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The Role of Industrial Policy in Promoting Employment in Ethiopia's Textile and Garment Industry: Evidence from Bole Lemi Industrial Park

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Abstract: *Industrial policy has become a strategic instrument for promoting industrialization, employment generation, and structural transformation in developing economies. This study examined the effectiveness of industrial policy in enhancing employment generation, job quality, and employment sustainability in Ethiopia's textile and apparel industry, with particular emphasis on Bole Lemi Industrial Park. A mixed-methods research design was employed, integrating quantitative survey data collected from 225 employees with qualitative interviews conducted with industrial park administrators and human resource managers. Quantitative data were analyzed using descriptive statistics and multiple regression analysis, while qualitative data were examined through thematic content analysis. The findings indicate that industrial policy has made a significant contribution to employment creation by attracting investment through tax incentives, infrastructure development, and investment facilitation measures. However, the increase in employment has not been matched by comparable improvements in job quality. Employees reported concerns regarding low wages, limited opportunities for skills development, inadequate job security, and unfavorable working conditions. The study further identified several structural challenges affecting sustainable employment, including unreliable infrastructure, foreign exchange shortages, weak domestic supply chain linkages, rising production costs, and inconsistent policy implementation. These constraints reduce firm competitiveness and limit the long-term effectiveness of industrial policy. The study concludes that although industrial policy has successfully expanded employment opportunities in Ethiopia's textile and apparel sector, its long-term developmental impact depends on improving the quality and sustainability of employment. Accordingly, the study recommends strengthening workforce skills, improving policy consistency, enhancing industrial infrastructure and logistics, promoting stronger linkages between industrial parks and domestic suppliers, and addressing foreign exchange constraints to improve industrial competitiveness and support sustainable employment growth.*

Keywords: Industrial policy; employment generation; job quality; employment sustainability; textile and apparel industry; industrial parks; Ethiopia.

1. INTRODUCTION

1.1 Background of the Study

Industrial policy has become a key strategy for promoting structural transformation, increasing productivity, attracting investment, and creating employment, particularly in labor-intensive sectors such as textiles and apparel. Many developing countries, including Vietnam, Bangladesh, and Cambodia, have successfully used export-oriented industrial policies to accelerate industrialization and generate employment. In line with these global trends and Sustainable Development Goal (SDG) 8, Ethiopia has prioritized industrial development through industrial parks and special economic zones to diversify its economy, attract foreign direct investment (FDI), expand manufacturing, and create decent employment opportunities, particularly for women and youth (Juhász et al., 2023; United Nations, 2015).

Ethiopia has implemented this strategy through successive national development plans, including the Growth and Transformation Plans (GTP I and II), by establishing industrial parks such as Bole Lemi, Hawassa, Kilinto, and Bole Lemi II. These parks have attracted international investors and generated thousands of manufacturing jobs while promoting technology transfer and skills development. For example, the World Bank-supported Competitiveness and Job Creation Project reported that more than 19,000 jobs were created in Kilinto and Bole Lemi II, with women accounting for approximately two-thirds of the workforce. Despite these achievements, persistent challenges including weak domestic supply chains, limited skilled labor, inadequate infrastructure, and low technological capability continue to constrain sustainable industrial transformation (World Bank, 2024; Ethiopian Investment Commission, 2023).

Although Ethiopia's industrial policy has contributed to employment growth, existing evidence suggests that increases in the number of jobs have not necessarily translated into quality or sustainable employment. Studies indicate that many workers in the textile and garment industry continue to experience low wages, limited career advancement, high employee turnover, and inadequate working conditions. Furthermore, external shocks, including changes in international trade preferences such as AGOA, have exposed the vulnerability of export-oriented employment. These

findings suggest that industrial policy evaluation should extend beyond job creation to include employment quality, sustainability, resilience, and workers' welfare (Abebe et al., 2024; Gebrehiwot et al., 2025; ILO, 2023).

Bole Lemi Industrial Park, Ethiopia's first operational industrial park, provides an appropriate setting for assessing the effectiveness of industrial policy in promoting sustainable employment. While the park has successfully attracted foreign investment and created substantial employment opportunities, there is limited empirical evidence regarding whether these jobs are inclusive, stable, and capable of supporting long-term socioeconomic development. Most previous studies have focused primarily on employment numbers rather than employment quality and sustainability. Therefore, this study seeks to examine the effectiveness of industrial policy in promoting sustainable employment at Bole Lemi Industrial Park by assessing both the quantity and quality of employment outcomes and identifying the factors influencing long-term employment sustainability.

