |                   |                   | (0.31)            |                   |                   | (0.29)            |                   |                   | (0.29)            |                   |              | (0.31)            |                   |              | (0.30)            |
| Not interested in working*female |                   |              | 0.208             |                   |                   | 0.283             |                   |                   | 0.233             |                   |                   | 0.161             |                   |              | 0.379             |                   |              | 0.160             |
|                                  |                   |              | (0.31)            |                   |                   | (0.33)            |                   |                   | (0.31)            |                   |                   | (0.32)            |                   |              | (0.32)            |                   |              | (0.32)            |
| Constant                         | -<br>1.133**<br>* | -<br>0.700** | -<br>1.331**<br>* | -<br>2.485**<br>* | -<br>1.743**<br>* | -<br>2.660**<br>* | -<br>1.203**<br>* | -<br>0.802**<br>* | -<br>1.502**<br>* | -<br>2.250**<br>* | -<br>1.895**<br>* | -<br>2.478**<br>* | -<br>1.383**<br>* | -0.647*      | -<br>1.670**<br>* | -<br>1.979**<br>* | -<br>0.767** | -<br>2.348**<br>* |
|                                  | (0.39)            | (0.28)       | (0.41)            | (0.34)            | (0.24)            | (0.35)            | (0.42)            | (0.30)            | (0.45)            | (0.37)            | (0.30)            | (0.38)            | (0.51)            | (0.39)       | (0.54)            | (0.53)            | (0.38)       | (0.56)            |
| Observations                     | <b>1310</b>       | <b>1612</b>  | <b>1317</b>       | <b>1310</b>       | <b>1612</b>       | <b>1317</b>       | <b>1310</b>       | <b>1612</b>       | <b>1317</b>       | <b>1310</b>       | <b>1612</b>       | <b>1317</b>       | <b>1310</b>       | <b>1612</b>  | <b>1317</b>       | <b>1310</b>       | <b>1612</b>  | <b>1317</b>       |
| R-square                         | <b>0.31</b>       | <b>0.143</b> | <b>0.324</b>      | <b>0.306</b>      | <b>0.118</b>      | <b>0.325</b>      | <b>0.29</b>       | <b>0.126</b>      | <b>0.305</b>      | <b>0.284</b>      | <b>0.116</b>      | <b>0.302</b>      | <b>0.342</b>      | <b>0.153</b> | <b>0.355</b>      | <b>0.284</b>      | <b>0.123</b> | <b>0.301</b>      |

Source: Authors' calculations based on HFPS- Round 6, Youth module, 2021.

Notes: The dependent variable NEET is a dummy variable that takes the value of 1 if the youth is NEET, and 0 if employed. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All models were run with a probit model. To interpret the coefficients, marginal effects need to be calculated. All regressions contain age and education variables not reported here. 'CSES stands for Core Self-Evaluation Scale.

