

Ethiopia
Productivity
Report



Ethiopia Productivity Report

Near-final Presentation

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FDRE Policy
Studies Institute
(PSI)



政策研究大学院大学
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FOR POLICY STUDIES

Introduction

- ❑ Joint research by PSI (Ethiopia) and GRIPS (Japan) conducted over 2018-2019 and funded by JICA and PSI.
- ❑ The first comprehensive study on Ethiopia's productivity using national and international data with peer country comparison and firm survey.
- ❑ The main objectives are to (i) disseminate key facts about Ethiopian productivity; and (ii) offer inputs to the preparation of next national development plan and strategy.
- ❑ The main authors are Dr. Kidanemariam Berhe Hailu (PSI), Dr. Mulu Gebreeyesus (PSI) and Prof. Kenichi Ohno (GRIPS).
- ❑ The final printed version will be available in early 2020. The current version is complete except copy-editing, style-editing and final check and revision.

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Past productivity policies are reviewed; manufacturing database is re-constructed; time-series and sub-sectors are analyzed; international comparison is made; the wage-productivity nexus is examined

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Survey method and sample firms are explained; results for labor mindset and quality are explained; management practices are studied; policy and external impediments are identified

6. Policy measures to enhance productivity

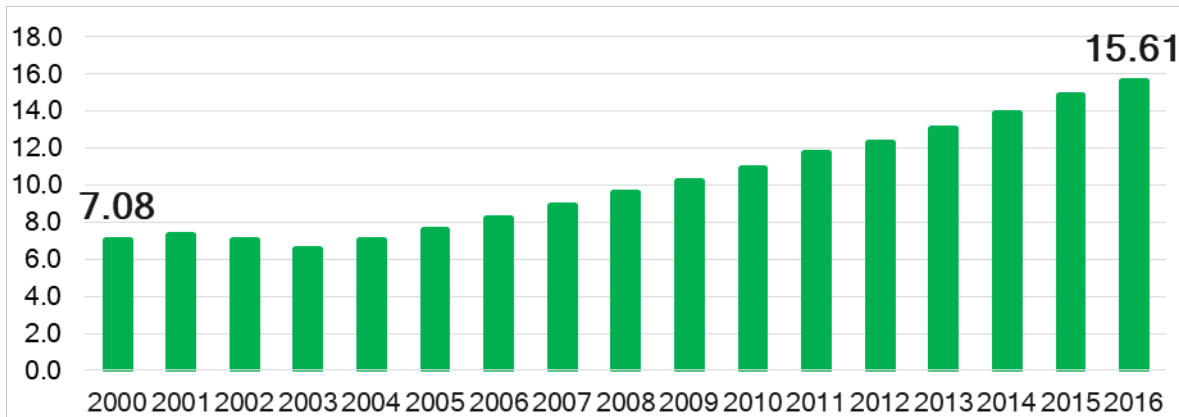
Ten recommendations for new policy directions

Ten Uncovered Facts

1. Reasonably high productivity growth but low absolute level
2. Heavy investment as a main driver of labor productivity
3. Limited labor mobility from low- to high-productivity activities
4. Fear of *premature de-industrialization* as rural labor migrates to services
5. Diverse performance within manufacturing
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7. Ethiopian workers are trainable in skills, but attitude and discipline are lacking
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1. Reasonably high productivity growth but low absolute level