1.2 Research Questions /or Hypothesis

- How much employment has Bole Lemi Industrial Park created in the textile and apparel sector, in terms of job creation, and workforce gender makeup?
- What is the level of employment created at Bole Lemi Industrial Park in terms of skill development possibilities, income levels, job security, and working conditions?
- How effective are industrial policy incentives and support mechanisms, including infrastructure provision, tax breaks, and investment facilitation, in recruiting textile and garment manufacturers and creating jobs at Bole Lemi Industrial Park?
- What are the primary limits and problems affecting job creation and the long-term viability of the textile and apparel industry at Bole Lemi Industrial Park?

1.3 Objectives of the Study

1.3.1 General Objective

This study's main goal is to evaluate how the Promotion, quality, and sustainability of jobs in Ethiopia's textile and apparel industry are impacted by the design and implementation of industrial policies, with a particular focus on Bole Lemi Industrial Park in Addis Ababa.

1.3.2 Specific Objective

- To find out how many jobs were created, the gender distribution of the workforce, and the skill levels of workers in the clothing and textile companies at Bole Lemi Industrial Park.
- To evaluate the caliber of jobs created at Bole Lemi In dustrial Park, paying special attention to working cond itions, job security, pay scales, and opportunities for sk ill development.
- To assess how well industrial policy incentives and support systems such as tax breaks, infrastructure development, and investment fac ilitation attract businesses and create jobs in the park.
- To determine the main obstacles and difficulties influencing the long-term viability of the textile and clothing sector in Bole Lemi Industrial Park as well as the creation of jobs.

2. METHODOLOGY OF THE STUDY

2.1 Description of the Study Area

The investigation was located in Addis Ababa's Bole Lemi Industrial Park. The park was created as part of Ethiopia's industrial park development plan, which was overseen by the Industrial Parks Development Corporation and the Ethiopian Investment Commission. Most of the companies that produced clothing and textiles there were export-oriented. The park served as an example of one of Ethiopia's early industrial park designs, which sought to create jobs, encourage exports, and draw in foreign direct investment (FDI) (Ethiopian Investment Commission, 2023).

2.2 Research Paradigm, Design and Approach

2.2.1 Research Paradigm

This study adopted a **pragmatic research philosophy** to examine the effect of industrial policy on employment creation in Ethiopia's textile and apparel sector, with a focus on Bole Lemi Industrial Park. Pragmatism was appropriate because it enabled the integration of quantitative evidence on employment outcomes with qualitative insights from workers and policymakers, providing a comprehensive and policy-relevant understanding of the research problem. Its methodological flexibility supported the use of mixed methods to address both measurable employment indicators and stakeholders' perspectives on policy effectiveness (Creswell & Creswell, 2018; Saunders et al., 2019).

2.2.2 Research Design

The study employed a case study research approach to examine how industrial policy influences employment creation, job quality, and sustainability within a real-world context. Bole Lemi Industrial Park was purposively selected because it is Ethiopia's first government-developed industrial park, a major textile and apparel manufacturing hub, and has a long operational history, making it an appropriate case for assessing the employment outcomes of industrial policy in Ethiopia's textile and apparel sector (Yin, 2018; World Bank, 2023).

2.2.3 Research Approach

This study used a mixed-methods approach (qualitative and quantitative) to thoroughly investigate how industrial policy affects the generation of jobs in Ethiopia's textile and apparel industry, specifically in Bole Lemi Industrial Park. The method is suitable because it provides a more thorough understanding of the phenomenon by capturing both quantitative outcomes (like the number of jobs, gender distribution, and wage levels) and qualitative insights (like job quality, policy effectiveness, and sector challenges) (Creswell & Creswell, 2018).

By contrasting and combining results from several data sources and techniques, triangulation was used. In particular, qualitative

data from interviews with employees and important stakeholders was examined in addition to quantitative data from surveys and official documents. The data were validated, consistency was cross-checked, and conclusions on employment outcomes and the efficacy of industrial strategy at the industrial park were strengthened by the convergence and divergence of these findings.

2.3 Types and Sources of Data

2.3.1 Types of Data

This study employed both quantitative and qualitative data to comprehensively assess the effects of industrial policy on employment creation at Bole Lemi Industrial Park. Quantitative data measured employment outcomes, workforce characteristics, and policy incentives, while qualitative data explored perceptions of job quality, working conditions, institutional support, and employment sustainability. Integrating both data sources enhanced the validity of the findings and provided a more comprehensive understanding of industrial policy outcomes (Creswell & Creswell, 2018; Saunders et al., 2019).

