

# The Level of Mismatch between Career and Graduated Field among University Graduates in Mogadishu, Somalia

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## Abstract

Horizontal mismatch, employment in an occupation unrelated to one's field of study, is an increasingly visible feature of Somalia's recovering labour market, yet it remains empirically under-documented. This study examines the level of career-field mismatch among university graduates in Mogadishu, Somalia. A cross-sectional descriptive survey was conducted online between February and March 2026 with 303 graduates using a structured, self-administered questionnaire. Data were analysed in Python (pandas, scipy) using frequencies, percentages, and Pearson's chi-square ( $\chi^2$ ) tests of independence. Overall, 50.5% ( $n = 153$ ) of graduates worked in a field not directly related to their studies, against 49.5% ( $n = 150$ ) who were matched. Mismatch varied sharply by field of study ( $\chi^2 = 59.17$ ,  $p < 0.001$ ): medicine graduates were the most mismatched (79.3%), while computer science (31.0%) and engineering (35.7%) graduates were far better aligned. Women were significantly more likely to be mismatched than men (69.7% vs 42.5%;  $\chi^2 = 17.45$ ,  $p < 0.001$ ). Employment sector was also strongly associated with mismatch ( $\chi^2 = 30.13$ ,  $p$

$< 0.001$ ), with government employees the best aligned (23.7% mismatched) and private-sector employees the worst (60.6%), whereas education level showed no significant association ( $\chi^2 = 6.78$ ,  $p = 0.148$ ). Among mismatched graduates, the dominant reason was a lack of jobs in their field (77.1%,  $n = 118$ ), and 73.9% ( $n = 113$ ) had never worked in their trained discipline. These results indicate that mismatch in Mogadishu is driven less by individual under-qualification than by structural labour-demand failure, with direct implications for higher-education planning, gender-responsive career support, and labour-market policy in Somalia and the wider East African Community (EAC) and IGAD region.

**Keywords:** career-field mismatch; horizontal mismatch; graduate employability; skills mismatch; higher education; Somalia

## Introduction

The transition from higher education to the labour market is a defining test of any education system. When a graduate secures employment in the field for which they were trained, the private and social returns to schooling are realised; when they do not, the result is horizontal mismatch —

a misalignment between the field of study and the field of work. Distinct from vertical mismatch (over- or under-education relative to a job's level), horizontal mismatch concerns the relevance, not the height, of qualifications, and it has become a central concern in graduate labour-market research worldwide (Salas-Velasco, 2021; Kiss, 2024).

Across developing and fragile economies, horizontal mismatch is both more common and more costly. It depresses wages, lengthens unemployment spells, erodes acquired human capital, and signals an inefficient allocation of scarce public investment in tertiary education (Gelle et al., 2021; Elamin, 2023). In Sub-Saharan Africa, a widening gap between what universities produce and what employers demand has been ranked among the principal drivers of graduate unemployment and underemployment (Guàrdia et al., 2021; Oluwajodu et al., 2015).

Somalia presents an especially acute case. After three decades of conflict and institutional collapse, the country has experienced a rapid, largely private and unregulated, expansion of higher education, particularly in Mogadishu. This expansion has not been matched by commensurate growth in formal, field-specific employment. Youth unemployment was estimated at 67% in the most recent national human development report, one of the highest rates in the world (UNDP, 2012), and skills mismatch is repeatedly identified as a core structural cause (Ahmed, 2023; IOM, 2016).

Graduates frequently report that the only available work lies outside their discipline, that recruitment is mediated by personal and clan connections, and that their degrees did not equip them with the practical competencies employers seek.

Yet despite the visibility of the problem, there is little rigorous, quantitative evidence on the actual level of career-field mismatch among Somali graduates, on which fields are most affected, or on whether mismatch falls unevenly along lines of gender, education level, or employment sector. Most existing commentary is qualitative or anecdotal. This evidence gap constrains both university curriculum planning and national workforce policy.

This study addresses that gap by providing the first systematic empirical measurement of career-field mismatch among 303 university graduates in Mogadishu. It quantifies the overall mismatch rate, identifies the fields and groups most affected, tests for statistically significant disparities, and surfaces the graduates' own stated reasons for working outside their fields. In doing so it speaks directly to regional human-capital frameworks under the East African Community (EAC) and the Intergovernmental Authority on Development (IGAD), both of which prioritise employability and labour-market integration as pillars of inclusive growth, and to Somalia's ongoing integration into the EAC higher-education system (Issa-Salwe et al., 2024).