**Table A3.5 - Regression Results for the aspiration-expectation GAP considering socioemotional skills**

| Dependent variable: Aspiration gap           |                         |                         |                             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
|----------------------------------------------|-------------------------|-------------------------|-----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Variables                                    | Model 1                 | Model 2                 | Model 3                     | Model 4             | Model 5             | Model 6             | Model 7             | Model 8             | Model 9             | Model 10            | Model 11            | Model 12            | Model 13            | Model 14            |
| Confidence                                   |                         |                         |                             | -0.198***<br>(0.05) | -0.237***<br>(0.07) |                     |                     |                     |                     |                     |                     | 0.112<br>(0.08)     | 0.132<br>(0.11)     |                     |
| Confidence*female                            |                         |                         |                             |                     | 0.108<br>(0.11)     |                     |                     |                     |                     |                     |                     |                     | -0.062<br>(0.17)    |                     |
| Capacity for optimism                        |                         |                         |                             |                     |                     | -0.405***<br>(0.06) | -0.473***<br>(0.08) |                     |                     |                     |                     | -0.380***<br>(0.09) | -0.446***<br>(0.12) |                     |
| Capacity*female                              |                         |                         |                             |                     |                     |                     | 0.222<br>(0.14)     |                     |                     |                     |                     |                     | 0.237<br>(0.19)     |                     |
| Task management                              |                         |                         |                             |                     |                     |                     |                     | -0.305***<br>(0.06) | -0.372***<br>(0.08) |                     |                     | -0.107<br>(0.09)    | -0.124<br>(0.12)    |                     |
| Task management*female                       |                         |                         |                             |                     |                     |                     |                     |                     | 0.169<br>(0.13)     |                     |                     |                     | 0.018<br>(0.19)     |                     |
| Goal Regulation                              |                         |                         |                             |                     |                     |                     |                     |                     |                     | -0.281***<br>(0.06) | -0.330***<br>(0.08) | -0.074<br>(0.09)    | -0.086<br>(0.12)    |                     |
| Goal Regulation*female                       |                         |                         |                             |                     |                     |                     |                     |                     |                     |                     | 0.141<br>(0.14)     |                     | 0.033<br>(0.19)     |                     |
| SES (one construct)                          |                         |                         |                             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     | -0.412***<br>(0.07) |
| SES*female                                   |                         |                         |                             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Female                                       | -0.179**<br>(0.07)      | -0.176**<br>(0.08)      | -0.147*<br>(0.08)           | -0.145*<br>(0.08)   | -0.753<br>(0.51)    | -0.138*<br>(0.08)   | -1.141**<br>(0.54)  | -0.151*<br>(0.08)   | -0.938*<br>(0.52)   | -0.154**<br>(0.08)  | -0.840<br>(0.56)    | -0.143*<br>(0.08)   | -1.139*<br>(0.63)   | -0.148*<br>(0.08)   |
| Rural                                        | 0.018<br>(0.08)         | 0.036<br>(0.08)         | 0.007<br>(0.08)             | 0.013<br>(0.09)     | -0.077<br>(0.11)    | 0.023<br>(0.09)     | -0.080<br>(0.11)    | 0.020<br>(0.09)     | -0.078<br>(0.11)    | 0.021<br>(0.09)     | -0.076<br>(0.11)    | 0.027<br>(0.09)     | -0.079<br>(0.11)    | 0.022<br>(0.09)     |
| Rural*female                                 |                         |                         |                             |                     | 0.256<br>(0.18)     |                     | 0.276<br>(0.18)     |                     | 0.271<br>(0.18)     |                     | 0.268<br>(0.18)     |                     | 0.284<br>(0.18)     |                     |
| <b>Age_group (15 - 19) - Reference group</b> |                         |                         |                             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Age_group (20 - 24)                          | -0.123<br>(0.09)        | -0.004<br>(0.10)        | 0.014<br>(0.10)             | 0.042<br>(0.10)     | 0.172<br>(0.12)     | 0.058<br>(0.10)     | 0.164<br>(0.13)     | 0.061<br>(0.10)     | 0.200<br>(0.12)     | 0.049<br>(0.10)     | 0.164<br>(0.12)     | 0.066<br>(0.10)     | 0.172<br>(0.12)     | 0.066<br>(0.10)     |