2.3.2 Sources of Data

2.3.2.1 Primary Data Sources

Businesses, workers, and decision-makers at Addis Ababa's Bole Lemi Industrial Park provided the study's primary data. In order to accurately capture actual employment situations, firm-level policy experiences, and institutional perspectives that were not fully represented in secondary reporting, primary data was necessary.

2.3.2.2 Secondary Data Sources

To supplement primary data, secondary data was gathered from publications on international development, official institutional reports, and business-level administrative records. Because they provide the macroeconomic environment, regulatory frameworks, and longitudinal employment patterns required to assess employment creation and sector sustainability, secondary sources were crucial to industrial policy and labor market research.

2.4 Sampling Design

This study examined the impact of industrial policy on job creation in Ethiopia's textile and apparel sector in Bole Lemi Industrial Park using a multistage sample approach. Because it included several units of analysis, such as businesses, workers, and key informants, the method was appropriate. First, Bole Lemi Industrial Park was chosen on purpose because of its significance to Ethiopia's industrial policy and the growth of the textile industry. Second, the park's textile and clothing companies were picked. Lastly, key informants were purposefully chosen based on their knowledge, and workers were chosen using random sampling. According to Saunders et al. (2019), this method improved representativeness and practicality and made it possible to incorporate both organizational and individual-level viewpoints.

2.4.1 Sample Size Determination

Cochran, W. G. (1977) is a suitable and often used technique for figuring out a statistically representative sample size for big populations. The formula is frequently used in survey research, social sciences, economics, and management studies since it takes population diversity, margin of error, and confidence level into account. Cochran's formula is used to determine the starting sample size for large populations. The formula is:

$$n0 = \frac{Z^2 p(1-p)}{e^2} \quad \text{----------(1)}$$

Where, n0= initial sample size,

Z= Z-value at desired confident level (1.96 for 95% confidence level),

p= estimated proportion of population,

e= the margin of error,

$$n0 = \frac{(1.96)^2 * (0.5)(0.5)}{(0.05)^2} = \frac{3.84 * 0.25}{0.0025} \quad \text{----------(2)}$$

$$n0 = \frac{0.96}{0.0025} = 384 \quad \text{----------(3)}$$

Thus, for a very large population which is not known, the required sample size (n0) is **384.**

For the finite population correction (required because N= 19,000 is known)

$$n = \frac{n0}{1 + \frac{n0 - 1}{N}} \quad \text{----------(4)}$$

Where, n= Adjusted sample size

n0= initial sample size

N= population size

$$\mathbf{n = \frac{384}{1 + \frac{384 - 1}{19000}}} \quad \text{----------(5)}$$

$$\mathbf{n = \frac{384}{1 + 0.02} = \frac{384}{1.02}} \quad \text{----------(6)}$$

$$\mathbf{n = 376.47 \approx 377} \quad \text{----------(7)}$$

Therefore, the recommended minimum sample size (n_0) used in this research is **376** Participants.

2.4.2 Data Collection Instruments

To fully achieve the research goals, this study used a combination of quantitative and qualitative data collection approaches, including structured questionnaires, key informant interview guides, document review checklists, and workplace observation checklists. These instruments were selected to ensure that sectorial challenges, worker characteristics, job quality, policy incentives, and employment creation were quantified in a valid, reliable, and context-appropriate way.

2.4.2.1 Structured Questionnaire for Employees

A representative sample of workers in the clothing and textile sectors of Bole Lemi Industrial Park were given a standardized questionnaire. Demographic data (e.g., gender, age),

employment details (job title, skill level, tenure), and opinions of job quality (working conditions, pay scales, job security, training opportunities) were all collected through the questionnaire. To standardize evaluation and enable quantitative analysis, Likert-type and categorical response questions were used (Creswell & Creswell, 2018).

The number of jobs held, gender distribution, skill categories (skilled/unskilled), satisfaction with working conditions, and perceived opportunities for advancement were some examples of indicators.

2.4.2.2 Key Informant Interview Guide

Semi-structured interviews were conducted with representatives of trade and investment organizations, business HR managers, industrial park managers, and policymakers. This guide looked closely at the implementation of industrial policy incentives (such as tax cuts, infrastructure investments, and regulatory support) and their impact on attracting investors and creating jobs. Open-ended questions allowed respondents to elaborate on institutional procedures, accomplishments, and bottlenecks (Kallio et al., 2 016).

The effectiveness of governmental incentives, institutional coordination, barriers to job growth, and strategic priorities for skill development were a few examples.