Specifically, the study aims to:

- (i) determine the overall level of career-field mismatch among university graduates in Mogadishu;
- (ii) describe the sociodemographic profile of the graduate population, including field-of-study distribution;
- (iii) examine variation in mismatch by field of study, sex, education level, and employment sector;
- (iv) test for statistically significant associations between mismatch and these characteristics using chi-square analysis;
- (v) identify the main reasons graduates give for working outside their field of study; and
- (vi) draw out implications for universities, the higher-education regulator, employers, and regional policy partners.

## Literature Review

This review draws on a systematic search of recent peer-reviewed literature (2021–2026) on horizontal mismatch, graduate employability, and skills imbalance, with particular attention to Africa and other developing economies. It is organised around four themes, concluding with the research gap this study addresses.

### Conceptualising Horizontal (Field-of-Study) Mismatch

Horizontal mismatch occurs when graduates trained in one field are employed in an unrelated occupation at their qualification level (Salas-

Velasco, 2021). Using a nationally representative survey of Spanish graduates, Salas-Velasco (2021) shows that field of study is itself a powerful predictor of mismatch: graduates of chemistry, mathematics, physics, pharmacy, and languages face a markedly higher likelihood of working outside their field than those in professionally licensed disciplines. Kiss (2024), analysing the Hungarian labour market in Humanities and Social Sciences Communications, extends the construct by distinguishing the convertibility and substitutability of a degree, and finds that business, IT, technical, medical, and education degrees raise the probability of both vertical and horizontal matching. Together these studies establish that mismatch is not random but is structured by discipline, a premise central to the present analysis.

### Graduate Employability and Skills Mismatch in Africa and East Africa

In African higher education, mismatch is consistently framed as a symptom of a deeper employability deficit. Guàrdia, Mancini, Jacobetty, and Maina (2021), in a multi-country East African study published in the *Journal of Teaching and Learning for Graduate Employability*, document a systematic gap between the skills universities impart and those employers demand, with employability skills 'mostly perceived as insufficiently developed' during study. Oluwajodu et al. (2015) and prior studies similarly attribute persistent graduate unemployment in South Africa and across the continent to weak

alignment between curricula and labour-market needs, theory-heavy instruction, and a shortage of work-integrated learning. In Ethiopia, Herut (2026) reports that more than a third of graduates (41.5%) are vertically or horizontally mismatched, while curricular incoherence and limited internships entrench the problem. This body of work locates the East African graduate-mismatch problem in structural, supply-side and demand-side failures rather than in individual deficiency.

### **Mismatch in Developing Economies: Wage Penalties and Labour-Market Outcomes**

Evidence from other developing economies underscores the economic cost of mismatch. Elamin (2023), examining the MENA region with machine-learning methods, estimates overeducation wage penalties ranging from 17% in Egypt to roughly 50% in Tunisia. Evidence from Indonesia (Wicaksono et al., 2023) reports substantial horizontal-mismatch rates and persistent earnings penalties, including a tendency for mismatch to recur across jobs. These findings show that mismatch is not a transient frictional state but a durable condition with measurable losses in productivity, earnings, and job satisfaction, reinforcing why measuring its prevalence in Somalia matters.

### **Gender, Field Choice, and Mismatch**

A recurring finding is that mismatch and its consequences fall unevenly by gender. Women remain a minority of STEM graduates globally,

about 35% over the past decade (UNESCO GEM Report, 2024), and are less likely than men to enter and remain in field-relevant careers, even where they out-graduate men overall. In Ethiopian tracer evidence, women report substantially longer unemployment spells than men (Herut, 2026). The gendered structure of field choice and labour demand makes sex a critical variable in any mismatch analysis, motivating the explicit chi-square test of mismatch by sex reported below.

### **Research Gap**

Three gaps emerge. First, the overwhelming majority of horizontal-mismatch evidence comes from high-income or middle-income settings; fragile, post-conflict economies such as Somalia are almost absent from the peer-reviewed record. Second, existing Somali commentary on graduate unemployment is largely qualitative and rarely isolates horizontal (field) mismatch as a measurable outcome with field-level and gender-level breakdowns. Third, no published study quantifies the mismatch rate among Mogadishu graduates or tests its association with field, sex, education level, and sector. This study fills that gap with a structured survey and inferential statistics, contributing the first empirical baseline for career-field mismatch in Somalia.

## Methodology

### Research Design

A cross-sectional descriptive survey design was employed. This design is appropriate for collecting data at a single point in time and for systematically describing patterns in the attitudes, behaviours, and perceptions of a defined population (Creswell, 2014).