| Age_group (20 -24) *female                   |                         |                         |                             |                     | -0.407**<br>(0.21)  |                     | -0.362*<br>(0.21)   |                     | -0.423**<br>(0.21)  |                     | -0.375*<br>(0.21)   |                     | -0.361*<br>(0.21)   |                     |
| <b>Secondary or lessl - Reference group</b>  |                         |                         |                             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Post-secondary diploma                       | -<br>1.082***<br>(0.13) | -<br>0.958***<br>(0.13) | -<br>0.899*<br>**<br>(0.14) | -0.964***<br>(0.14) | -1.024***<br>(0.18) | -0.946***<br>(0.14) | -0.984***<br>(0.18) | -0.951***<br>(0.14) | -0.992***<br>(0.18) | -0.943***<br>(0.14) | -0.975***<br>(0.17) | -0.934***<br>(0.14) | -0.959***<br>(0.18) | -0.977***<br>(0.14) |
| Bachelor's degree and more                   | -0.0719<br>(0.09)       | -0.121<br>(0.09)        | -0.116<br>(0.09)            | -0.114<br>(0.09)    | -0.227**<br>(0.11)  | -0.123<br>(0.10)    | -0.219*<br>(0.12)   | -0.133<br>(0.09)    | -0.246**<br>(0.12)  | -0.134<br>(0.09)    | -0.233**<br>(0.12)  | -0.135<br>(0.10)    | -0.227*<br>(0.12)   | -0.13<br>(0.09)     |

|                                                                |               |              |              |              |              |             |              |              |              |              |              |              |              |              |
|----------------------------------------------------------------|---------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Post-secondary diploma * female                                |               |              |              |              | 0.207        |             | 0.16         |              | 0.165        |              | 0.152        |              | 0.128        |              |
|                                                                |               |              |              |              | (0.30)       |             | (0.29)       |              | (0.30)       |              | (0.30)       |              | (0.30)       |              |
| Bachelor's degree and more * female                            |               |              |              |              | 0.373*       |             | 0.335        |              | 0.373*       |              | 0.346*       |              | 0.33         |              |
|                                                                |               |              |              |              | (0.21)       |             | (0.21)       |              | (0.21)       |              | (0.21)       |              | (0.21)       |              |
| <b>Aspiration constraints (individual dummies)</b>             |               |              |              |              |              |             |              |              |              |              |              |              |              |              |
| Lack of wasta                                                  |               | -0.085       | -0.097       | -0.123       | -0.054       | -0.119      | -0.053       | -0.110       | -0.051       | -0.137       | -0.065       | -0.118       | -0.054       | -0.138       |
|                                                                |               | (0.11)       | (0.11)       | (0.11)       | (0.14)       | (0.11)      | (0.14)       | (0.11)       | (0.14)       | (0.11)       | (0.14)       | (0.11)       | (0.14)       | (0.11)       |
| Financial/credit constraints                                   |               | -            | -            |              |              |             |              |              |              |              |              |              |              |              |
|                                                                |               | 0.418***     | 0.433**      | -0.428***    | -0.443***    | -0.424***   | -0.452***    | -0.424***    | -0.431***    | -0.414***    | -0.411***    | -0.419***    | -0.439***    | -0.414***    |
|                                                                |               | (0.10)       | (0.11)       | (0.11)       | (0.13)       | (0.11)      | (0.13)       | (0.11)       | (0.13)       | (0.11)       | (0.13)       | (0.11)       | (0.13)       | (0.11)       |
| Insufficient job opportunities or suitable jobs not available  |               | -0.199**     | -0.150       | -0.123       | -0.192       | -0.089      | -0.148       | -0.106       | -0.164       | -0.107       | -0.176       | -0.082       | -0.139       | -0.091       |
|                                                                |               | (0.10)       | (0.10)       | (0.10)       | (0.13)       | (0.10)      | (0.13)       | (0.10)       | (0.13)       | (0.10)       | (0.13)       | (0.10)       | (0.13)       | (0.10)       |
| Lack of skills/training                                        |               | 0.098        | 0.060        | -0.007       | -0.016       | 0.008       | 0.000        | 0.014        | 0.017        | 0.014        | 0.010        | 0.021        | 0.019        | -0.020       |
|                                                                |               | (0.09)       | (0.09)       | (0.09)       | (0.12)       | (0.09)      | (0.11)       | (0.09)       | (0.11)       | (0.09)       | (0.11)       | (0.09)       | (0.12)       | (0.09)       |
| Insufficient education                                         |               | -            | -            |              |              |             |              |              |              |              |              |              |              |              |
|                                                                |               | 0.451***     | 0.448**      | -0.424***    | -0.481***    | -0.413***   | -0.470***    | -0.410***    | -0.471***    | -0.412***    | -0.473***    | -0.406***    | -0.466***    | -0.399***    |