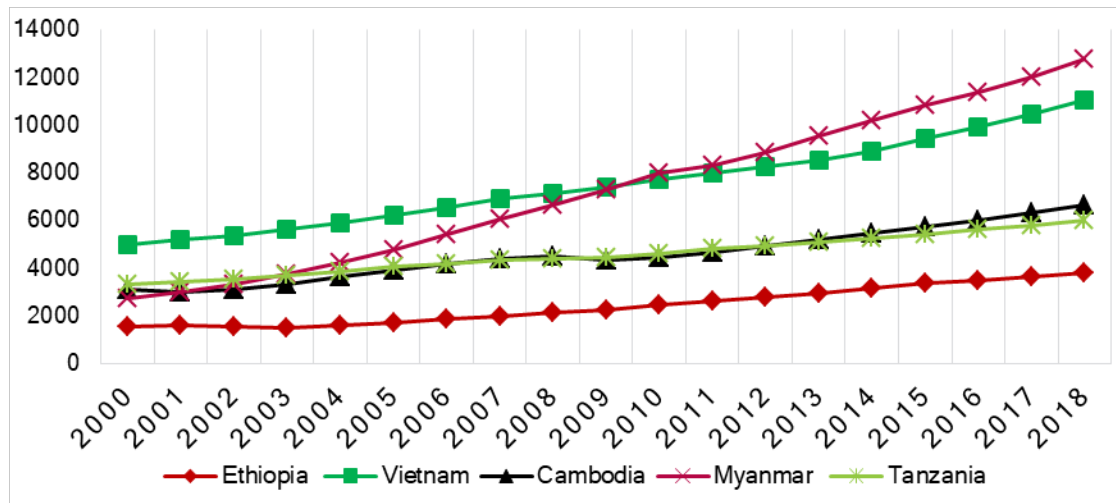
Economy-wide labor productivity ('000 Birr), 2000-2016



Ethiopia's labor productivity grew 4.94% per annum during 2000-2016.

Source: Authors' calculation based on data from NPC and WDI.

Ethiopia's labor productivity in international comparison

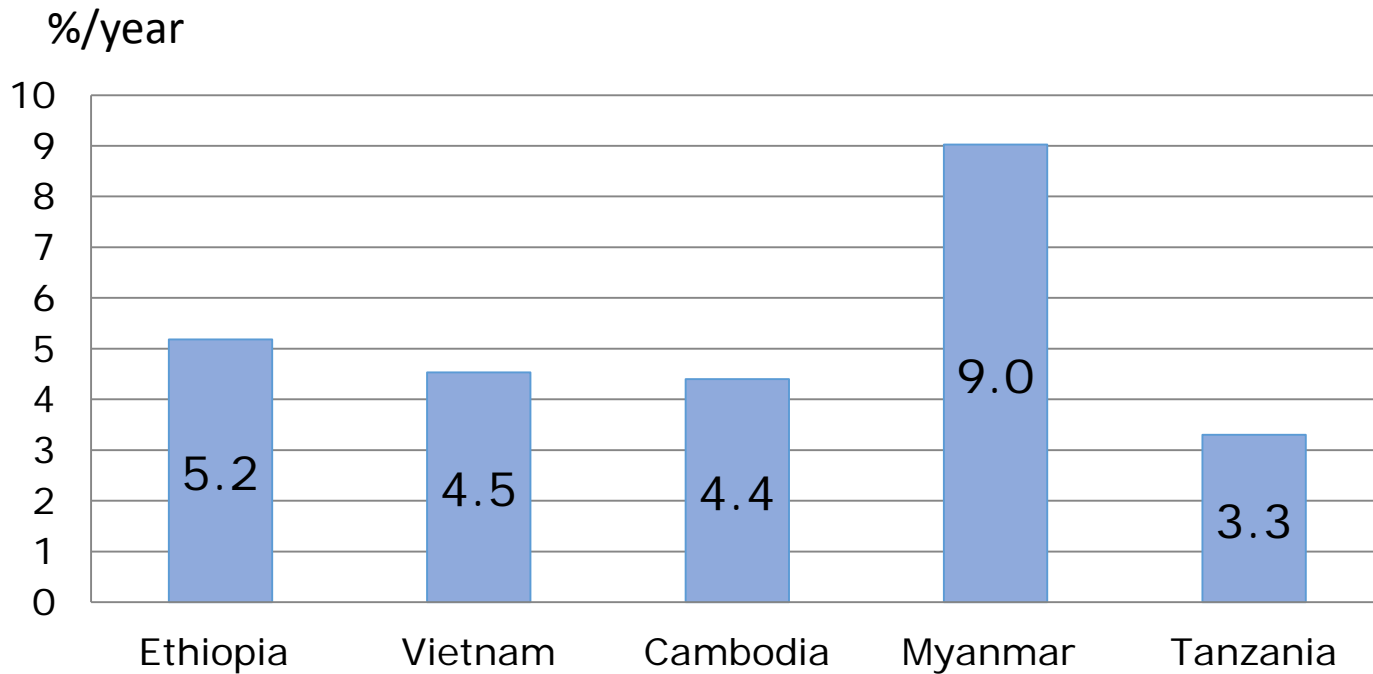


However, Ethiopia's labor productivity level is still low even among latecomers.