### Setting and Study Period

The study was conducted in Mogadishu, Somalia, the country's capital and largest concentration of universities and graduate employment. Data were collected online between February and March 2026.

### Study Population and Sampling

A total of 303 university graduates were recruited using a systematic sampling approach, based on availability and willingness to participate. Eligible respondents were graduates of a tertiary institution who were currently in, or actively seeking, employment in Mogadishu.

### Data Collection Instrument

Data were collected using a structured, self-administered questionnaire comprising 15 items distributed electronically via Google Forms. The instrument was bilingual (English and Somali) and was reviewed for clarity and cultural appropriateness. It covered five domains: (i) sociodemographic characteristics (sex, age, year of graduation, field of study, education level); (ii) employment status and sector; (iii) the degree of

relatedness between the current job and the field of study; (iv) for matched graduates, perceived skill relevance, hiring factors, and university preparedness; and (v) for mismatched graduates, the reasons for working outside the field, prior field experience, and active job-search behaviour.

### Data Analysis

Data were analysed using Python (pandas, scipy). Descriptive statistics — frequencies and percentages — were computed for all variables. Free-text and bilingual responses (e.g. field of study) were normalised into consistent categories prior to analysis. Bivariate associations between categorical variables were assessed using Pearson's chi-square ( $\chi^2$ ) test of independence, with Yates' continuity correction applied to the  $2 \times 2$  comparison by sex, and  $p < 0.05$  as the threshold for significance. Cross-tabulations were produced for mismatch status by sex, by field of study, by education level, and by employment sector. Where expected cell counts fell below five, results were interpreted with appropriate caution.

### Ethical Considerations

The study was conducted under the Baacil Institute research programme [OWNER: confirm whether reviewed/approved by the Somalia Researchers Association (SRA) or an institutional ethics committee]. All participation was voluntary. Informed consent was obtained prior to data collection, and respondents were assured of the confidentiality and anonymity of their

responses. No personally identifying information was collected, and data were used solely for research purposes.

## Results

### Sociodemographic Characteristics of Respondents

Table 1 presents the sociodemographic profile of the 303 graduates surveyed. The sample was predominantly male (70.6%,  $n = 214$ ), with women comprising 29.4% ( $n = 89$ ). The largest age group was 21–25 years (39.9%), and the bachelor's degree was by far the most common qualification (71.0%,  $n = 215$ ). Two fields dominated the sample, medicine (36.6%,  $n = 111$ ) and computer science (33.0%,  $n = 100$ ), together accounting for over two-thirds of respondents, with the remainder spread across engineering, law, business, and other disciplines.

**Table 1. Sociodemographic Characteristics of Respondents (N = 303)**

| Characteristic                    | n (%)       |
|-----------------------------------|-------------|
| <b>Sex</b>                        |             |
| Male                              | 214 (70.6%) |
| Female                            | 89 (29.4%)  |
| <b>Age group (years)</b>          |             |
| 21-25                             | 121 (39.9%) |
| 26-30                             | 50 (16.5%)  |
| 31-35                             | 51 (16.8%)  |
| 36-40                             | 54 (17.8%)  |
| 41-45                             | 20 (6.6%)   |
| 46-50                             | 5 (1.7%)    |
| 50+                               | 2 (0.7%)    |
| <b>Highest level of education</b> |             |
| Diploma                           | 46 (15.2%)  |
| Bachelor                          | 215 (71.0%) |
| Masters                           | 23 (7.6%)   |
| PhD                               | 16 (5.3%)   |
| Other (secondary)                 | 3 (1.0%)    |
| <b>Employment sector</b>          |             |
| Private sector                    | 203 (67.0%) |
| Government                        | 76 (25.1%)  |
| NGO                               | 24 (7.9%)   |
| <b>Field of study</b>             |             |
| Medicine                          | 111 (36.6%) |
| Computer Science                  | 100 (33.0%) |
| Engineering                       | 28 (9.2%)   |
| Law                               | 26 (8.6%)   |
| Business Administration           | 14 (4.6%)   |
| Agriculture                       | 9 (3.0%)    |
| Education                         | 9 (3.0%)    |
| Media and Communication           | 3 (1.0%)    |
| Nursing                           | 2 (0.7%)    |
| Laboratory Science                | 1 (0.3%)    |

### Overall Level of Career–Field Mismatch

Table 2 presents the central outcome of the study. Just over half of all graduates reported that their current job was not directly related to their field of study, giving an overall career–field mismatch rate of 50.5% ( $n = 153$ ). The remaining 49.5% ( $n = 150$ ) were matched, working in a job directly related to their studies. This near-even split, a marginal majority being mismatched, indicates that for the typical Mogadishu graduate, employment in one's trained field is no more

likely than employment outside it. Figure 1 visualises this distribution.

