



Analysis of Unemployment Among College Graduates and The Skill Gap in Surabaya

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ABSTRACT

This study analyzes the phenomenon of higher education graduate unemployment and skill mismatch in Surabaya City. As an economic hub in East Java, Surabaya faces a critical challenge where the increasing number of university graduates does not align with labor market absorption due to structural skill gaps and job mismatches. Using a qualitative literature study method, this article examines theoretical frameworks—such as human capital, structural unemployment, and skill mismatch—alongside relevant legal and regulatory frameworks, including Law No. 13/2003, Presidential Regulation No. 68/2022, and Surabaya Local Regulation No. 4/2016. The findings indicate that graduate unemployment is driven by a lack of practical soft skills, digital competencies, limited work experience, and unintegrated labor market information systems. The article proposes the implementation of the Link and Match Career Program (LMCP) as a strategic collaborative mechanism connecting local government, universities, and industry. LMCP aims to synchronize academic curricula, expand structured internships, promote skill certification, and optimize labor market forecasting to enhance graduate employability and achieve inclusive governance in Surabaya.

ABSTRAK

Penelitian ini menganalisis fenomena pengangguran lulusan perguruan tinggi dan kesenjangan keterampilan (skill mismatch) di Kota Surabaya. Sebagai pusat perekonomian di Jawa Timur, Surabaya menghadapi tantangan krusial di mana peningkatan jumlah lulusan perguruan tinggi belum berbanding lurus dengan penyerapan pasar kerja akibat kesenjangan keterampilan struktural dan job mismatch. Menggunakan metode studi literatur kualitatif, artikel ini mengkaji kerangka teoritis—seperti human capital, pengangguran struktural, dan skill mismatch—serta evaluasi regulasi ketenagakerjaan mencakup UU No. 13/2003, Perpres No. 68/2022, dan Perda Kota Surabaya No. 4/2016. Hasil kajian menunjukkan bahwa pengangguran sarjana dipicu oleh minimnya keterampilan praktis (soft skills), kemampuan digital, keterbatasan pengalaman, serta sistem informasi pasar kerja yang belum terintegrasi. Artikel ini merumuskan usulan Link and Match Career Program (LMCP) sebagai mekanisme kolaboratif strategis antara pemerintah daerah, perguruan tinggi, dan dunia usaha/dunia industri (DUDI) untuk menyelaraskan kurikulum, memperluas magang terstruktur, sertifikasi kompetensi, serta proyeksi pasar kerja demi terciptanya tata kelola ketenagakerjaan yang inklusif di Surabaya.

INTRODUCTION

Unemployment among college graduates is one of the strategic labor market issues that has consistently drawn the attention of the public and policymakers, particularly in metropolitan economic growth centers such as the city of Surabaya. As the capital of East

Java Province and a hub for business, trade, industry, and services, Surabaya boasts a highly dynamic concentration of higher education institutions, both public and private. The presence of these higher education institutions substantially produces thousands of educated graduates each year, with the hope that they will be absorbed by the business and industrial sectors. However, empirical evidence reveals a labor market paradox: the high number of college graduates is not automatically matched by an optimal rate of labor absorption in the local job market.

This phenomenon of educated unemployment is not solely driven by a limited number of job openings, but is closely linked to issues of work readiness, the relevance of higher education curricula, and the rapid shift in industry qualification standards. Haris et al. (2025) assert that unemployment among college graduates is influenced by an accumulation of systemic factors, including a skills mismatch with industry needs, economic growth that is insufficient to absorb the entire highly educated workforce, and an imbalance between the number of graduates and the availability of relevant job openings. These conditions demonstrate that holding a higher education degree is not yet an absolute guarantee that a graduate will immediately secure a job in their field of expertise.

One of the main obstacles faced by recent graduates seeking employment in Surabaya is the existence of a skills gap. This gap occurs when graduates' competency levels fall below the practical standards required by the industry. Although college graduates generally possess adequate theoretical academic knowledge, the modern workplace demands far more comprehensive qualifications. Companies need employees who are adaptable, possess effective interpersonal communication skills, are capable of collaborating in cross-disciplinary teams, are proficient in digital literacy and information technology, and demonstrate strong problem-solving skills under work pressure (CHALID, 2021). If these soft skills are not honed during their studies, graduates will face significant obstacles in navigating the selection and recruitment process.