Source: Author's computation from ILO's economy-wide labor productivity.

Ethiopia's labor productivity growth is higher than Vietnam, Cambodia or Tanzania but lower than Myanmar

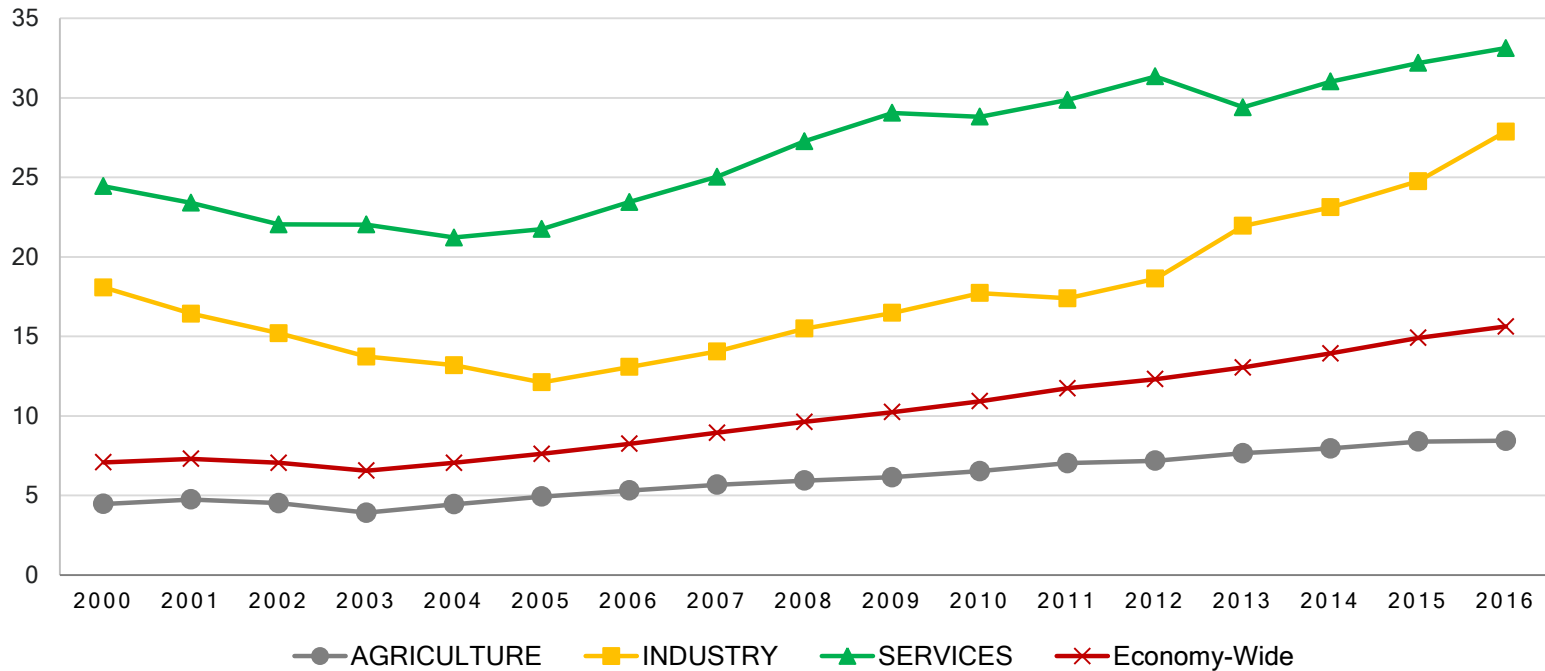
Labor Productivity Growth (2001-2018)



Source: Authors' calculation from ILO's economy-wide labor productivity.