**Table 2. Overall Career–Field Mismatch Status (N = 303)**

| Career–field relationship         | n (%)       |
|-----------------------------------|-------------|
| Mismatched (not directly related) | 153 (50.5%) |
| Matched (directly related)        | 150 (49.5%) |



**Figure 1. Overall Career–Field Mismatch Rate (N = 303)**

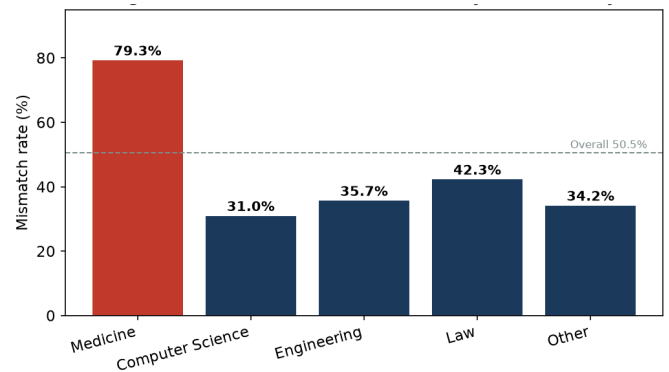
### Career–Field Mismatch by Field of Study

Table 3 presents career–field mismatch disaggregated by field of study, and the association is both large and highly significant ( $\chi^2 = 59.17$ ,  $p < 0.001$ ). Medicine graduates were overwhelmingly the most mismatched group: 79.3% ( $n = 88$ ) of medical graduates were working outside their field. By stark contrast, computer science graduates were the best aligned, with only 31.0% ( $n = 31$ ) mismatched, followed by engineering (35.7%) and law (42.3%). This inversion, a clinical, licensed profession showing the highest mismatch while a market-demanded technical field shows the lowest, suggests that field-specific labour

demand, not the prestige of the discipline, governs match outcomes in Mogadishu (Salas-Velasco, 2021). Figure 2 displays the pattern.

**Table 3. Career–Field Mismatch by Field of Study ( $\chi^2 = 59.17$ ,  $p < 0.001$ ,  $df = 4$ )**

| Field of study   | Mismatched n (%) | Matched n (%) | Total |
|------------------|------------------|---------------|-------|
| Medicine         | 88 (79.3%)       | 23 (20.7%)    | 111   |
| Computer Science | 31 (31.0%)       | 69 (69.0%)    | 100   |
| Engineering      | 10 (35.7%)       | 18 (64.3%)    | 28    |
| Law              | 11 (42.3%)       | 15 (57.7%)    | 26    |
| Other            | 13 (34.2%)       | 25 (65.8%)    | 38    |



**Figure 2. Career–Field Mismatch Rate by Field of Study**

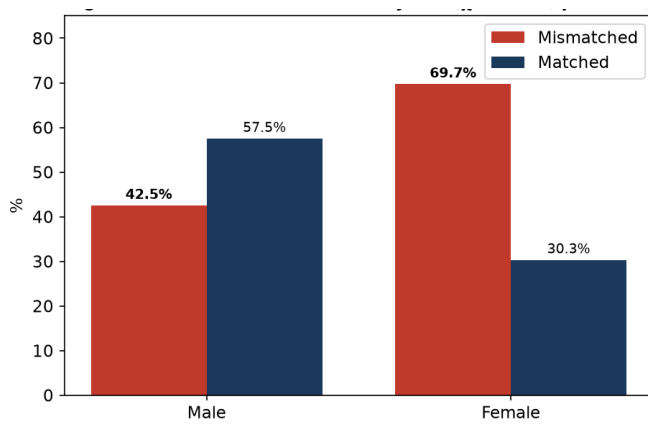
### Career–Field Mismatch by Sex

Table 4 presents mismatch by sex, revealing a pronounced and statistically significant gender gap ( $\chi^2 = 17.45$ ,  $p < 0.001$ ). Women were far more likely to be mismatched than men: 69.7% ( $n = 62$ ) of female graduates worked outside their field, compared with 42.5% ( $n = 91$ ) of male graduates, a gap of more than 27 percentage points. Put differently, a clear majority of women, but a minority of men, were mismatched. This finding is consistent with regional evidence that female graduates face greater difficulty

converting qualifications into field-relevant employment (Herut, 2026; UNESCO GEM Report, 2024). Figure 3 illustrates the disparity.