2.4.2.3 Document Review Checklist

Using a document review checklist, important data was systematically retrieved from government publications, employment statistics, policy documents, industrial park records, and investment agreements. This program made sure that primary data on compensation structures, gender ratios, policy incentives, and job creation were systematically compared with existing data. The checklist's instructions were based on each research objective's criteria, such as formal descriptions of incentive structures and anticipated versus actual employment creation (Bowen, G. A., 2009).

2.4.2.4 Workplace Observation Checklist

Structured workplace observations were conducted in a few selected organizations to assess working conditions, safety protocols, skill utilization, and the overall work environment. The availability of personal protective equipment (PPE), workplace ergonomics, training sessions, and employee amenities were all included in a pre-made checklist that was used for observations. Information from surveys and interviews was integrated with observation data to increase validity (Angrosino, 2007).

2.4.3 Data Validity and Reliability

2.4.4 Validity

To ensure data validity, the study used a number of methods to confirm that the instruments measured the intended constructs accurately. Job creation, gender distribution, and skill levels were cross-checked with HR data and standard labor metrics. The effectiveness of industrial policy and the quality of jobs were assessed using validated frameworks, triangulated data sources, and expert-reviewed surveys and interviews. Expert-reviewed, literature-informed guides were used to document sector viability challenges. Pilot testing, expert validation, and methodological triangulation enhanced overall content, construct, and criterion-related validity (Creswell & Creswell, 2018).

2.4.5 Reliability

To ensure reliability, the study employed consistent and reproducible data gathering techniques for every instrument. Scales such as skill-level classification and work quality measures were evaluated for internal consistency using Cronbach's alpha ($\alpha > 0.70$), and structured questionnaires were pilot tested in a comparable industrial setting. Semi-structured interviews with lawmakers, managers, and human resources personnel were conducted using standard operating methods. To ensure consistent theme interpretation throughout qualitative data analysis, inter-coder reliability was investigated. Additionally, triangulating data sources, including employee questionnaires, HR records, business reports, and observational data, increased the findings' stability and dependability. This ensured that the outcomes could be replicated and trusted in comparable situations (Golafshani, N., 2003).

2.5 Methods of Data Analysis

Quantitative data were analyzed using descriptive statistics, cross-tabulations, and multivariate regression to examine workforce characteristics and the effect of industrial policy incentives on employment outcomes, with analysis conducted using SPSS or STATA. Employment generation, job quality, and policy-related variables were measured using HR records, survey data, and Likert-scale indices, while qualitative interview data were analyzed through thematic content analysis to identify recurring themes related to policy effectiveness, job quality, and employment sustainability in the textile and apparel sector (Wooldridge, 2019; Hair et al., 2019).

2.6 Ethical considerations

In order to preserve the rights, dignity, and safety of everyone involved in evaluating employment creation, job quality, the efficacy of industrial strategies, and sector sustainability at Bole Lemi Industrial Park, this study adhered to established research ethics guidelines. Before any data was collected, legislators, managers, and employees were asked for their informed consent. A thorough explanation of the study's objectives, voluntary participation, and the freedom to discontinue participation at any moment without repercussions were all included in this consent. Particularly when talking about delicate topics like pay, job security, and policy performance, confidentiality and anonymity were scrupulously upheld by coding responses and removing identifiable personal or firm-level information from reports. Information was kept safe and used only for teaching purposes. Additionally, by getting official consent from the appropriate authorities and organizations before conducting fieldwork, the study avoided any harm, pressure, or conflict of interest.

3. RESULTS AND DISCUSSIONS

3.1 Response Rate

There were 376 questionnaires distributed overall, according to the sample size. Responses from employee questionnaires and experts' interviews. Employees and experts were given 376

questionnaires based on the sample size; 225 of them were returned and examined. Three (3) experts offered to be interviewed when invited to do so. The following is the response rate for the distributed questionnaires: Response rate = (number of completed surveys divided by the number of surveys distributed) * 100% = (232/376) * 100% = 61.71% ≈ 62% as a result, the response rate is 62%. This response rate indicates good participant engagement, which improves the accuracy and dependability of the study's conclusions.

3.2 Employment and Workforce Profile at Bole Lemi Industrial Park

3.2.1 Gender Analysis

Table 1: **gender of the responder**

		Frequency	Valid Percent	Cumulative Percent
Valid	male	84	37.3	37.3
	female	141	62.7	100.0
	Total	225	100.0	

Sources: Survey (2026) SPSS output

According to the poll, there is a definite female majority in the sample, with 62.7% of respondents being female and 37.3% being male.
Overall, the data shows a gender imbalance that should be taken into account when interpreting the data because the higher presence of women may affect responses to other survey factors.