|                                                                |               | (0.08)       | (0.08)       | (0.08)       | (0.10)       | (0.08)      | (0.10)       | (0.08)       | (0.10)       | (0.08)       | (0.10)       | (0.08)       | (0.10)       | (0.08)       |
| Lack of wasta*female                                           |               |              |              |              | -0.213       |             | -0.203       |              | -0.198       |              | -0.213       |              | -0.200       |              |
|                                                                |               |              |              |              | (0.23)       |             | (0.23)       |              | (0.23)       |              | (0.23)       |              | (0.23)       |              |
| Financial/credit constraints*female                            |               |              |              |              | 0.032        |             | 0.056        |              | 0.017        |              | -0.007       |              | 0.038        |              |
|                                                                |               |              |              |              | (0.23)       |             | (0.23)       |              | (0.23)       |              | (0.23)       |              | (0.23)       |              |
| Insufficient job opportunities*female                          |               |              |              |              | 0.162        |             | 0.134        |              | 0.136        |              | 0.160        |              | 0.127        |              |
|                                                                |               |              |              |              | (0.21)       |             | (0.22)       |              | (0.22)       |              | (0.22)       |              | (0.22)       |              |
| Lack of skills/training*female                                 |               |              |              |              | 0.031        |             | 0.029        |              | 0.000        |              | 0.013        |              | 0.008        |              |
|                                                                |               |              |              |              | (0.19)       |             | (0.19)       |              | (0.19)       |              | (0.19)       |              | (0.19)       |              |
| Insufficient education*female                                  |               |              |              |              | 0.145        |             | 0.137        |              | 0.151        |              | 0.153        |              | 0.146        |              |
|                                                                |               |              |              |              | (0.18)       |             | (0.18)       |              | (0.18)       |              | (0.18)       |              | (0.18)       |              |
| <b>Aspiration drivers (suitability of job reference group)</b> |               |              |              |              |              |             |              |              |              |              |              |              |              |              |
| It is a highly respected profession                            |               |              | 0.231*       | 0.188        | 0.168        | 0.173       | 0.148        | 0.19         | 0.163        | 0.175        | 0.151        | 0.172        | 0.144        | 0.158        |
|                                                                |               |              | (0.13)       | (0.13)       | (0.16)       | (0.13)      | (0.16)       | (0.13)       | (0.16)       | (0.13)       | (0.16)       | (0.13)       | (0.16)       | (0.13)       |
| Youth's high interest in the field                             |               |              | 0.143        | 0.0748       | -0.00247     | 0.0224      | -0.0627      | 0.0592       | -0.0281      | 0.0617       | -0.00626     | 0.019        | -0.0642      | 0.0189       |
|                                                                |               |              | (0.12)       | (0.12)       | (0.15)       | (0.12)      | (0.15)       | (0.12)       | (0.15)       | (0.12)       | (0.15)       | (0.12)       | (0.15)       | (0.12)       |
| Constant                                                       | -             |              |              |              |              |             |              |              |              |              |              |              |              |              |
|                                                                | 0.304***      | 0.224**      | -0.0222      | 0.723***     | 0.939***     | 1.376***    | 1.704***     | 1.048***     | 1.354***     | 0.997***     | 1.235***     | 1.516***     | 1.853***     | 1.457***     |
|                                                                | (0.07)        | (0.09)       | (0.13)       | (0.25)       | (0.31)       | (0.26)      | (0.34)       | (0.25)       | (0.32)       | (0.27)       | (0.34)       | (0.30)       | (0.39)       | (0.30)       |
| <b>Observations</b>                                            | <b>1614</b>   | <b>1602</b>  | <b>1602</b>  | <b>1601</b>  | <b>1601</b>  | <b>1601</b> | <b>1601</b>  | <b>1601</b>  | <b>1601</b>  | <b>1601</b>  | <b>1601</b>  | <b>1601</b>  | <b>1601</b>  | <b>1601</b>  |
| <b>R-square</b>                                                | <b>0.0696</b> | <b>0.125</b> | <b>0.139</b> | <b>0.145</b> | <b>0.152</b> | <b>0.16</b> | <b>0.167</b> | <b>0.151</b> | <b>0.158</b> | <b>0.148</b> | <b>0.155</b> | <b>0.162</b> | <b>0.169</b> | <b>0.155</b> |

Source: Authors' calculations based on HFPS- Round 6, Youth module, 2021.