**Table 4. Career–Field Mismatch by Sex ( $\chi^2 = 17.45$ ,  $p < 0.001$ ,  $df = 1$ )**

| Sex    | Mismatched n (%) | Matched n (%) | Total |
|--------|------------------|---------------|-------|
| Male   | 91 (42.5%)       | 123 (57.5%)   | 214   |
| Female | 62 (69.7%)       | 27 (30.3%)    | 89    |



*Figure 3. Career–Field Mismatch by Sex*

### Career–Field Mismatch by Education Level

Table 5 presents mismatch by highest level of education. Unlike field and sex, education level was not significantly associated with mismatch ( $\chi^2 = 6.78$ ,  $p = 0.148$ ). While the mismatch rate declined gradually with rising qualifications, from 63.0% among diploma holders and 50.2% among bachelor's graduates to 39.1% at master's and 31.2% at PhD level, these differences did not reach statistical significance, and two cells had low expected counts, warranting caution. The implication is that simply attaining a higher degree does not reliably protect a Mogadishu graduate from working outside their field;

structural demand constraints appear to bind across qualification levels.

**Table 5. Career–Field Mismatch by Education Level ( $\chi^2 = 6.78$ ,  $p = 0.148$ ,  $df = 4$ )**

| Education level   | Mismatched n (%) | Matched n (%) | Total |
|-------------------|------------------|---------------|-------|
| Diploma           | 29 (63.0%)       | 17 (37.0%)    | 46    |
| Bachelor          | 108 (50.2%)      | 107 (49.8%)   | 215   |
| Masters           | 9 (39.1%)        | 14 (60.9%)    | 23    |
| PhD               | 5 (31.2%)        | 11 (68.8%)    | 16    |
| Other (secondary) | 2 (66.7%)        | 1 (33.3%)     | 3     |

### Career–Field Mismatch by Employment Sector

Table 6 presents career–field mismatch disaggregated by employment sector, and the association is strong and highly significant ( $\chi^2 = 30.13$ ,  $p < 0.001$ ,  $df = 2$ ). Mismatch was highest in the private sector, where 60.6% ( $n = 123$ ) of graduates worked outside their field, compared with 50.0% ( $n = 12$ ) in the NGO sector and just 23.7% ( $n = 18$ ) in government. Public-sector employment thus offered the strongest field alignment, consistent with more formalised, credential-linked recruitment, whereas the large private sector, the main absorber of graduates, placed the majority in unrelated roles.

**Table 6. Career–Field Mismatch by Employment Sector ( $\chi^2 = 30.13$ ,  $p < 0.001$ ,  $df = 2$ )**

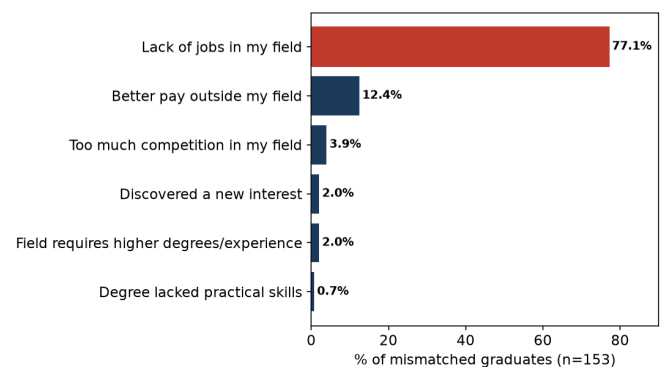
| Employment sector | Mismatched n (%) | Matched n (%) | Total |
|-------------------|------------------|---------------|-------|
| Private sector    | 123 (60.6%)      | 80 (39.4%)    | 203   |
| NGO               | 12 (50.0%)       | 12 (50.0%)    | 24    |
| Government        | 18 (23.7%)       | 58 (76.3%)    | 76    |

## Reasons for Working Outside the Field of Study

Table 7 presents, for the 153 mismatched graduates, the main reason they were working in a field different from their studies. The dominant reason by a wide margin was a lack of jobs in their field (77.1%, n = 118), followed at a distance by better pay outside the field (12.4%, n = 19) and excessive competition within the field (3.9%, n = 6). Reasons reflecting individual choice, discovering a new interest or needing higher degrees, were rare, and three respondents (2.0%) gave other reasons (unemployment, meeting living costs, joining a family business). This strongly demand-side pattern is reinforced by two further findings: 73.9% (n = 113) of mismatched graduates had never previously worked in their trained field at all, and 92.8% remained either actively searching for (41.2%, n = 63) or open to (51.6%, n = 79) field-relevant work; only 7.2% (n = 11) were not looking. Mismatch in Mogadishu is therefore largely involuntary, rooted in the absence of field-specific demand rather than in graduates' preferences (Ahmed, 2023; Guàrdia et al., 2021). Figure 4 ranks the reasons.