3.2.2 Job Category Analysis

Table 2: Job category of the respondent

		Frequency	Valid Percent	Cumulative Percent
Valid	Production operator	124	55.1	55.1
	Supervisor	46	20.4	75.6
	Technician	21	9.3	84.9
	Administrative	27	12.0	96.9
	Managerial	7	3.1	100.0
	Total	225	100.0	

Sources: Survey (2026) SPSS output

Production operators account for the majority of responders (55.1%), followed by supervisors (20.4%), administrative personnel (12.0%), technicians (9.3%), and managers (3.1%).
The results primarily represent the viewpoints of frontline workers because operational-level employees make up the majority of the sample. Because it restricts higher-level strategic representation, the low percentage of management and technical professionals should be taken into account when interpreting the results.

3.2.3 Trends in Employment Change Analysis

Table 3: Trends in Employment Change in the Firm since Establishment

		Frequency	Valid Percent	Cumulative Percent
Valid	Significantly increased	129	57.3	57.3
	Moderately increased	66	29.3	86.7
	No significant change	30	13.3	100.0
	Total	225	100.0	

Sources: Survey (2026) SPSS output

The firm's job expansion is strongly perceived, according to the poll results. Employment has increased overall, according to 86.7% of respondents (57.3% strongly and 29.3% somewhat), while 13.3% see no significant change.
Only a tiny percentage of employees perceive employment stability, indicating that the company has seen significant worker expansion over time, reflecting organizational growth and greater performance.

Generally, the quantitative results demonstrated that although Bole Lemi Industrial Park has produced job opportunities, workers' skill development, training, and long-term job retention are still restricted, especially when it comes to training efficacy, career advancement, and job security. These conclusions are corroborated by the qualitative responses from HR managers, which show that many workers start the textile and apparel industry with poor skill levels and receive insufficient ongoing training, which has a detrimental impact on performance, productivity, and retention. This consistency between survey and interview data indicates that workforce development and long-term job sustainability issues continue despite employment growth, which is closely related to the study's goal of increasing employment and workers' skill levels.

3.3 Descriptive Analysis

Table 4: Descriptive Statistics

	N	Mean	Std. Deviation

job secure	225	3.45	1.129
salary	225	3.82	1.033
Training	225	3.36	1.126
infrastructure	225	1.91	.774
Policy inconsistency	225	1.97	.574
Valid N (list wise)	225		

Sources: Survey (2026) SPSS output

Although the comparatively high standard deviation indicates variations in job security experiences between organizations or workers, the descriptive data demonstrate that respondents generally had a moderate sense of job security (Mean = 3.45, SD = 1.129), indicating that most employees feel comfortable in their jobs. Compensation fairness is the most positively evaluated element with very constant replies, with respondents strongly agreeing that their compensation is fair in relation to their workload (Mean = 3.82, SD = 1.033). Similar to this, training and performance enhancement (Mean = 3.36, SD = 1.126) shows that respondents somewhat concur that training enhances their performance, although the modest mean implies that training efficacy is not consistently felt. Industrial park infrastructure, on the other hand, has a very low rating (Mean = 1.91, SD = 0.774), indicating a significant infrastructural constraint and strong disagreement that infrastructure supports productivity. Similarly, respondents consistently view policy instability as a significant barrier, as evidenced by the negative rating of policy inconsistency discouraging long-term investment (Mean = 1.97, SD = 0.574) with comparatively little variance. Overall, the results indicate that external factors especially infrastructure and policy consistency are major barriers to productivity and long-term industrial development, even when internal employment circumstances like pay, job security, and training are seen favorably.

3.4 Job Quality at Bole Lemi Industrial Park

Job quality represents a fundamental dimension of industrial policy effectiveness because the success of industrialization should be evaluated not only by the number of jobs created but also by the quality of employment provided. Decent employment encompasses safe working conditions, reasonable working hours, job security, fair compensation, and employee welfare, all of which contribute to sustainable industrial development and workforce productivity. Accordingly, respondents were asked to evaluate key dimensions of job quality using a five-point Likert scale ranging from strongly disagree to strongly agree. The results provide important evidence regarding employees' perceptions of their working conditions and the extent to which industrial policy has contributed to decent and sustainable employment.

