



Employment Impact Assessment of Infrastructure Investments: Results from Rwanda and Ghana

STRENGTHEN: Global Knowledge Sharing Workshop





Why focus on infrastructure?



- **Critical for development**
 - Widely acknowledged and critical constraint in many countries
 - Infrastructure investment gap for achieving SDGs estimated to run several *USD trillion annually*
- **Important role and influence of government and public policy**
 - Investments by government
 - PPPs, Blending and conditions for enabling private sector investment
- **Decent Employment in Construction Sector**
 - Infrastructure investments and employment creation-especially as a countercyclical measure and long term impacts
 - Addressing decent work deficits in construction sector
- **Supporting private sector development**
 - SMEs as employers are ILO constituents
 - Infrastructure works can in turn provide significant market opportunities for SMEs.
 - Working out of informality
- **Skills development**
 - Central to improving employment, productivity and wages in the sector



Infrastructure in STRENGTHEN



- Selected as one of the Global Themes
- Interest from countries for initiatives to assist with understanding and quantifying employment impacts of their infrastructure investments: **Employment Impact Assessments**
- Specific policies and programmes in each country identified by project stakeholders
- Global component: review and development of additional methodologies to assess employment impacts



What are the types of questions we try to answer when doing EmplAs?



Who gets the jobs?

men, women, youth,
disabled

**Where are the jobs
being created?** urban,
rural, regions, districts

**What kinds of condition and
contracts?** (permanent,
temp: monthly, weekly, daily,
none, informal?, benefits?

**How many
jobs?** person-
days, FTE, Job
opportunities,
durations

What are the characteristics of those who get the jobs?

formerly unemployed, school
leavers, recent graduates,
professional, artisans,
technicians, skilled, years of
experience

**What are the indirect and
induced employment
effects?** How many jobs are
created in related sectors?
What kinds of jobs?

**What can we say about
the long-term effects of
infrastructure on
employment?** Does the
completed infrastructure
further support
employment creation?



Study Approach and methodology



- Combination of Project level data collection and Input Output/ Social Accounting Matrix multiplier analysis
 - Data collection from contractors and government departments (clients) on projects
 - Consultation with local engineers and construction sector experts
 - Calculate labour and material inputs for projects, as well as employment output ratios
 - Create a separate sub account within the construction sector of the Social Accounting Matrix
 - Calculate subsector employment multipliers



Rwanda: Road Sector Investment S





Policy Goals

- Employment: Create 200,000 off-farm jobs per annum
- Road sector:
 - Improve the road network to ensure that all farms are within 2 km distance of all-weather roads,
 - Will require rehabilitating or upgrading 30 000 km of roads
 - *The National Feeder Roads Policy and Strategy (NFRPS) of 2017* estimates on average US\$73 million will be required per annum between 2017 and 2027 to do this.

REPUBLIC OF RWANDA



MINISTRY OF INFRASTRUCTURE

NATIONAL FEEDER ROADS POLICY AND STRATEGY





Employment Objective in the Roads Strategy:



“Presently, there are many underemployed farmers, therefore, this policy intends to create off-farm jobs opportunities for the unemployed and underemployed farmers to maintain and improve the existing road network through labour based methods (HIMO).”

Combined rate of unemployment and time related underemployment for those who participated in subsistence agriculture:
55.1% LFS 2017

But what could the employment impact of taking this approach be?



Key results

- Spending equivalent to USD 1 million on labour-intensive feeder roads would create up to 850 off-farm FTE vs 350 FTE using more capital intensive methods
- Main difference lies in direct job creation- only a small difference in the values of the multipliers – indirect effects
- For construction sector as a whole 550 FTE per USD 1 million, of these half are direct- other half indirect-induced would be direct jobs:
- ***For every job created in the construction sector, one additional job is created in the rest of the economy.***



Anticipated effects of the adopted Feeder Road Strategy



- The employment effect of this Feeder Road strategy was estimated to be between **10 000 and 24 000 additional FTE off-farm jobs per annum**, depending on the extent to which labour-based methods of construction will be used.
- Equivalent to **5 to 12%** of national target and **4 per cent of all off-farm** employment.
- Significance in local context:
 - Low unemployment= high underemployment (hours worked): This work is likely to be taken up by far more people- so benefits would be spread to many more people
 - Wage rate paid in construction in rural areas higher than agricultural wage rate- (20 to 30%)
 - Opportunities for shifting from agriculture into a more productive sector- even if only temporarily, but for some people long-term



Employment Effects of Social Housing Construction in Ghana





Social Housing in Ghana



- Shortage of affordable housing in Ghana- National Housing Policy includes investment in social housing
- In addition to affordable housing, job creation also included as an objective in the policy
- Through Ministry of Works and Housing: planned investment between 2018 and 2020, of GHS5,162 million (About USD 1,186 million) in housing projects
- To benefit about 21,500 families
- What are the anticipated job creation effects of this policy?