**Table 7. Reasons for Working Outside the Field of Study (Mismatched graduates, n = 153)**

| Main reason for mismatch                 | n (%)       |
|------------------------------------------|-------------|
| Lack of jobs in my field                 | 118 (77.1%) |
| Better pay outside my field              | 19 (12.4%)  |
| Too much competition in my field         | 6 (3.9%)    |
| Discovered a new interest                | 3 (2.0%)    |
| Field requires higher degrees/experience | 3 (2.0%)    |
| Degree lacked practical skills           | 1 (0.7%)    |
| Other                                    | 3 (2.0%)    |



*Figure 4. Main Reasons for Working Outside the Field of Study*

## Hiring Factors and University Preparedness among Matched Graduates

Table 8 presents, for the 150 matched graduates, the factors that helped them secure field-relevant work and their assessment of university preparation. Hiring was distributed across personal connections (44 respondents, 29.3%), specific skills (41, 27.3%), internships, and university reputation (each 32, 21.3%), with one respondent citing both a specific skill and a personal connection (0.7%), personal connection being the single most cited factor, echoing the role of social and clan networks documented in Somali labour-market studies (Ahmed, 2023). On

preparedness, 62.7% (n = 94) of matched graduates felt their university education had prepared them well, while 37.3% (n = 56) felt it had not fully prepared them (32.0% 'not everything', 5.3% 'not at all'), a non-trivial preparedness gap even among the successfully matched. Matched graduates rated the relevance of their skills to their current job at a mean of 3.92 (SD = 1.25) on a 1–5 scale, with 68.0% (n = 102) choosing 4 or 5.

**Table 8. Most Important Factor in Securing Field-Relevant Work (Matched graduates, n = 150)**

| Most important hiring factor           | n (%)      |
|----------------------------------------|------------|
| Personal connection                    | 44 (29.3%) |
| Specific skill                         | 41 (27.3%) |
| Internship                             | 32 (21.3%) |
| University reputation                  | 32 (21.3%) |
| Specific skill and personal connection | 1 (0.7%)   |

## Discussion

### A Labour Market Split Down the Middle

The headline result, a 50.5% career–field mismatch rate, places Mogadishu's graduate labour market among the most mismatched documented in the recent literature. It substantially exceeds the 41.5% reported in Ethiopian tracer studies (Herut, 2026) and the horizontal-mismatch levels typically reported in middle-income settings (Salas-Velasco, 2021; Kiss, 2024). That a graduate in Mogadishu is essentially as likely to work outside their field as within it confirms, with quantitative evidence, the structural mismatch long asserted qualitatively in Somali policy discourse (Ahmed, 2023; IOM, 2016).

### Field of Study as the Strongest Determinant

The field-level analysis ( $\chi^2 = 59.17$ ,  $p < 0.001$ ) is the study's most analytically important finding. The very high mismatch among medicine graduates (79.3%) alongside the low mismatch among computer science graduates (31.0%) inverts intuitive expectations and points to the structure of local demand: a fast-growing private digital and IT sector absorbs computing graduates, whereas the formal health system cannot absorb the volume of medical graduates being produced. This is consistent with Salas-Velasco's (2021) finding that field is a primary axis of mismatch, and it implies that enrolment planning must be tied to realistic sectoral absorption capacity.

### A Significant and Policy-Relevant Gender Gap

The 27-point gender gap (women 69.7% vs men 42.5%;  $\chi^2 = 17.45$ ,  $p < 0.001$ ) shows that the burden of mismatch falls disproportionately on women. This aligns with regional and global evidence that female graduates face steeper barriers to field-relevant employment (Herut, 2026; UNESCO GEM Report, 2024), and it indicates that gender-blind employment policy will leave a large, qualified segment of the workforce underutilised.

