Evaluation of AfDB Road and Port Projects (2012–2019)
Cluster Evaluation Report
IDEV conducts different types of evaluations to achieve its strategic objectives.
Evaluation of AfDB Road and Port Projects (2012–2019)

Cluster Evaluation Report

October 2021
**ACKNOWLEDGEMENTS**

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IDEV Project Cluster Evaluation, October 2021

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The overarching objective of the African Development Bank Group is to spur sustainable economic development and social progress in its regional member countries (RMCs), thus contributing to poverty reduction. The Bank Group achieves this objective by mobilizing and allocating resources for investment in RMCs and providing policy advice and technical assistance to support development efforts.

**About Independent Development Evaluation (IDEV)**

The mission of Independent Development Evaluation at the AfDB is to enhance the development effectiveness of the institution in its regional member countries through independent and instrumental evaluations and partnerships for sharing knowledge.

**Independent Development Evaluation (IDEV)**

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Photo Credit: AfDB Group’s Transport Projects and ancillary components on Flickr
# Contents

Abbreviations and Acronyms  v  
Executive Summary  1  

## Introduction  7  
- Rationale, Purpose and Scope of the Evaluation  7  
- Approach, Methods, and Limitations  8  

## Overview of the AfDB Transport Sector Portfolio  13  
- Transport Sector Volume and Trends  13  
- Geographical Distribution  14  
- Sources of Financing  15  

## Project Cluster Performance  17  
- Relevance  17  
- Coherence  21  
- Effectiveness  22  
- Efficiency  29  
- Sustainability of Results  33  
- Additionality  35  

## Assessment of Cross-cutting Issues  39  
- Gender  39  
- Climate  39  
- State Fragility  41  

## Conclusion and Lessons  43  
- Conclusion  43  
- Lessons  45  

## Annexes  49
List of Figures

Figure 1 Illustration of project summative scoring per evaluation criterion
Figure 2 Shares of total approvals for each sector 2012–2019
Figure 3 Sub-sectors volumes of approvals (2000–2011 and 2012–2019)
Figure 4 Summative project ratings – Relevance
Figure 5 Summative project ratings – Coherence
Figure 6 Summative project ratings – Effectiveness
Figure 7 Summative project ratings – Efficiency
Figure 8 Summative project ratings – Sustainability
Figure 9 Summative project ratings – Additionality

List of Tables

Table 1 Projects selected for in-depth assessment
Table 2 Projects selected for desk review
Table 3 Summary table of achievement of project outputs (main infrastructure works)
Table 4 Summary table of achievement of project outputs (ancillary components)
Table 5 Traffic volumes were generally higher than planned
Table 6 Average time and cost savings by projects
Table 7 Benefits reported by local populations
Table 8 Summary table of project implementation timeframes