Table 5: Job Quality at Bole Lemi Industrial Park

Job Quality Indicator	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Workplace safety	6.2	29.3	26.7	22.2	15.6
Working hours are reasonable	16.4	63.6	16	3.6	0.4
I feel secure in my job	2.3	25.3	16.4	36.9	19.1
Layoffs are uncommon	5.3	22.2	14.7	37.8	20
Salary is fair relative to workload	0	15.6	16.9	37.3	30.2
Overtime payment is fairly provided	8.4	72	16	3.1	0.4
Additional employee benefits are provided	6.7	55.6	26.7	8.9	2.2

The findings reveal considerable variation across the different dimensions of job quality. Employees reported positive perceptions regarding working hours, overtime compensation, and the provision of additional employment benefits, suggesting that organizations generally comply with labor regulations related to working time and compensation practices. However, workplace safety received mixed evaluations, indicating that occupational health and safety standards require further improvement. More importantly, respondents expressed substantial concerns regarding job security, the likelihood of layoffs, and the fairness of their salaries, with the majority indicating dissatisfaction in these areas. These findings suggest that although industrial policy has successfully expanded employment opportunities, improvements in employment quality have not progressed at the same pace.

These findings support the Decent Work Framework of the International Labour Organization (ILO), which argues that employment should be assessed not only by the availability of

jobs but also by job security, fair income, safe working conditions, and social protection (ILO, 2013). Similarly, Human Capital Theory emphasizes that stable employment, adequate compensation, and supportive working environments improve employee motivation, productivity, and long-term organizational performance (Becker, 1993). The findings are also consistent with empirical studies conducted in Ethiopia's textile and apparel sector. Abebe et al. (2024) and Gebrehiwot et al. (2025) reported that while industrial parks have created significant employment opportunities, workers continue to face low wages, limited career advancement, high labor turnover, and employment insecurity. Likewise, the World Bank (2024) noted that Ethiopia's industrial parks have contributed substantially to job creation but highlighted the need to strengthen employment quality, improve labor conditions, and enhance workforce retention to ensure that industrial policy delivers sustainable and inclusive development. These results therefore indicate that future industrial policy should prioritize not only employment expansion but also the quality, security, and sustainability of jobs created.

3.5 Impact of Policy Incentives on Investment and Employment

Industrial policy incentives play a central role in attracting investment, improving firm productivity, and promoting sustainable employment. The effectiveness of these incentives depends not only on fiscal measures such as tax incentives but also on the availability of reliable infrastructure, efficient public services, investment facilitation, and supportive government policies. To assess the effectiveness of these policy instruments, respondents evaluated ten key dimensions of industrial policy using a five-point Likert scale ranging from strongly disagree to strongly agree. The findings provide insights into the extent to which current policy incentives support investment and employment growth at Bole Lemi Industrial Park.

Table 6: Industrial Policy Dimension

Industrial Policy Dimension	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Tax incentives reduce operating costs	3.1	20.9	17.8	35.6	22.7
Tax incentives influence firms' investment decisions	17.8	48.9	11.6	18.2	3.6
Industrial park infrastructure improves productivity	29.8	54.2	11.1	4.9	0
Electricity supply is reliable	3.1	4.9	12.4	36.4	43.1
Water supply is adequate	4.9	18.7	17.3	26.7	32.4
Transport and logistics systems are efficient	0	4.9	7.1	49.8	38.2
Government support simplifies business registration	7.1	23.1	23.1	32	14.7
Export facilitation services are effective	3.1	23.6	28.9	39.1	5.3
Industrial policy effectively promotes job creation	1.8	15.1	28	40	15.1
Government support enhances firm competitiveness	0.9	20.9	15.1	43.1	20

The findings reveal that the effectiveness of industrial policy incentives varies considerably across different policy dimensions. Respondents expressed strong agreement that industrial park infrastructure contributes to productivity, with more than four-fifths acknowledging its positive impact, while tax incentives were also widely recognized as influencing firms' investment decisions. These results indicate that fiscal incentives and industrial infrastructure remain important mechanisms for attracting investment and supporting industrial expansion. However, respondents expressed overwhelmingly negative perceptions regarding the reliability of electricity supply, adequacy of water services, efficiency of transport and logistics systems, export facilitation services, government support for business registration, and the contribution of industrial policy to job creation and firm competitiveness. These findings suggest that although investment incentives exist, weaknesses in infrastructure and institutional support

substantially reduce their effectiveness in promoting sustainable industrial development and employment.