### Mismatch Is Involuntary, Not Chosen

That 77.1% of mismatched graduates cite a lack of jobs in their field, and 73.9% have never worked in their field at all, decisively locates the cause on the demand side. This is not a story of

graduates preferring other careers; it is a story of field-specific demand failure, echoing the employability-gap literature across East Africa (Guàrdia et al., 2021; Oluwajodu et al., 2015) and the wage-penalty evidence from comparable developing economies (Elamin, 2023; Wicaksono et al., 2023). The prominence of personal connections in hiring further suggests that even the matched outcomes depend partly on networks rather than purely on merit (Ahmed, 2023).

### **Education Level Offers Limited Insurance**

The absence of a significant education-level effect ( $p = 0.148$ ) tempers any assumption that further study is a reliable route out of mismatch in this market. Although mismatch fell somewhat at master's and PhD levels, the effect was not significant and rested on small cells. In a constrained labour market, additional credentials do not guarantee field-relevant absorption, a caution relevant to graduates weighing postgraduate study purely for employability reasons.

### **Limitations and Future Research**

Several limitations should be borne in mind. First, the study was confined to Mogadishu and the sample was recruited on the basis of availability and willingness to participate; it is skewed towards men (70.6%) and towards medicine (36.6%) and computer science (33.0%) graduates, so the results should not be generalised to all Somali graduates or to other

regions without caution. Second, mismatch was measured by a single self-reported item on whether the current job is directly related to the field of study; no objective occupation-field coding was applied, and responses are subject to interpretation and social-desirability bias. Third, the design is cross-sectional, so the associations reported describe co-occurrence rather than causation. Fourth, the bivariate analyses are unadjusted: field of study and sex overlap strongly in this sample (67 of the 89 women were medicine graduates), so part of the observed gender gap may reflect the field composition of the female sample rather than sex per se. Fifth, several education-level cells were small (PhD  $n = 16$ , other  $n = 3$ ), so expected counts below five occurred in that test and the result should be read as indicative.

Future research should draw multi-institution and multi-region samples, code occupations against fields of study using a standard classification, use multivariate models that adjust for field when estimating the sex effect, and adopt longitudinal tracer designs to follow graduates from graduation into field-relevant employment.

### **Conclusion**

This study provides the first comprehensive empirical examination of career-field mismatch among university graduates in Mogadishu, Somalia. Drawing on a survey of 303 graduates, it establishes that the labour market is split almost exactly down the middle: 50.5% of graduates ( $n =$

153) work outside their field of study, while only 49.5% are matched.

The analysis identifies clear and statistically significant fault lines. Mismatch is structured powerfully by field of study ( $\chi^2 = 59.17$ ,  $p < 0.001$ ), with medicine graduates most affected (79.3%) and computer science graduates least (31.0%); by sex ( $\chi^2 = 17.45$ ,  $p < 0.001$ ), with women bearing a disproportionate burden (69.7%); and by employment sector ( $\chi^2 = 30.13$ ,  $p < 0.001$ ). Education level, by contrast, offers no significant protection. The graduates' own testimony, a lack of jobs in their field (77.1%) and never having worked in their discipline (73.9%), makes clear that this mismatch is involuntary and structural.

These findings carry urgent implications. For Somalia's universities, the National Commission for Higher Education (NCHE), and the Ministry of Education, the results signal an over-supply of graduates in fields the local economy cannot yet absorb, and a curriculum–demand misalignment that wastes scarce human and financial capital. For regional and international partners under the East African Community (EAC), IGAD, and the Arab League, the evidence reinforces the case for coordinated investment in labour-market information systems, work-integrated learning, and gender-responsive employment policy. Closing Somalia's career–field gap is not merely an education question but a foundation for inclusive economic recovery.

## Recommendations

**For universities:** Align programme enrolments and curricula with realistic sectoral absorption capacity, especially by moderating intake into oversubscribed fields such as medicine and strengthening practice-oriented training and modernising curricula, including the integration of emerging technologies (Hirsi & Sharif, 2026). Embed mandatory internships, work-integrated learning, and employability skills (digital, communication, problem-solving) into every degree, digital-skills gaps persist even within Somali government institutions (Hussein & Sharif, 2025), and establish graduate tracer systems to monitor field-relevant employment outcomes over time.

**For the government:** Use accreditation and quality-assurance levers to tie new-programme approval to demonstrated labour-market demand. Build a national higher-education and labour-market information system that links graduate output to employment data, and prioritise gender-responsive interventions that specifically address the disproportionate mismatch faced by female graduates.