Notes: The dependent variable aspiration gap is a dummy variable that takes the value of 1 if the youth's aspired career does not match youth's expected career, and 0 otherwise. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All models were run with a probit model. To interpret the coefficients, marginal effects need to be calculated. All regressions contain other aspiration drivers and interactions with female dummy not reported here. \*SES stands for Socio-Emotional Skills Scale.

**Table A3.6 - Regression Results for the aspiration-expectation GAP considering Core self-evaluation skills**

| Dependent variable: Aspiration gap           |                    |                    |                    |                    |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |
|----------------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Variables                                    | Model 1            | Model 2            | Model 3            | Model 4            | Model 5            | Model 6             | Model 7             | Model 8             | Model 9             | Model 10            | Model 11           | Model 12            | Model 13            | Model 14            | Model 15            |
| Self-esteem                                  |                    |                    |                    | -0.178**<br>(0.08) | -0.237**<br>(0.10) |                     |                     |                     |                     |                     |                    | -0.152<br>(0.09)    | -0.175<br>(0.12)    |                     |                     |
| Self-esteem*female                           |                    |                    |                    |                    | 0.141<br>(0.17)    |                     |                     |                     |                     |                     |                    |                     | 0.044<br>(0.20)     |                     |                     |
| Stability                                    |                    |                    |                    |                    |                    | -0.508***<br>(0.07) | -0.480***<br>(0.08) |                     |                     |                     |                    | -0.506***<br>(0.07) | -0.469***<br>(0.08) |                     |                     |
| Stability*female                             |                    |                    |                    |                    |                    |                     | -0.080<br>(0.15)    |                     |                     |                     |                    |                     | -0.101<br>(0.16)    |                     |                     |
| General Self-efficacy                        |                    |                    |                    |                    |                    |                     |                     | -0.282***<br>(0.08) | -0.305***<br>(0.11) |                     |                    | 0.040<br>(0.11)     | 0.051<br>(0.14)     |                     |                     |
| Gral. Self-efficacy*female                   |                    |                    |                    |                    |                    |                     |                     |                     | 0.041<br>(0.18)     |                     |                    |                     | -0.058<br>(0.23)    |                     |                     |
| Locus of control                             |                    |                    |                    |                    |                    |                     |                     |                     |                     | -0.217***<br>(0.08) | -0.252**<br>(0.10) | -0.045<br>(0.10)    | -0.080<br>(0.12)    |                     |                     |
| Locus of control*female                      |                    |                    |                    |                    |                    |                     |                     |                     |                     |                     | 0.119<br>(0.17)    |                     | 0.119<br>(0.20)     |                     |                     |
| CSES (one construct)                         |                    |                    |                    |                    |                    |                     |                     |                     |                     |                     |                    |                     |                     | -0.698***<br>(0.11) | -0.704***<br>(0.14) |
| CSES*female                                  |                    |                    |                    |                    |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     | -0.006<br>(0.24)    |