List of Boxes

Box 1 Alignment with Bank strategies in recently approved projects
Box 2 Extracts from interviews with project beneficiaries
Box 3 Integrating lessons learned in the design of recently approved transport projects
Box 4 Illustration of the Bank’s approach to a coherent transport project portfolio
Box 5 Cheaper and more comfortable transport services
Box 6 Transport project implementation delays in the portfolio analysis
Box 7 Procedures that can keep project implementation on track
Box 8 Addressing sustainability issues in recently approved transport projects
Box 9 Mainstreaming of gender issues in recently approved transport projects
Box 10 Mainstreaming climate change in recently approved transport projects
Box 11 Mainstreaming fragility in recently approved transport projects
## Abbreviations and Acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADF</td>
<td>African Development Fund</td>
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<tr>
<td>AfDB</td>
<td>African Development Bank Group</td>
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<td>AHGC</td>
<td>Gender Women and Civil Society Department</td>
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<tr>
<td>CSP</td>
<td>Country Strategy Paper</td>
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<tr>
<td>EHS</td>
<td>Environment, Health, and Safety</td>
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<tr>
<td>EPC</td>
<td>Engineering, procurement and construction</td>
</tr>
<tr>
<td>ESMP</td>
<td>Environmental and Social Management Plan</td>
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<tr>
<td>IDEV</td>
<td>Independent Development Evaluation</td>
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<tr>
<td>NGO</td>
<td>Non-governmental organization</td>
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<tr>
<td>OECD-DAC</td>
<td>Organization for Economic Co-operation and Development - Development Assistance Committee</td>
</tr>
<tr>
<td>PAR</td>
<td>Project Appraisal Report</td>
</tr>
<tr>
<td>PICU</td>
<td>Infrastructure and Urban Development Department</td>
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<tr>
<td>PINS</td>
<td>NSO and Private Sector Support Department</td>
</tr>
<tr>
<td>PIU</td>
<td>Project Implementation Unit</td>
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<tr>
<td>PPP</td>
<td>Public-Private Partnership</td>
</tr>
<tr>
<td>RDGC</td>
<td>Central Africa Regional Development and Business Delivery Office</td>
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<td>RDGE</td>
<td>East Africa Regional Development and Business Delivery Office</td>
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<tr>
<td>RDGN</td>
<td>North Africa Regional Development and Business Delivery Office</td>
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<tr>
<td>RMC</td>
<td>Regional Member Country</td>
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<td>SNSC</td>
<td>Safeguards and Compliance Department</td>
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<td>SNSP</td>
<td>Strategy and Policy Department</td>
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<tr>
<td>SAP</td>
<td>Systems Applications and Products in Data Processing</td>
</tr>
<tr>
<td>ToC</td>
<td>Theory of Change</td>
</tr>
<tr>
<td>TYS</td>
<td>Ten Year Strategy</td>
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<tr>
<td>UA</td>
<td>Unit of Account</td>
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Executive Summary

This summary report presents the key findings and lessons of an independent cluster evaluation of 18 transport projects approved by the African Development Bank Group (AfDB or the Bank) across the African continent from 2012 to 2019.

Transport infrastructure development is the most important sector of intervention for the AfDB, covering 22 percent (UA 8.4 billion) of the Bank’s portfolio between 2012–2019. The Bank’s financing for this sector in 2019 more than doubled compared to its 2012 level, underlining the Bank’s strong commitment to improving connectivity and regional integration on the African continent. The Bank’s transport portfolio is primarily made up of sovereign operations in the road sub-sector, which received 81 percent of the available funding for transport. The remaining share of funding is almost equally divided among the other sub-sectors, i.e., port and fluvial transport, air transport, and railways. Geographically, the Bank’s support for transport is well balanced across the continent, and almost 13 percent of funding is allotted to multinational projects. Non-sovereign operations represent only 9 percent of the Bank’s overall portfolio in the transport sector during the period under review.

The purpose of the cluster evaluation is to draw lessons from the design and implementation of transport projects to provide insights for future strategic and operational directions for the Bank’s assistance in this sector and to inform any revision to the AfDB Transport Policy (1993).

This cluster evaluation covers 18 purposely selected transport projects (road and port), comprising eight completed or close to completed projects (UA 564.37 million) and ten recently approved projects (UA 888.17 million).

Methodology

Within the framework established by the Theory of Change (ToC), and using the international evaluation criteria, the evaluation undertook (i) a portfolio review of all transport sector projects approved between 2012 and 2019 (182 projects), (ii) an in-depth evaluation or/and case study of eight transport projects approved after 2012 (6 roads and 2 ports, 6 sovereign and 2 non-sovereign operations), and (iii) a desk review of ten recently approved transport projects (2017–2019). This mixed-method combines qualitative and quantitative data. In addition, a comprehensive matrix, which includes judgment criteria, indicators, and data sources, made it possible to triangulate the findings to ensure their validity.

The evaluation faced several limitations, mostly related to the peculiar circumstances under which the project evaluations were carried out. Due to the COVID-19 pandemic, travel restrictions did not allow IDEV staff to visit the project sites and carry out interviews with stakeholders locally; these were conducted by resident consultants instead, supplemented by virtual interviews. Other limitations were related to poor and unequal data availability to assess development outcomes.

Main Findings

Are the Bank’s transport projects strategically aligned with the Bank Ten-Year Strategy and the needs of regional member countries?