In addition to the skill gap, the phenomenon of job mismatch further complicates the dynamics of the labor market in Surabaya. Job mismatch encompasses both vertical mismatch (university graduates working in positions that require only a high school education) and horizontal mismatch (graduates working in fields that are completely unrelated to their major). The impact of this mismatch is significant; Ningsih et al. (2025) show that job mismatch significantly reduces job satisfaction and erodes employee efficiency and performance. In a macro context, this mismatch results in the

underutilization of human capital, which negatively impacts regional economic productivity.

In today's era of digital transformation, corporate recruitment standards in Surabaya are evolving at a rapid pace. Industry stakeholders tend to prioritize job candidates who not only have a high GPA but also demonstrate tangible proof of job readiness, competency certifications, a portfolio of work, and strong personal branding on professional platforms. Candra et al. (2026) confirm that work readiness, soft skills training, and personal branding have a significant impact on the employability of recent graduates in Surabaya. Graduates' failure to adapt to these trends has a direct impact on their psychosocial well-being, triggering anxiety, a crisis of self-confidence, and even a "quarter-life crisis" due to social pressures and family expectations (Ramadhina & Sandra, 2026).

Given the urgency of this issue, this study aims to conduct an in-depth and systematic analysis of unemployment among college graduates and the skills gap in the city of Surabaya. The novelty and scientific contribution of this article lie in the inclusive governance approach, which integrates the evaluation of local labor regulations with the formulation of a strategic collaborative policy known as the Link and Match Career Program (LMCP). Through the LMCP framework, this study provides a formulative foundation for the Surabaya City Government, universities, and the industrial sector to build an adaptive, data-driven, and responsive labor ecosystem that meets the demands of the times.

LITERATURE REVIEW

1. Theoretical Frameworks of Graduate Unemployment and Skill Mismatch

Studies on educated unemployment base their analysis on several key theoretical frameworks in economics and public administration. First, the Theory of Structural and Frictional Unemployment. Structural unemployment occurs as a result of fundamental changes in the structure of the economy and rapid technological developments that are not offset by adjustments in the workforce's skills (Pratiwi, 2025). Advances in artificial intelligence (AI), industrial automation, and cloud computing are narrowing the space for conventional jobs, putting graduates who lack digital literacy at risk of being left behind (Candra et al., 2026). Meanwhile, frictional unemployment reflects the time lag required for graduates to search for and match their qualifications with available job positions in the market.

Second, the Skill Mismatch Theory. Hasibuan et al. (2021) explain that skill mismatch reflects an asymmetry between the qualifications, knowledge, and skills possessed by job seekers and the competency standards demanded by the labor market. Skill mismatch is categorized into two main forms: vertical mismatch (a mismatch in educational qualification levels) and horizontal mismatch (a mismatch between fields of study and job types). This phenomenon leads to inefficiencies in wage setting, decreased productivity, and increased turnover rates within companies.

Third, Human Capital Theory and Its Criticisms. Popularized by Becker (1994), this theory posits that investment in education and training will linearly increase an individual's capacity, labor productivity, and earning potential. However, in the context of labor market dynamics in developing countries, this assumption of linearity often fails. Feby et al. (2023) demonstrate that the accumulation of human capital through formal education alone does not automatically drive economic growth if the quality of education accessed is not relevant to the real needs of industry. This indicates that the quantity of degrees must be aligned with the quality of practical competencies.

Fourth, Labor Market Theory. Sudarmanto et al. (2025) emphasize that the interaction between the supply of labor from universities and the demand for labor from companies is profoundly influenced by the efficiency of information flows, wage policies, and government regulatory interventions. Information asymmetry in the local labor market often results in an abundant supply of college graduates not being efficiently absorbed by industries that actually need skilled workers.

2. Principles of Inclusive Governance in Labor Policy

From a public governance perspective, efforts to address educated unemployment must be guided by the principles of inclusivity and justice. The principle of social justice requires the state to ensure that all citizens, without exception, have equal access to decent work commensurate with their academic capabilities. The principle of educational relevance requires higher education institutions not to be isolated from the real world but to actively align their curricula with the dynamics of the labor market. Furthermore, the principles of productivity and competitiveness call for the creation of an ecosystem that fosters the generation of economic value-added based on innovation and local expertise.