These findings are consistent with the theoretical arguments of New Institutional Economics, which emphasizes that effective industrial development depends not only on financial incentives but also on the quality of institutions, public infrastructure, and governance mechanisms that reduce transaction costs and improve business performance (North, 1990). Likewise, Porter's Competitive Advantage Theory argues that reliable infrastructure, efficient logistics, and supportive government policies enhance firm productivity and international competitiveness (Porter, 1990). Empirically, the findings support the World Bank (2024), which reports that Ethiopia's industrial parks have attracted investment but continue to face significant constraints related to infrastructure reliability, utility shortages, and weak institutional coordination. Similarly, UNIDO (2022) and the International Labour Organization (2023) found that inadequate electricity, water supply, transport systems, and administrative inefficiencies undermine firm productivity, export performance, and employment sustainability in developing economies. The qualitative evidence from the Industrial Park Administration Manager further reinforces these quantitative findings by highlighting that infrastructure deficiencies, utility interruptions, and logistical bottlenecks continue to limit the effectiveness of industrial policy incentives. Collectively, these findings indicate that strengthening infrastructure, improving public service delivery, streamlining investment facilitation, and enhancing policy implementation are essential for maximizing the contribution of industrial policy to investment, firm competitiveness, and sustainable employment creation.

3.6 . Challenges to Sustainable Growth and Job Creation

Achieving sustainable industrial growth requires more than creating employment opportunities; it also depends on addressing the structural and operational challenges that influence firm productivity, investment, and long-term employment sustainability. To identify the major constraints affecting industrial development at Bole Lemi Industrial Park, respondents were asked to evaluate six key challenges using a five-point Likert scale ranging from strongly disagree to strongly agree. The results provide evidence on the extent to which these factors constrain sustainable growth and job creation within the textile and apparel sector.

Table 7: Challenges to Sustainable Growth and Job Creation

Challenge	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
High labor turnover reduces productivity	24.4	52	12	11.1	0.4
Foreign exchange shortages affect production	30.7	38.2	19.6	8.9	2.7
Global competition threatens business sustainability	10.7	56	17.8	15.6	0
Rising input costs reduce profitability	22.7	51.6	11.6	13.8	0.4
Infrastructure disruptions affect operations	31.1	57.3	10.2	1.3	0
Policy inconsistency discourages long-term investment	16.9	69.8	12.4	0.9	0

The findings indicate that respondents perceive several significant barriers to sustainable industrial growth and employment creation. Infrastructure disruptions emerged as the most critical challenge, with 88.4% of respondents agreeing that interruptions in electricity, transport, water, and communication services negatively affect business operations. Policy inconsistency was also identified as a major constraint, as 86.7% believed that unstable government policies discourage long-term investment. Similarly, high labor turnover (76.4%), rising input costs (74.3%), foreign exchange shortages (68.9%), and increasing global competition (66.7%) were widely recognized as factors that reduce productivity, profitability, business sustainability, and employment stability. These findings suggest that although industrial policy has stimulated investment and employment creation, persistent structural constraints continue to undermine the sustainability of industrial development.

The findings are consistent with the Industrial Competitiveness Theory, which argues that sustainable industrial growth

depends on a supportive business environment characterized by reliable infrastructure, macroeconomic stability, efficient markets, and predictable government policies (Porter, 1990). Likewise, New Institutional Economics emphasizes that institutional quality, policy consistency, and efficient public services reduce uncertainty and encourage long-term private investment (North, 1990). Empirical studies also support these findings. The World Bank (2024) identifies unreliable infrastructure, foreign exchange shortages, and policy uncertainty as major constraints to the performance of Ethiopia's industrial parks. Similarly, UNIDO (2022) and the International Labour Organization (2023) report that high labor turnover, increasing production costs, inadequate infrastructure, and weak institutional support reduce firm competitiveness and limit the capacity of industrial parks to generate sustainable employment. The qualitative evidence obtained from industrial park managers further corroborates the survey findings by highlighting inadequate wages, limited workforce skills, infrastructure deficiencies, and market dependence as major obstacles to productivity and long-term business sustainability. Collectively, these findings demonstrate that strengthening infrastructure, ensuring macroeconomic and policy stability, improving labor retention, and reducing production costs are essential for enhancing the long-term effectiveness of industrial policy and achieving sustainable employment growth in Ethiopia's textile and apparel industry.

3.7 Correlation Analysis

The correlation coefficient indicates how strongly two variables have a linear relationship. Correlation analysis is a helpful statistical tool for determining the degree and direction of relationships between variables, according to Roemer et al. (2021). The degree of a linear link between two variables may be determined using the correlation coefficient. In order to evaluate the associations between the independent and dependent variables, a correlation analysis will be performed.