Large sectoral variation in labor productivity

Ethiopia's labor productivity by major sectors ('000 Birr, 2011 prices)



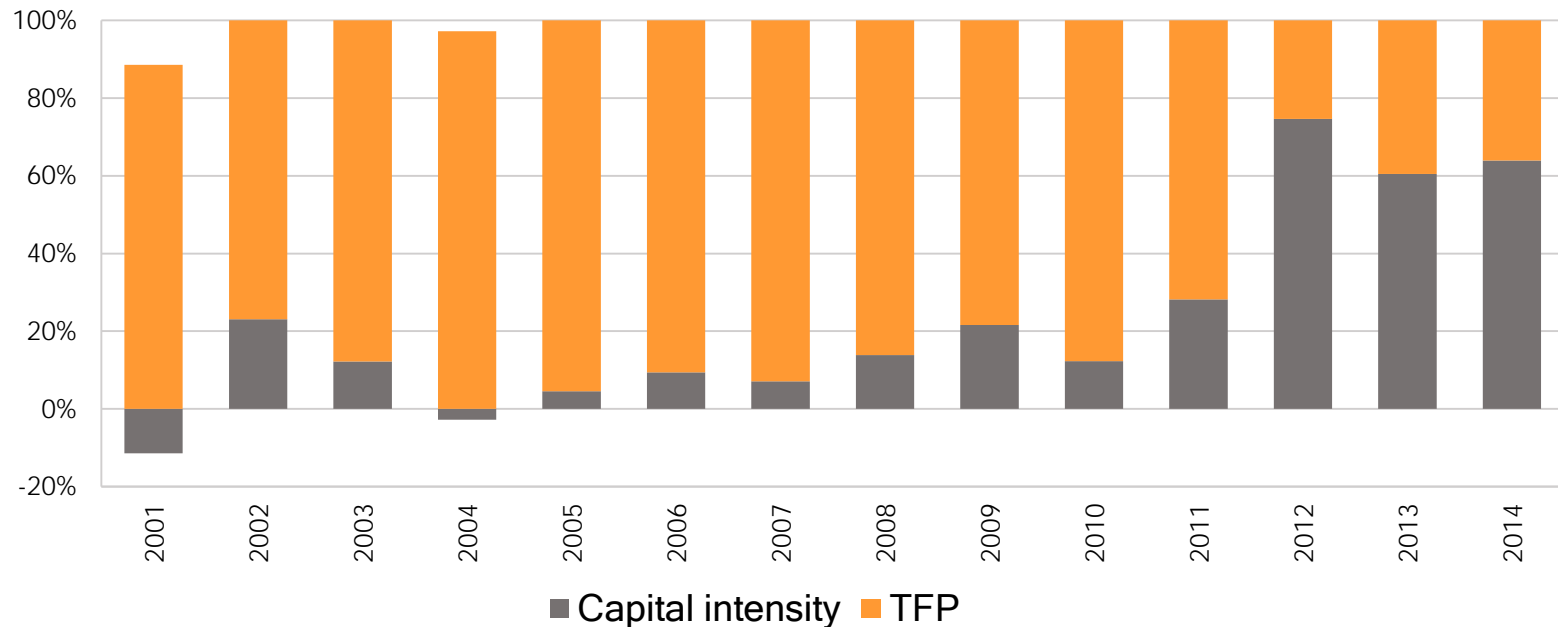
Source: Authors' calculation based on PDC data and World Bank's WDI.

- **The service sector stands out in labor productivity level.**
- **In 2016, services and industry respectively had labor productivity 3.9 and 3.3 times higher than agriculture.**
- **Large sectoral productivity gaps mean large potential gain from structural transformation (labor migration from low to high sectors).**

2. Heavy investment as a main driver of labor productivity

Growth of TFP, labor productivity and capital intensity

Note: Labor productivity = capital intensity + TFP



Source: Authors' calculation based on PDC data, World Bank's WDI and the Penn Tables.