**For employers and industry:** Partner with universities on internships, apprenticeships, and curriculum co-design so that hiring rests on demonstrable skills rather than personal connections. Create structured graduate-entry pathways in growth sectors, and provide transparent, merit-based recruitment to widen

access for qualified women and under-networked graduates.

### **For regional and international partners:**

Through the EAC, IGAD, and the Arab League, support Somalia in developing labour-market data infrastructure, work-integrated learning programmes, and skills-anticipation mechanisms. Fund gender-responsive employability initiatives and regional graduate-mobility frameworks that help absorb field-specific surpluses across the wider East African labour market.

## **References**

- Ahmed, A. A. (2023). The reasons why the unemployment rate of graduates is increasing in Mogadishu-Somalia. *Journal of Developing Country Studies*, 7(2), 26–53. <https://doi.org/10.47604/jdcs.2116>
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
- Elamin, O. A. (2023). Overeducation wage penalty for university graduates: Evidence from the MENA region using machine learning techniques. *Middle East Development Journal*, 15(1), 151–188. <https://doi.org/10.1080/17938120.2023.2167482>
- Gelle, L. Y., Abshir, A., & Ali-Salad, M. A. (2021). Graduate unemployment in Somalia: Causes, socio-economic consequences and possible solutions. *Journal of Economics and Development Studies*, 9(3), 14–21. <https://doi.org/10.15640/jeds.v9n3a2>
- Guàrdia, L., Mancini, F., Jacobetty, P., & Maina, M. (2021). Graduates' employability skills in East Africa. *Journal of Teaching and Learning for Graduate Employability*, 12(2), 169–184. <https://doi.org/10.21153/jtlge2021vol12no2art988>
- Herut, A. H. (2026). Graduate employability in Ethiopian higher education: A decade of persistent gaps, policy incoherence, and unmet labor market demands (2013–2025). *Social Sciences & Humanities Open*, 13, Article 102636. <https://doi.org/10.1016/j.ssaho.2026.102636>
- Hirsi, A., & Sharif, A. (2026). Adaptation level of artificial intelligence (AI) in university curriculums: A case study on Mogadishu located universities. *Horn of Africa Journal of Social Science*, 4(Special Issue), 28–34. <https://doi.org/10.70806/ny0mhz54>
- Hussein, A., & Sharif, A. M. (2025). Assessment of digital skills and training in Somali government institutions. *Horn of Africa Journal of Social Science*, 3(4), 1–9. <https://doi.org/10.70806/jkhtfx87>
- International Organization for Migration (IOM). (2016). *Equipping Somalia's youth for the labour market*. IOM Somalia. <https://reliefweb.int/report/somalia/equipping-somalia-s-youth-labour-market>
- Issa-Salwe, A. M., Baadiyow, A. A., Warsame, A. H., & Osman, A. S. (2024). Integrating

- Somali higher education with the EAC educational system. *Advances in Social Sciences Research Journal*, 11(8), 114–126. <https://doi.org/10.14738/assrj.118.17386>
- Kiss, Z. (2024). Vertical and horizontal (mis)match of university degrees in the Hungarian labour market. *Humanities and Social Sciences Communications*, 11, Article 1699. <https://doi.org/10.1057/s41599-024-04203-x>
- Oluwajodu, F., Blaauw, D., Greyling, L., & Kleynhans, E. P. J. (2015). Graduate unemployment in South Africa: Perspectives from the banking sector. *SA Journal of Human Resource Management*, 13(1), Article a656. <https://doi.org/10.4102/sajhrm.v13i1.656>
- Salas-Velasco, M. (2021). Mapping the (mis)match of university degrees in the graduate labor market. *Journal for Labour Market Research*, 55, Article 14. <https://doi.org/10.1186/s12651-021-00297-x>
- UNESCO Global Education Monitoring Report (GEM Report). (2024, April 25). New UIS data show that the share of women in STEM graduates stagnant for 10 years. *World Education Blog*. <https://world-education-blog.org/2024/04/25/new-uis-data-show-that-the-share-of-women-in-stem-graduates-stagnant-for-10-years/>
- United Nations Development Programme (UNDP). (2012). *Somalia Human Development Report 2012: Empowering youth for peace and development*. UNDP Somalia. <https://hdr.undp.org/content/2012-somalia-human-development-report>
- Wicaksono, P., Theresia, I., & Al Aufa, B. (2023). Education–occupation mismatch and its wage penalties: Evidence from Indonesia. *Cogent Business & Management*, 10(3), Article 2251206. <https://doi.org/10.1080/23311975.2023.2251206>