On-site construction employment - person months



2.1%, Security guards and cleaners

2.1%, Project managers

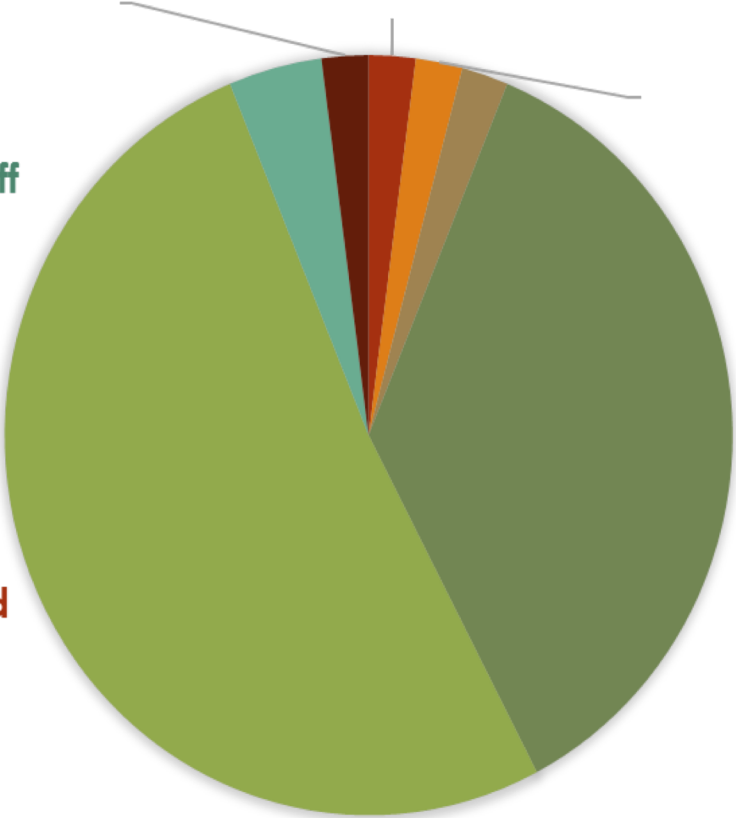
2.1%, Engineers

2.1%,
Technicians

36.1%, Skilled
labour

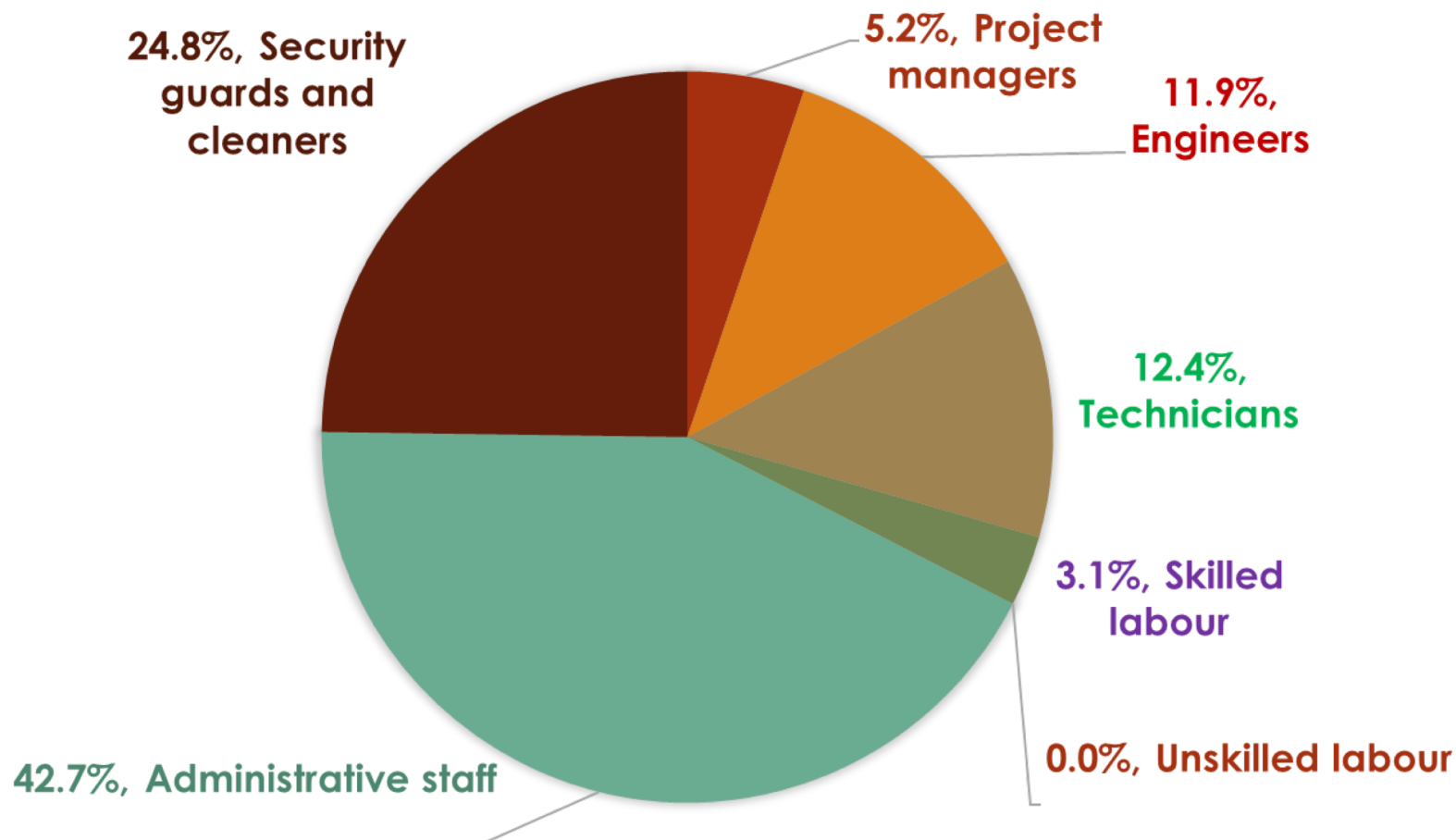
51.4%, Unskilled
labour

4.1%, Administrative staff





Construction Supervision-person months





Employment creation per unit:



Direct Jobs
created per
housing unit:

- 4.3 FTE per housing unit

Total Direct obs
created per USD
1 million invested
in social housing:

- 112 FTE per USD 1 million



Jobs in supervision



1. Construction supervisors are formal workers and have benefits which include:

- Social security,
- Transportation benefits
- Health insurance
- Annual and sick leaves
- Annual performance bonus.

2. Average monthly earnings of construction supervisors is USD569





Jobs on site- Unskilled and Skilled Labour



1. Average monthly wages for unskilled labour: USD287
 - Almost 5 x minimum monthly wage in Ghana USD60.14)- (and what security guards on same project are being paid)(**Really unskilled?**)
2. Average monthly wages for skilled labour was USD398
3. **ZERO** female employment!
4. Skilled and unskilled workers had limited benefits. (only all risk insurance), short-term, casual contracts.
 - All Categorised as informal according to Ghanaian official definition (more than 90% of employment in Ghana is informal)





Findings on employment effects



Output multipliers:

Social Housing: 2.6.

Construction Sector 1.8

For entire Social Housing Portfolio

- **Direct employment 39,000 FTEs**
 - All in the construction sector
 - Average wage USD 322 (Higher than both national average and minimum wage)
- **Indirect employment 48,000 FTEs**