Project alignment with the Bank’s relevant strategies was found highly satisfactory due to the relevance of the transport sector in the Bank’s overall strategy. The evaluated projects contributed to at least four operational priorities of the
The projects supported African countries in their need to expand their transport network and services, which were identified as investment priorities by the countries themselves. Projects aligned well to the related countries’ transport and logistics development priorities and addressed the needs of local populations through their socio-economic components. All projects were included in national strategies or were part of regional corridors where transport was identified as a key sector for economic development. The design of socio-economic components was geared towards improving the living conditions of local populations by mitigating the effects of poverty. However, the funds allocated to these components were generally modest and spread too thinly to unleash substantial development opportunities that could have been achieved by better exploiting synergies with other ongoing projects supported by the Bank or by other development partners.

Recent transport operations in the cluster have integrated the objectives of the High 5s into their design. Generally, the link is with more than one of the High 5s, with five of the 10 reviewed projects contributing to at least four priorities, those being: (i) Feed Africa, (ii) Industrialize Africa, (iii) Integrate Africa, and (iv) Improve the quality of life for the people of Africa. Half of the projects are expected to contribute towards the “Feed Africa” priority, highlighting the transport sector’s role in unlocking agricultural potential and facilitating access to food. These objectives were pursued through specific activities included in ancillary components to reinforce existing agricultural production and food processing activities, improve linkages in agricultural value chains, empower women and facilitate trade.

The cross-cutting issues of gender, climate, and fragility were found to be better integrated into the design of the recent transport projects than the completed ones; however, the contribution of transport projects to green growth is not well defined. Compared to the past, the reviewed projects outline a better approach to tackling the drivers of fragility and gender inequality by providing ancillary services that empower local populations. In addition, these projects systematically integrate resilience to climate change in project design, but they do not define to what extent they can contribute to mitigating climate change.
To what extent did the interventions achieve the intended results for the direct beneficiaries regarding regional integration, connectivity, affordability, safety, and transport sector governance?

Completed projects were found to have achieved substantial transport efficiency gains that benefited the local populations and businesses. Apart from the two port projects and the toll bridge, the projects achieved or largely exceeded traffic forecasts. In all projects, cost and time savings were substantial and benefitted transport operators and service users. The road projects allowed people to reach main market centers and services at a lower cost and made transport more accessible, including for women.

The outcomes of project socio-economic components were often insufficiently reported. To reinforce the benefits and inclusiveness of transport projects as well as mitigate their negative impacts on the environment and social structures, the completed projects (except for the two non-sovereign projects and the urban project in Tunisia) included ancillary components providing socio-economic infrastructure and services to the local population. These ancillary components were found useful and appreciated by the projects’ beneficiaries as they made a difference in their everyday life. All projects brought about an increase in temporary jobs, but it is unclear to what extent local populations were able to benefit from these opportunities.

The evaluation found no evidence of projects’ effects on improving transport sector governance and regional integration. Although capacity-building activities and the provision of studies sought to improve transport sector governance, project designs did not include appropriate objectives and indicators for evaluating the effectiveness of these activities. In addition, the interviews did not yield convincing evidence that could demonstrate the contribution of the projects to improving governance in the transport sector. The impacts and usefulness of the studies financed by the projects could not be assessed since, in most cases, these were still ongoing or were delivered at the very end of the projects. Although regional integration was considered an important objective in almost all projects, the team found no evidence of increased intra-regional trade flows that could be linked to the projects. These effects might take longer to materialize and are often held back by the lack of progress in customs regulations and management.

Project outcomes on road safety are uncertain. Qualitative analysis showed that improved road conditions made traveling less risky, while increased vehicle speed was often reported as an issue of concern for the local populations. However, without data on traffic accidents, it was impossible to verify to what extent projects contributed to traffic safety.

To what extent was the Bank’s assistance delivered efficiently in terms of both timeliness and cost-effectiveness?