| Female                                       | -0.179**<br>(0.07) | -0.176**<br>(0.08) | -0.147*<br>(0.08)  | -0.149*<br>(0.08)  | -0.719<br>(0.52)   | -0.175**<br>(0.08)  | -0.150<br>(0.48)    | -0.154**<br>(0.08)  | -0.465<br>(0.50)    | -0.158**<br>(0.08)  | -0.616<br>(0.49)   | -0.178**<br>(0.08)  | -0.353<br>(0.68)    | -0.171**<br>(0.08)  | -0.348<br>(0.67)    |
| Rural                                        | 0.018<br>(0.08)    | 0.036<br>(0.08)    | 0.007<br>(0.08)    | 0.010<br>(0.09)    | -0.078<br>(0.11)   | 0.011<br>(0.09)     | -0.067<br>(0.11)    | 0.000<br>(0.09)     | -0.090<br>(0.11)    | 0.012<br>(0.09)     | -0.070<br>(0.11)   | 0.016<br>(0.09)     | -0.062<br>(0.11)    | 0.011<br>(0.09)     | -0.072<br>(0.11)    |
| Rural*female                                 |                    |                    |                    |                    | 0.254<br>(0.18)    |                     | 0.219<br>(0.18)     |                     | 0.259<br>(0.18)     |                     | 0.241<br>(0.18)    |                     | 0.218<br>(0.18)     |                     | 0.244<br>(0.18)     |
| <b>Age_group (15 - 19) - Reference group</b> |                    |                    |                    |                    |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |
| Age_group (20 - 24)                          | -0.123<br>(0.09)   | -0.004<br>(0.10)   | 0.014<br>(0.10)    | 0.034<br>(0.10)    | 0.172<br>(0.12)    | -0.007<br>(0.10)    | 0.122<br>(0.12)     | 0.044<br>(0.10)     | 0.174<br>(0.12)     | 0.030<br>(0.10)     | 0.166<br>(0.12)    | 0.008<br>(0.10)     | 0.147<br>(0.12)     | 0.056<br>(0.10)     | 0.192<br>(0.12)     |
| Age_group (20 -24) *female                   |                    |                    |                    |                    | -0.417**<br>(0.21) |                     | -0.391*<br>(0.21)   |                     | -0.401*<br>(0.21)   |                     | -0.415**<br>(0.21) |                     | -0.404*<br>(0.21)   |                     | -0.408**<br>(0.21)  |
| <b>Secondary or less - Reference group</b>   |                    |                    |                    |                    |                    |                     |                     |                     |                     |                     |                    |                     |                     |                     |                     |
| Post-secondary diploma                       | 1.082***<br>(0.13) | 0.958***<br>(0.13) | 0.899***<br>(0.14) | 0.943***<br>(0.14) | 0.988***<br>(0.18) | 0.958***<br>(0.14)  | 0.976***<br>(0.17)  | 0.948***<br>(0.14)  | 0.986***<br>(0.17)  | 0.927***<br>(0.14)  | 0.969***<br>(0.17) | 0.994***<br>(0.14)  | 1.024***<br>(0.18)  | 1.014***<br>(0.14)  | 1.057***<br>(0.18)  |
| Bachelor's degree and more                   | -0.0719<br>(0.09)  | -0.121<br>(0.09)   | -0.116<br>(0.09)   | -0.125<br>(0.09)   | -0.239**<br>(0.11) | -0.147<br>(0.10)    | -0.251**<br>(0.12)  | -0.123<br>(0.09)    | -0.239**<br>(0.11)  | -0.115<br>(0.09)    | -0.225**<br>(0.11) | -0.152<br>(0.10)    | -0.262**<br>(0.12)  | -0.138<br>(0.09)    | -0.259**<br>(0.12)  |
| Post-secondary diploma * female              |                    |                    |                    |                    | 0.17<br>(0.29)     |                     | 0.106<br>(0.28)     |                     | 0.166<br>(0.29)     |                     | 0.17<br>(0.29)     |                     | 0.121<br>(0.29)     |                     | 0.172<br>(0.29)     |

|                                                                |               |               |               |               |               |               |               |               |               |              |               |               |               |               |               |
|----------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|---------------|---------------|---------------|---------------|---------------|
| Bachelor's degree and more * female                            |               |               |               |               | 0.373*        |               | 0.344         |               | 0.388*        |              | 0.368*        |               | 0.353*        |               | 0.403*        |
|                                                                |               |               |               |               | (0.21)        |               | (0.21)        |               | (0.21)        |              | (0.21)        |               | (0.21)        |               | (0.21)        |
| <b>Aspiration constraints (individual dummies)</b>             |               |               |               |               |               |               |               |               |               |              |               |               |               |               |               |
| Lack of wasta                                                  |               | -0.085        | -0.097        | -0.120        | -0.057        | -0.156        | -0.078        | -0.141        | -0.066        | -0.130       | -0.065        | -0.176        | -0.109        | -0.192*       | -0.123        |