 - (Without jobs in agriculture and wholesale and retail)
- **Induced employment 67,000 FTEs**
 - (Without jobs in agriculture and wholesale and retail)
- **Total employment effect 164,000 FTEs**
 - Direct, indirect, and induced effects
- **Why exclude indirect agriculture and Wholesale and Retail employment?**
 - Very low apparent productivity in this sector
 - Underemployment in agriculture (average weekly hours worked **26 hours**)
 - Wholesale and retail 91 % informal described as consisting to a large degree of “roaming, hawking and small sales outlets by the side of the road”



Some general findings



- Important sector for government impacting on employment; considerable private sector investment in fast developing urban areas in many cities
- Studies establish a basis for integrating employment objectives, setting targets as well as monitoring and reporting
- Attractive to youth- but limited involvement of women
- Infrastructure needs to be looked at from an aggregate point of view: not as a project, but a sustained investment through a number of projects each year
- Allows low skilled workers to enter into a more productive sector-even if more labour-intensive approaches are used
- While wages (and productivity) tend to be higher than comparable work of similar skill levels- other deficits remain: Informal, Social Security, Occupational Health and Safety, Opportunities for skills development
- Skills problems, in particular with regards to finishing and installations- wage to material inputs ratio skewed, high risk.
- Opportunity for career development: learning on the job, additional training, artisans
- Difference in multipliers: higher in Ghana and more potential to increase local supply in Rwanda