The planning of transport project timelines and budgets proved to be challenging. Similarly to the Bank’s overall transport project portfolio, the projects included in this cluster evaluation experienced considerable delays. The evaluation found that while construction works were managed effectively, capacity and administrative constraints in executing agencies delayed the disbursement of funds and the implementation of activities according to the projects’ workplans. Recurrent obstacles included lengthy procedures for resettlement and compensation, the procurement of works, the disbursement of the counterpart funding, and the recruitment of necessary staff. Design reviews also resulted in delays and required budgetary reallocation. Cost overruns were limited due to project budgets including appropriate contingencies of 15%-20%, and there were savings on procurement processes. However, funds allocated to ancillary components were more difficult to disburse as these were spread across multiple service providers.
The implementation of the main infrastructure works was found to have been well supervised while the ancillary components were not sufficiently followed up on. The evaluation found that most of the Bank’s and executing agencies’ supervision efforts were devoted to the main construction sites. Socio-economic infrastructure and capacity building components were often delayed. There seems to be no appropriate mechanism in place to follow through and/or speed up the delivery of these activities. For some projects, glitches and delays in the correct implementation of the project Environmental and Social Management Plan (ESMP) were also reported and required the Bank’s continuous action to ensure that its standards were followed correctly.

To what extent are the achieved results sustainable?

The sustainability of the road transport projects remains questionable due to ongoing reforms to road funds and road agencies not being completed. The assessment of a project’s sustainability must consider how maintenance is ensured for the entire network. In the current conditions, the evaluation found that the lack of adequate road maintenance, compounded by overloading of vehicles, is likely to cause a rapid deterioration of the assets built by the projects unless countries substantially improve their road asset management frameworks. Without enforcement, there is no certainty that the measures built into the projects to mitigate vehicle overloading, excess speed, and endangered safety will be sufficient. Finally, if traffic measurements are not carried out regularly, it will not be possible to plan maintenance works.

The evaluation found that private sector involvement in transport financing improved efficiency, but the financial risks remain high. The cluster included two non-sovereign operations that showcased how the private sector could build and maintain transport infrastructure. There are, however, many limitations in their use, given that countries’ investment pipelines do not include many revenue-generating transport projects. As shown in the two projects analyzed, the risk of such operations remains high as unilateral changes in Public-Private Partnership (PPP) agreements might occur. The evaluation also showed that revenue-generating projects are better at securing sufficient funds for maintenance when revenues are ring-fenced for this purpose.

Lessons

The following lessons emerged from this cluster evaluation:

Project development outcomes

Greater development outcomes can be achieved by a more thoughtful design and a better follow-up of projects’ ancillary components, and exploitation of synergies with other development projects. The ancillary components were found useful to improve the well-being of the local population and mitigate negative effects on the environment and social structures; however, the current approach has delivered mixed results. Ancillary components were often partially implemented and/or delayed, and their sustainability is uncertain. The executing agencies did not effectively supervise their implementation, due to a lack of capacity and incentives. All these issues point to a need to improve the manner in which these components are integrated into project design and implementation frameworks. Also, to increase the impact of these components as well as ensure their sustainability over time, it is important that executing agencies and the Bank’s task managers place more importance on the supervision of ancillary activities by equipping themselves with the necessary expertise and resources in addition to ensuring that relevant ministries are involved (education, healthcare, environment, agriculture). At the same time, examples from recently approved transport projects show that exploiting synergies with other projects in the agriculture and private
sectors could enhance the development impacts of transport projects on local populations, as well as supporting the objectives of “Feeding Africa” and “Industrializing Africa.”

The success of capacity-building activities on improving transport sector governance can only be measured if appropriate assessment frameworks are included in the design of a project’s monitoring system. The objectives set by the reviewed projects were often too generic and did not identify the areas of skills and competencies where training was most needed.

Improving the analyses of the effects of the Bank’s projects on climate change could help to mitigate their negative impacts better. For example, the cluster projects did not include estimates of carbon emissions and did not specify to what extent the proposed climate mitigation measures would offset the effects of increased motorized traffic.