|                                                                |               | (0.11)        | (0.11)        | (0.11)        | (0.14)        | (0.11)        | (0.14)        | (0.11)        | (0.14)        | (0.11)       | (0.14)        | (0.11)        | (0.14)        | (0.11)        | (0.14)        |
| Financial/credit constraints                                   |               | -             | -             | -             | -             | -             | -             | -             | -             | -            | -             | -             | -             | -             | -             |
|                                                                |               | 0.418***      | 0.433***      | 0.425***      | 0.429***      | 0.441***      | 0.445***      | 0.416***      | 0.419***      | 0.438***     | 0.447***      | 0.437***      | 0.437***      | 0.421***      | 0.418***      |
|                                                                |               | (0.10)        | (0.11)        | (0.11)        | (0.13)        | (0.11)        | (0.13)        | (0.11)        | (0.13)        | (0.10)       | (0.13)        | (0.11)        | (0.13)        | (0.10)        | (0.13)        |
| Insufficient job opportunities or suitable jobs not available  |               | -0.199**      | -0.150        | -0.131        | -0.206        | -0.249**      | 0.334***      | -0.170*       | -0.260**      | -0.158       | -0.241*       | -0.232**      | -0.312**      | -0.186*       | -0.276**      |
|                                                                |               | (0.10)        | (0.10)        | (0.10)        | (0.13)        | (0.10)        | (0.13)        | (0.10)        | (0.13)        | (0.10)       | (0.13)        | (0.10)        | (0.13)        | (0.10)        | (0.13)        |
| Lack of skills/training                                        |               | 0.098         | 0.060         | 0.028         | 0.018         | -0.117        | -0.127        | 0.019         | 0.004         | 0.019        | 0.006         | -0.142        | -0.161        | -0.086        | -0.113        |
|                                                                |               | (0.09)        | (0.09)        | (0.09)        | (0.11)        | (0.10)        | (0.12)        | (0.09)        | (0.11)        | (0.09)       | (0.11)        | (0.10)        | (0.12)        | (0.09)        | (0.12)        |
| Insufficient education                                         |               | -             | -             | -             | -             | -             | -             | -             | -             | -            | -             | -             | -             | -             | -             |
|                                                                |               | 0.451***      | 0.448***      | 0.426***      | 0.480***      | 0.458***      | 0.522***      | 0.414***      | 0.470***      | 0.407***     | 0.459***      | 0.435***      | 0.486***      | 0.377***      | 0.430***      |
|                                                                |               | (0.08)        | (0.08)        | (0.08)        | (0.10)        | (0.09)        | (0.11)        | (0.08)        | (0.10)        | (0.08)       | (0.11)        | (0.09)        | (0.11)        | (0.09)        | (0.10)        |
| Lack of wasta*female                                           |               |               |               |               | -0.201        |               | -0.218        |               | -0.226        |              | -0.199        |               | -0.196        |               | -0.208        |
|                                                                |               |               |               |               | (0.23)        |               | (0.23)        |               | (0.23)        |              | (0.23)        |               | (0.23)        |               | (0.23)        |
| Financial/credit constraints*female                            |               |               |               |               | 0.009         |               | -0.015        |               | 0.000         |              | 0.022         |               | -0.021        |               | -0.018        |
|                                                                |               |               |               |               | (0.23)        |               | (0.23)        |               | (0.23)        |              | (0.23)        |               | (0.23)        |               | (0.23)        |
| Insufficient job opportunities*female                          |               |               |               |               | 0.177         |               | 0.216         |               | 0.219         |              | 0.197         |               | 0.209         |               | 0.224         |