3. Regulatory Context and Policy Governance in Surabaya

The implementation of labor policies in the City of Surabaya is governed by a hierarchy of laws and regulations ranging from the national to the local level. At the national level, Law No. 13 of 2003 on Labor establishes the right of every worker to acquire and improve their competencies through on-the-job training (Articles 9–12). In addition, Presidential Regulation No. 68 of 2022 on the Revitalization of Vocational Education and Vocational Training emphasizes the obligation for partnerships between educational institutions and the business and industrial sectors (DUDI) to address skill mismatches.

At the local level, the Surabaya City Government issued Local Regulation No. 4 of 2016 on the Implementation of Labor Affairs, which mandates the facilitation of local workforce placement, the organization of job fairs, and competency-based training. This policy is reinforced by Surabaya Mayor's Regulation No. 34 of 2022 on the "Resilient Youth Education Scholarship," which is now focused on supporting the development of students' competencies in strategic study programs needed by industries in East Java.

RESEARCH METHODS

This study employs a qualitative approach using a literature review and document-based policy analysis. These methods were chosen to comprehensively explore, analyze, and map the root causes of unemployment among college graduates and the skills gap, as well as to evaluate the regulatory framework in effect in the City of Surabaya. Secondary data collection was conducted through a systematic search of three groups of literature sources:

- a. Accredited Scientific Literature: Reputable national and international journals discussing theories of unemployment, skill mismatch, job mismatch, work readiness, personal branding, and employability (e.g., Haris et al., 2025; Candra et al., 2026; Ningsih et al., 2025; Ramadhina & Sandra, 2026).
- b. Regulatory Documents: Central and local regulations, including Law No. 13/2003, Presidential Regulation No. 68/2022, Surabaya City Regulation No. 4/2016, and Surabaya Mayor's Regulation No. 34/2022.
- c. Labor Data and Reports: Reports from the Central Statistics Agency (BPS), the Surabaya City Department of Labor, and regional planning documents.

Data analysis was conducted using descriptive-analytical and exploratory techniques through three main stages: (1) Data Reduction and Categorization, in which the collected literature was grouped based on thematic focus (causal factors, regulatory

analysis, and solution formulation); (2) Comparative Evaluation and Policy Matrix, which involves analyzing the strengths, weaknesses, and implementation gaps in existing regulations; and (3) Formative Synthesis, which involves developing a proposed inclusive policy framework titled the Link and Match Career Program (LMCP) along with its curriculum scope for the City of Surabaya.

RESULTS AND DISCUSSION

1. Analysis of Graduate Unemployment Dynamics and Skill Gap in Surabaya

The synthesis of empirical data and the literature indicates that the phenomenon of unemployment among college graduates in Surabaya stems from three main dimensions: (1) The Soft Skills Gap, in which college graduates possess adequate academic credentials but lack proficiency in communication, leadership, critical problem-solving, and teamwork (CHALID, 2021); (2) A Deficit in Digital Readiness and Personal Branding, where Surabaya's job market—dominated by the service sector and the creative economy—requires job seekers to have a track record of digital portfolios and professional personal branding (Candra et al., 2026); and (3) Information Asymmetry and Job Mismatch, where a mismatch between a field of study and available jobs negatively impacts job performance and satisfaction (Ningsih et al., 2025).

2. Evaluation of Existing Labor Regulations and Policy Gap Analysis

Although the City of Surabaya already has labor regulations in place, an evaluation of their implementation reveals that there remains a significant gap between legal requirements and the reality on the ground. An in-depth evaluation of the relevant regulations is presented in Table 1.

Table 1
Evaluation of Relevant Labor Regulations and Implementation Gaps in Surabaya

Regulations	The Rules Focus	Implementation Gap
UU No. 13 Tahun 2003 tentang Ketenagakerjaan	The right to employment, job training, and workforce skill development (Articles 9–12).	Vocational training still focuses on mid-level/basic vocational workers and does not yet target the specific competencies of college graduates.
Perpres No. 68 Tahun 2022 tentang Revitalisasi Vokasi	Collaboration between vocational higher education institutions and	Partnerships are still dominated by certain manufacturing sectors; they have not yet reached the modern

Regulations	The Rules Focus	Implementation Gap
	the business and industrial sectors.	service sector, IT, and the creative economy in an equitable manner.
Perda Kota Surabaya No. 4 Tahun 2016 tentang Penyelenggaraan Ketenagakerjaan	Facilitation of local job placement, job fairs, and online job boards in Surabaya.	Job vacancy information has not yet been integrated in real time with the database of college graduates in Surabaya.
Perwali Surabaya No. 34 Tahun 2022 tentang Beasiswa Pemuda Tangguh	Financial assistance for higher education tuition for high-achieving students and low-income residents.	The awarding of scholarships has not yet been fully tied to a commitment to structured internships and job placement in local industries.