**Project performance**

The timeliness of implementation of transport projects can be improved if binding constraints are removed. Implementation risks and possible delays were identified correctly in project appraisal documents but were not reassessed during project implementation. The proposed mitigation measures were insufficient to ensure a timely start of construction works and ancillary components because the proposed solutions did not focus on removing binding constraints and were not underpinned by a more in-depth analysis of the project-specific context, which could have revealed some flaws in project readiness analysis.

Compared to the traditional procurement route, alternative procurement routes can help reduce delays in project implementation and the need for extensive design revisions. The non-sovereign operations in the cluster that were financed through a PPP were implemented on time, while the use of an Engineering, Procurement and Construction contract ensured that the constructor absorbed additional and unforeseen costs. The Bank could consider using more “design and build” or construction management contracts if there are favorable local conditions.

**Project sustainability**

Embedding a revenue generating mechanism in transport projects can be an effective way to address the lack of funding and capacity for maintenance. This evaluation showed that supporting countries by providing studies on how to improve road governance and management is useful but does not lead to substantial changes unless recommendations are followed through. It also showed that integrating a cost recovery mechanism into transport projects can be a more effective way to address the lack of funding and capacity for maintenance, as revenue-generating projects are more likely to be well-maintained.

**Data collection and monitoring**

Activating project monitoring and evaluation systems in a timelier fashion can make more information available on development outcomes. Transport projects had good monitoring and evaluation systems embedded in their design, but their usefulness depended on their timely implementation. For example, efforts to collect more sex-disaggregated data could have improved the understanding of how women benefit from improved transport infrastructure and services, in addition to the anecdotal evidence that can be collected through site visits.

A more accurate traffic demand forecast can help improve project design and increase project sustainability. More detailed, updated and realistic data on traffic projections and traffic flows can help to set up appropriate traffic control measures (speed control and weighbridges) and plan maintenance works.
Introduction

This report summarizes the results of a cluster evaluation of 18 transport projects funded by the African Development Bank Group (AfDB or “the Bank”) over the 2012–2019 period. This introductory section presents the purpose and scope of the evaluation and the methodological approach adopted to collect data and consolidate the evidence emerging from different evaluation activities carried out between August 2020 and January 2021. Chapter 2 presents an overview of the AfDB transport project portfolio. Chapter 3 consists of a synthesis of the eight completed project evaluations structured according to the international evaluation criteria (relevance, coherence, effectiveness, efficiency, and sustainability). Chapter 4 assesses cross-cutting issues - Gender, Climate Change, and State Fragility. Lastly, Chapter 5 concludes and draws some strategic and operational lessons.

Rationale, Purpose and Scope of the Evaluation

A cluster evaluation for the transport sector was deemed useful for the following reasons:

- **Transport is a key sector for the Bank, which plans to revise its Transport Policy in the future.** The 1993 Transport Sector Policy remains relevant for the Bank’s operations, although discussions have been held internally on renewing the policy to align it better with current contexts and issues in this sector, including urban transport, multimodality, and the electrification of transport. In the recent past, a revision of the Bank’s transport policy was envisaged again, but the process has not yet started. This evaluation is thus timely and aims to inform the preparation of the new transport sector policy and strategy once the Bank decides to proceed with this.

- **There is a need to assess how the Bank has integrated lessons learned from previous experience into recently approved transport projects, and to what extent it has developed new approaches.** A previous evaluation of the transport sector carried out by Independent Development Evaluation (IDEV) covered the years 2000–2011. An assessment of the level of implementation of independent evaluation recommendations carried out by IDEV in 2019 showed that progress in implementing its recommendations has been slow (level of adoption rated low for nine out of 10 recommendations).

- **Transport projects need to align to recent policy developments (the High 5s, new thematic policies for gender, climate change and fragility).** To accelerate the implementation of its Ten-Year Strategy (TYS), in 2015, the AfDB identified development priorities known as the High 5s, which are: (i) Light up and Power Africa, (ii) Feed Africa, (iii) Industrialize Africa, (iv) Integrate Africa, and (v) Improve the Quality of Life for the People of Africa. The Bank’s High 5s link better transport infrastructure to improved regional integration and improved competitiveness of businesses due to improved access to bigger markets and reduced transport and logistics costs. Better access to roads can substantially improve the living conditions of African people by increasing access to markets for agricultural produce; improving access to basic services, including healthcare and education; and expanding job opportunities. Public transport in large African cities can help reduce road congestion and the negative environmental externalities of urban traffic.