Recently, the driver of labor productivity has shifted from TFP growth to capital deepening. That is, true efficiency improvement slowed while heavy investment in infrastructure and other physical assets raises labor productivity (more machines and buildings per worker). This situation is not sustainable.

3. Limited labor mobility from low- to high-productivity activities

Decomposition of labor productivity growth by shift-share method

	Productivity Growth	Sources of Labor Productivity Growth			Contribution Shares to Labor Productivity Growth (%)		
		Within effect	Shift Effect	Interaction Effect	Within effect	Shift Effect	Interaction Effect
2004-2007	7.9	21.7	4.6	0.5	81.0	17.0	2.0
2008-2011	6.6	14.2	7.2	0.5	64.7	32.9	2.4
2012-2016	6.0	15.7	9.9	1.3	58.3	36.9	4.8
2004-2016	6.6	79.5	26.7	15.5	65.3	21.9	12.7

Source: Authors' computation from PDC data and World Bank's WDI.

- Initially, labor productivity was largely driven by *within-effect* (efficiency increase in each sector) but its contribution gradually declined. More recently, *shift-effect* (labor migration from low to high productivity sector) became larger.
- Even so, Ethiopia's internal labor migration is not as active as in high growth performers in East Asia.
- Declining *within-effect* contribution is worrisome. For rapid structural transformation, both *within-effect* and *shift-effect* should be more dynamic and complementing one another.

4. Fear of premature de-industrialization as rural labor migrates to services

Decomposition of labor productivity growth by shift-share method

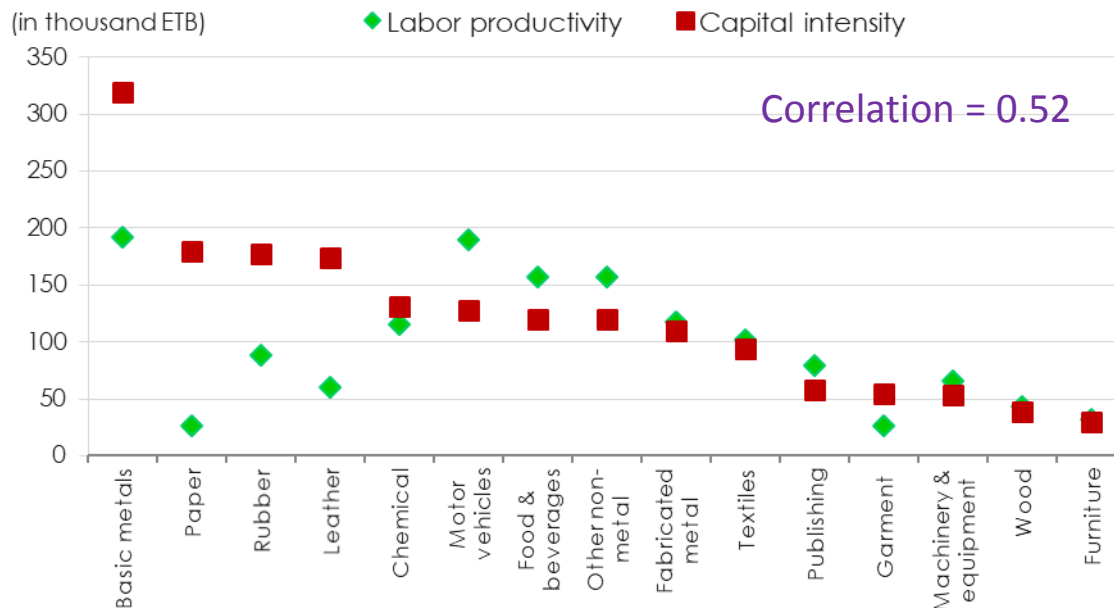
	Sources of labor productivity growth (%)			Contribution share to labor productivity (%)		
	Agriculture	Industry	Service	Agriculture	Industry	Service
Within effect	46.31	12.14	21.05	58.25	15.28	26.48
Shift Effect	-8.03	5.89	28.82	-30.08	22.08	108.00
Interaction Effect	-7.21	6.56	16.16	-46.47	42.28	104.18

Source: Authors' computation from PDC data and World Bank's WDI.