Furthermore, a comprehensive analysis of the strengths and weaknesses of the regulations indicates the need for structural reforms. The matrix analyzing the strengths and weaknesses of the regulations is presented in Table 2.

Table 2
Analysis of Regulatory Strengths and Weaknesses in Surabaya Local Context

Policy Aspects	Strengths of Current Regulations	Weaknesses, and Limitations of Regulations
Legal Clarity	There is a strong legal foundation—ranging from national laws to local regulations—that guarantees the right to vocational training..	Regulations often overlap between the authority of the East Java Provincial Government (secondary education) and the Surabaya City Government (local labor affairs).
Local Innovation	The “Resilient Youth” Scholarship Initiative has proven effective in improving access to higher education for Surabaya residents.	Regulations do not yet require the industrial sector in Surabaya to periodically transfer technology and update curricula at higher education institutions.
Adaptability	The mandate to revitalize vocational education provides flexibility for adjusting practical curricula.	Enforcement of penalties against companies that fail to report job openings (the Mandatory Job Opening Reporting Act) remains weak at the local level.
Tripartite Partnership	Creating opportunities for collaboration between the city government, universities, and business associations.	The “speed gap” between changes in industrial technology and the bureaucracy involved in designing university curricula.

3. Philosophical, Sociological, and Juridical Foundations

The formulation of policies to address unemployment among college graduates in Surabaya is based on three main pillars: (1) Philosophical Foundation: Rooted in the

Twelfth and Ninth Principles of Pancasila, particularly the Principle of Social Justice for All Indonesian People, as well as Article 27, paragraph (2) of the 1945 Constitution, which requires the state to guarantee the right to work and a decent standard of living. (2) Sociological Foundation: Addressing the psychosocial anxieties of recent graduates, the “quarter-life crisis” (Ramadhina & Sandra, 2026), and the squandering of the younger generation’s potential due to job mismatches. (3) Legal Basis: Harmonizing Labor Law No. 13/2003, Presidential Regulation No. 68/2022, and Surabaya City Regulation No. 4/2016 within an integrated operational framework.

4. Strategic Policy Proposal: Link and Match Career Program (LMCP)

To bridge the gap between higher education institutions, local governments, and the industrial sector in Surabaya, this article proposes a strategic policy known as the Link and Match Career Program (LMCP). The LMCP is designed as a tripartite collaborative ecosystem with eight main pillars:

- a. **Implementation of an Integrated LMCP System:** The creation of a unified digital platform that connects data on college graduates, competency profiles, and projections of the industrial workforce needs in Surabaya in real time.
- b. **Synchronization of Academic Curricula:** Requiring a review of college curricula every two years with the involvement of local industry experts (Hertanto, 2026).
- c. **Enhancement of University Career Centers:** Transforming the role of campus career centers from merely disseminating job openings to serving as centers for soft skills development, personal branding, and professional portfolio creation (Candra et al., 2026).
- d. **Targeted Reskilling and Upskilling Programs:** Short-term intensive training for recent graduates in high-value fields (digital marketing, data analytics, AI tools, UI/UX, public speaking) (Ramadhina & Sandra, 2026).
- e. **Standardized Competency Certification:** Facilitation of subsidies for BNSP/international certifications for underprivileged college graduates through collaboration with the Surabaya City Government.
- f. **Structured Internship Framework:** A structured internship of at least 6 months with industry-standard mentoring and incentives for qualification conversion (Yanto et al., 2024).

- g. Youth Entrepreneurship Incubator: Entrepreneurship mentoring based on technological innovation for graduates who wish to create new jobs.
- h. Monitoring, Evaluation, and Administrative Sanctions: Periodic evaluation of the effectiveness of graduate placement, as well as administrative sanctions in the form of incentives or disincentives for partner companies participating in the regional service program.