3.7.1 The Relationship between Variables

Table 8: Correlation of the variables

		Job Security	Salary	Training	Infrastructure	Policy inconsistency
Job Security	Pearson Correlation	1	-.225**	-.073	.164*	.143*
	Sig. (2-tailed)		.001	.277	.014	.032
	N	225	225	225	225	225
Salary	Pearson Correlation	-.225**	1	.021	-.137*	-.159*
	Sig. (2-tailed)	.001		.757	.040	.017
	N	225	225	225	225	225
Training	Pearson Correlation	-.073	.021	1	.057	.043
	Sig. (2-tailed)	.277	.757		.392	.525
	N	225	225	225	225	225
Infrastructure	Pearson Correlation	.164*	-.137*	.057	1	.165*
	Sig. (2-tailed)	.014	.040	.392		.013
	N	225	225	225	225	225
Policy inconsistency	Pearson Correlation	.143*	-.159*	.043	.165*	1
	Sig. (2-tailed)	.032	.017	.525	.013	
	N	225	225	225	225	225
**. Correlation is significant at the 0.01 level (2-tailed).						

Sources: Survey (2026) SPSS output

Several weak but statistically significant correlations between the investigated variables are shown by the correlation data. There is no significant correlation between job security and training, although it has modest positive correlations with industrial park infrastructure (r = 0.164, p = 0.014), policy inconsistency (r = 0.143, p = 0.032), and wage fairness (r = -0.225, p = 0.001). Additionally, there is no significant correlation between salary fairness and training, although it is weakly and adversely correlated with infrastructure (r = -0.137, p = 0.040), job security, and policy inconsistency (r = -0.159, p = 0.017). There is no statistically significant correlation between training and performance improvement and any

variables, suggesting that it functions independently in this model. Infrastructure in industrial parks is adversely correlated with compensation fairness but weakly and favorably correlated with job security and policy inconsistencies ($r = 0.165$, $p = 0.013$). This suggests that infrastructure issues are linked to poorer satisfaction and governance concerns. In a similar vein, policy inconsistency shows a negative correlation with wage fairness but a weak positive correlation with infrastructure and job security, suggesting that policy instability somewhat lowers compensation satisfaction while being associated with more general systemic problems. While infrastructure and policy inconsistency are significantly interrelated external elements impacting the work environment, all correlations are modest (below 0.30), indicating limited but significant linkages.

CONCLUSIONS AND RECOMMENDATIONS

3.1 Conclusions of the Study

The study concludes that industrial policy has made a significant contribution to employment generation in the textile and apparel sector at Bole Lemi Industrial Park, demonstrating its effectiveness as a catalyst for industrialization and job creation in Ethiopia. The findings indicate that policy instruments, particularly tax incentives, infrastructure development, and investment facilitation, have successfully attracted investment and expanded employment opportunities within the sector. However, the evidence also reveals that while industrial policy has been effective in increasing the quantity of jobs, it has been less successful in improving their quality. Persistent challenges related to wages, job security, skill development, and working conditions continue to limit the realization of decent and sustainable employment. Furthermore, structural constraints—including unreliable infrastructure, foreign exchange shortages, weak linkages with domestic industries, and inconsistent policy implementation—pose significant risks to long-term employment sustainability and industrial competitiveness. Overall, the study concludes that although industrial policy has largely achieved its objective of promoting employment creation, its long-term developmental impact will remain constrained unless greater emphasis is placed on improving job quality, strengthening institutional capacity, and addressing the structural barriers affecting sustainable industrial growth.

3.1 Recommendations of the Study

Based on the findings, the study recommends that the Government of Ethiopia and industrial park administrators prioritize improving the quality and sustainability of employment alongside job creation. This requires strengthening labor standards through competitive wage structures, regular salary adjustments aligned with the cost of living, improved workplace safety, and enhanced employee welfare programs. Expanding industry-oriented skills development through stronger partnerships between industrial parks, Technical and Vocational Education and Training (TVET) institutions, and universities, together with structured career development opportunities, would further improve workforce productivity and retention. The study also recommends strengthening policy consistency by ensuring stable and predictable industrial policies that enhance investor confidence and support long-term investment decisions. In addition, improving the reliability of electricity, water, transport, and logistics infrastructure is essential for increasing industrial productivity and reducing operational costs. To enhance the competitiveness and sustainability of the textile and apparel sector, policymakers should promote stronger linkages between industrial parks and domestic suppliers, encourage local sourcing of production inputs, and establish more effective foreign exchange allocation mechanisms for export-oriented firms to ensure uninterrupted production and sustained employment growth.

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