- **Looking at sectors, agriculture was the greatest contributor to overall productivity growth followed by services. Industry had the lowest contribution.**
- **Agricultural labor moves mostly to services, and only modestly to industry.**
- **Ethiopia's internal labor migration not only is small, but does not follow the standard pattern of agriculture to industry (and only later to services). This is a sign of "premature de-industrialization" which many middle income economies face.**
- **Structural transformation is not visible (unlike East Asia) despite continued high growth and government's long support for manufacturing.**
- **Data is unable to identify concrete service sub-sectors that receive rural labor. But they may be largely low-tech services rather than high-value professional services.**

5. Diverse performance within manufacturing

Labor productivity and capital intensity by sub-sector



Source: authors' calculation based on the CSA's LMSMI Survey and PDC data.

- **Motor vehicles, basic metals, fabricated metal, food & beverages have high labor productivity while garment, wood, textiles, furniture, leather & footwear have low labor productivity. However, the results should be interpreted with much caution because they also reflect factors other than efficiency.**
- **Capital-intensive sub-sectors show high labor productivity because workers have more machinery to work with. But this does not mean such workers are efficient by each industry's standard.**
- **Each sub-sector is a mixture of traditional and modern techniques, and large-scale production and family-based proprietorship (aggregation problem).**

6. The risk of losing wage-productivity balance

Labor productivity and real and nominal wages in 2015

Source: authors' calculation using UNIDO INDSTAT 2 2018, ISIC Revision 3.

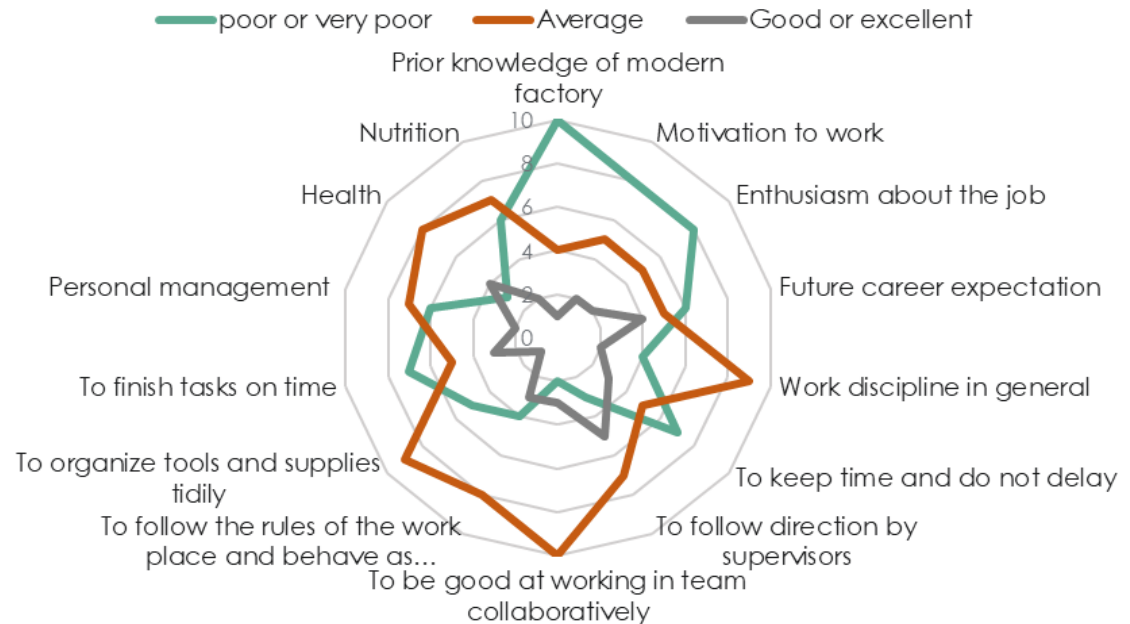


- For sound growth, wage and labor productivity must be balanced. Aggressive wage hikes damage competitiveness while wage suppression lowers workers' living standard. Ideally, labor productivity should rise strongly, and wage should rise at the same pace as labor productivity (as in Japan in the 1960s).
- Ethiopia's manufacturing labor productivity and wages are both low. Low wage alone is not enough to attract high-quality FDI unless labor productivity is enhanced far above the current level.
- The minimum wage setting must be based on economic data and scientific reasoning, not on whose voice is loudest. Data quality must also be improved.