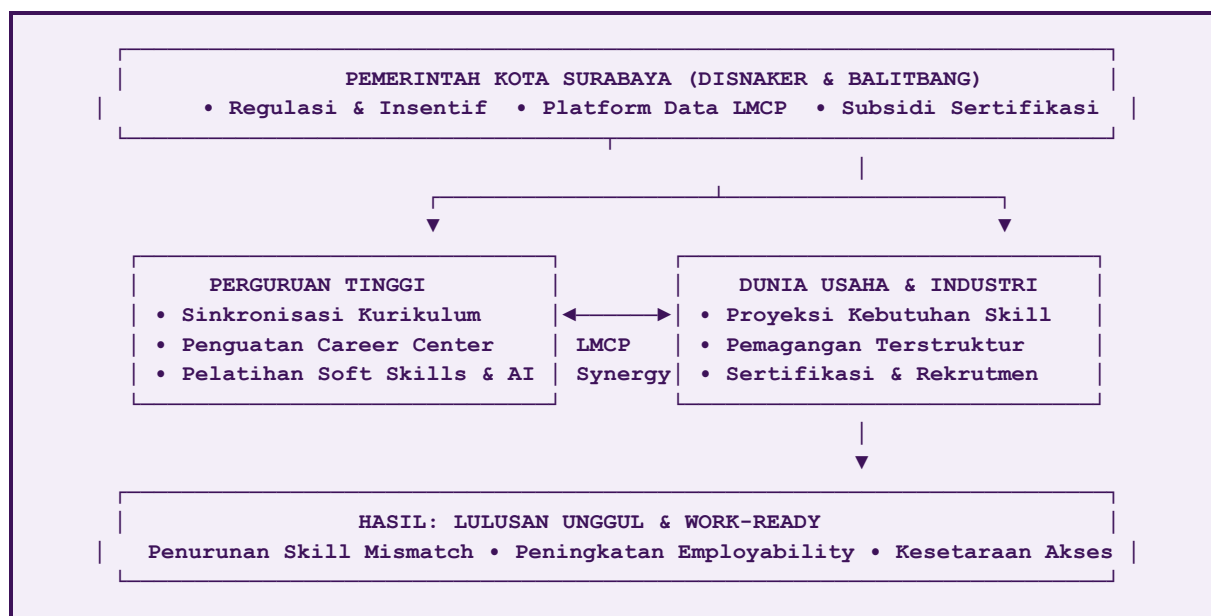


Figure 1. Conceptual Framework of Link and Match Career Program (LMCP) Governance Model in Surabaya

CONCLUSION

Based on the comprehensive analysis presented, it is concluded that the problem of unemployment among college graduates in Surabaya is a multidimensional systemic issue. This problem is not solely triggered by a quantitative shortage of jobs but is caused by a skills gap, widespread job mismatches, a lack of practical experience, and the lack of integration within the labor market information system. Although national and regional regulatory frameworks are in place, their implementation in Surabaya remains sector-specific and has not yet adapted to the pace of digital transformation in industry. Therefore, the implementation of collaborative policies through the Link and Match Career Program (LMCP) is a strategic priority for creating an inclusive, responsive, and sustainable labor market governance system.

1. Recommendations

Based on the research findings, several concrete steps are recommended for stakeholders in the City of Surabaya:

- a. For the Surabaya City Government: Immediately formulate a Mayor's Regulation regarding operational guidelines for the Link and Match Career Program (LMCP) and establish an integrated employment database system that connects universities, industry, and college graduates seeking employment.
- b. For Higher Education Institutions: Periodically revitalize the curriculum in collaboration with industry associations, restructure Career Centers into centers for employability development, and integrate soft skills training, personal branding, and artificial intelligence into extracurricular and co-curricular activities.
- c. For the Business and Industrial Sectors (DUDI): Create inclusive, structured internship opportunities; ensure transparency in recruitment qualifications; and actively participate in research and practical teaching programs on campus.
- d. For College Graduates (Fresh Graduates): Proactively enhance personal capabilities through reskilling and upskilling programs and competency certifications; build a professional personal brand; and cultivate adaptive mental resilience to navigate the dynamics of the job market.

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