|                                                                |               |               |               |               | (0.22)        |               | (0.22)        |               | (0.22)        |              | (0.22)        |               | (0.22)        |               | (0.21)        |
| Lack of skills/training*female                                 |               |               |               |               | 0.024         |               | 0.041         |               | 0.041         |              | 0.035         |               | 0.062         |               | 0.075         |
|                                                                |               |               |               |               | (0.19)        |               | (0.21)        |               | (0.19)        |              | (0.19)        |               | (0.21)        |               | (0.20)        |
| Insufficient education*female                                  |               |               |               |               | 0.139         |               | 0.168         |               | 0.142         |              | 0.131         |               | 0.140         |               | 0.140         |
|                                                                |               |               |               |               | (0.18)        |               | (0.18)        |               | (0.18)        |              | (0.18)        |               | (0.19)        |               | (0.18)        |
| <b>Aspiration drivers (suitability of job reference group)</b> |               |               |               |               |               |               |               |               |               |              |               |               |               |               |               |
| It is a highly respected profession                            |               |               | 0.231*        | 0.227*        | 0.214         | 0.0505        | 0.0661        | 0.204         | 0.192         | 0.227*       | 0.218         | 0.0528        | 0.0744        | 0.146         | 0.148         |
|                                                                |               |               | (0.13)        | (0.13)        | (0.16)        | (0.13)        | (0.16)        | (0.13)        | (0.16)        | (0.13)       | (0.16)        | (0.13)        | (0.16)        | (0.13)        | (0.16)        |
| Youth's high interest in the field                             |               |               | 0.143         | 0.129         | 0.0589        | 0.149         | 0.105         | 0.133         | 0.072         | 0.154        | 0.106         | 0.142         | 0.0987        | 0.133         | 0.0855        |
|                                                                |               |               | (0.12)        | (0.12)        | (0.15)        | (0.12)        | (0.15)        | (0.12)        | (0.15)        | (0.12)       | (0.15)        | (0.12)        | (0.15)        | (0.12)        | (0.15)        |
| Constant                                                       | -             | 0.304***      | 0.224**       | -0.0222       | 0.881***      | 0.805***      | 1.581***      | 1.393***      | 0.839***      | 0.774**      | 1.263***      | 1.187***      | 1.728***      | 1.507***      | 1.793***      |
|                                                                |               | (0.07)        | (0.09)        | (0.13)        | (0.25)        | (0.31)        | (0.23)        | (0.27)        | (0.25)        | (0.31)       | (0.24)        | (0.29)        | (0.32)        | (0.39)        | (0.31)        |
| <b>Observations</b>                                            | <b>1612</b>   | <b>1600</b>   | <b>1600</b>   | <b>1600</b>   | <b>1600</b>   | <b>1600</b>   | <b>1600</b>   | <b>1600</b>   | <b>1600</b>   | <b>1600</b>  | <b>1600</b>   | <b>1600</b>   | <b>1600</b>   | <b>1600</b>   | <b>1600</b>   |
| <b>R-square</b>                                                | <b>0.0811</b> | <b>0.1556</b> | <b>0.1753</b> | <b>0.1757</b> | <b>0.1846</b> | <b>0.1898</b> | <b>0.1995</b> | <b>0.1756</b> | <b>0.1845</b> | <b>0.180</b> | <b>0.1886</b> | <b>0.1945</b> | <b>0.2039</b> | <b>0.1831</b> | <b>0.1925</b> |

Source: Authors' calculations based on HFPS- Round 6, Youth module, 2021.

Notes: The dependent variable aspiration gap is a dummy variable that takes the value of 1 if the youth's aspired career does not match youth's expected career, and 0 otherwise. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. All models were run with a probit model. To interpret the coefficients, marginal effects need to be calculated. All regressions contain other aspiration drivers and interactions with female dummy not reported here. CSES stands for Core Self-Evaluation Scale.