7. Ethiopian workers are trainable in technical skills, but attitude and discipline are lacking

Labor mindset: rating by managers

Source: PSI productivity study survey (2018).



- **Garment workers are “over-qualified” with 60% completing high school or above. Firms report they are quick learners of technical skills.**
- **What is severely lacking is the development of soft skills, which includes industrial work discipline and motivation.**
- **Meanwhile, workers are very unhappy with the low wage and poor working conditions. They do not regard the garment job as only transitory.**
- **Housing is especially critical for garment workers who are predominantly young women. Refusal to do overtime is not only due to low compensation but also security problems in going home late.**

8. Foreign methods in improving workers

Foreign factory managers bring different cultures and methods from home countries. This may improve enterprise management in Ethiopia but it may also raise tension with local workers.

- On the positive side, workers may be improved by various methods including (i) top-down order and punishment, (ii) corporate family oneness, (iii) mindset reform through instruction and persuasion, and (iv) mindset reform through monetary rewards and incentives. In addition, some FDI firms mobilize (v) Ethiopian line supervisors as interface between foreign management and Ethiopian labor.
- These approaches are considered, and sometimes even tried, by FDI garment factories in Hawassa, Bole Lemi, and Mekelle. The results vary from firm to firm. Systematic research on foreign method adoption is desired.
- On the negative side, some foreign managers impose their methods without due respect to local customs and conditions, causing friction. Meanwhile, Ethiopian managers unexposed to global business practices exhibit weaknesses in purpose, responsibility, global orientation, learning consistency, and time management. Both must learn and improve.

9. Locational differences in worker type

Location	Rate of attrition per year		Rate of absenteeism
	Volunteer attrition	Fired	
Bole Lemi	84%	2%	9%
Hawassa	35%	3%	6%
Mekelle	27%	5%	2%

Source: PSI productivity study survey (2018).

- **Urban industrial parks, with many other job opportunities nearby, suffer more from labor shortage and footloose labor than rural industrial parks. Migrant workers are dominant in urban areas while workers commute from local villages in rural areas.**
- **Factory wages are naturally higher in urban areas due to higher urban prices and because migrant workers need to rent rooms and send money home.**
- **This dual geographical pattern is clearly visible in Asia as well as in Ethiopia. Bole Lemi is highly urban while Mekelle is rural. Hawassa is in between.**

10. Impediments to productivity improvement outside factories

Ethiopian manufacturing firms face many policy-related problems and external impediments which are beyond their control. Our interviewees say the following are very serious barriers to business.

- Shortage of foreign currency
- Unstable power supply
- Slow and inefficient logistics
- Bureaucratic customs clearance
- Unavailability of materials, supplies and spare parts
- Law-based labor headaches concerning minimum wage, overtime limits, leaves, and workers' income tax

(Some of the above are being addressed by government)

The government is working hard on the World Bank's Ease of Doing Business ranking, which is good, but this deals mainly with the speed and cost of administrative procedures. Other impediments noted above must also be tackled.

Ten Recommended Policy Directions for Productivity Enhancement

POLICY FRAMEWORK

1. Establish a policy organization and an operational organization
2. Improve data collection and publication
3. Set medium-term targets

POLICY ACTION AREAS

4. Adjust investment policy for proper pace and more private projects
5. Speeding up structural transformation
6. Maintaining wage competitiveness
7. Deepen and broaden Kaizen into a National Productivity Movement
8. Construct an effective enterprise support system (especially for SMEs)
9. Simultaneous pursuit of productivity and ethical standards
10. Transforming the mindset of workers and management