The main objective of this cluster evaluation is to draw pertinent lessons to inform future strategic and operational directions for the Bank’s assistance
in the transport sector by (i) taking stock of the results of the Bank’s assistance; and (ii) drawing lessons for future work. Thus, the evaluation will serve both accountability and learning purposes. Specifically, the objectives of the evaluation are to:

- Assess to what extent operations in the transport sector are strategically aligned with the Bank’s TYS, and the needs, policies, and priorities of Regional Member Countries (RMCs).
- Assess to what extent recent operations incorporate innovative approaches and lessons learned from previous evaluations, and whether they are strategically aligned with the High 5s.
- Assess whether interventions are achieving their intended results for the direct beneficiaries in terms of regional integration, connectivity, affordability, safety, and transport sector governance.
- Assess the extent to which the results achieved are sustainable; and
- Identify lessons to inform the Bank’s future transport sector policy and/or strategy.

This evaluation covers a selection of transport projects approved across the African continent during 2012–2019, of which eight projects completed or close to completion (Table 1) and ten projects recently approved (Table 2), together referred to as “the project cluster”. The evaluation focused on the road/highway sub-sector because of its strong dominance in the Bank’s transport portfolio. Fluvial transport and port sub-sector projects were also included since this sub-sector has gained importance in recent years.

**Approach, Methods, and Limitations**

The methodological approach was based on a Theory of Change (ToC), which provided the framework to guide the evaluation and helped trace the projects’ interventions that may or may not have contributed to reaching the objectives set by the Bank (Technical Annex 1). Based on the ToC, five high-level evaluation questions were translated into several sub-evaluation questions (Technical Annex 2) according to the international evaluation criteria of relevance, coherence, effectiveness, efficiency, and sustainability. The judgment criteria and data sources for responding to these evaluation questions are presented in a comprehensive evaluation matrix. A coherent framework for triangulating the different lines of collected evidence is also included in this evaluation.

**Core evaluation components**

To respond to the evaluation questions, this evaluation consolidated the evidence emerging from:


### Table 1: Projects selected for in-depth assessment

<table>
<thead>
<tr>
<th>Project name</th>
<th>Country</th>
<th>Sub-sector</th>
<th>Type of project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matotoka - Sefadu road rehabilitation project, section I</td>
<td>Sierra Leone</td>
<td>Road/Highway</td>
<td>Sovereign</td>
</tr>
<tr>
<td>Road sector support project - phase II</td>
<td>Tanzania</td>
<td>Road/Highway</td>
<td>Sovereign</td>
</tr>
<tr>
<td>Road Infrastructure Development Project</td>
<td>Madagascar</td>
<td>Road/Highway</td>
<td>Sovereign</td>
</tr>
<tr>
<td>Project to Develop Roads and Facilitate Transport on the North-South Corridor - Phase III</td>
<td>Multinational (Burundi – Rwanda)</td>
<td>Road/Highway</td>
<td>Sovereign</td>
</tr>
<tr>
<td>New port of Walvis Bay container terminal project – loan</td>
<td>Namibia</td>
<td>Water and Fluvial Transport/ Port</td>
<td>Sovereign</td>
</tr>
<tr>
<td>Gsez Port Project</td>
<td>Gabon</td>
<td>Water and Fluvial Transport/ Port</td>
<td>Non-Sovereign</td>
</tr>
<tr>
<td>Road Infrastructure Modernization Project</td>
<td>Tunisia</td>
<td>Road/Highway</td>
<td>Sovereign</td>
</tr>
<tr>
<td>Riviera Marcory Toll Bridge</td>
<td>Côte d’Ivoire</td>
<td>Road/Highway</td>
<td>Non-Sovereign</td>
</tr>
</tbody>
</table>
In-depth evaluation/case study of eight transport projects approved after 2012 and completed or close to completion (6 roads and 2 ports, 6 sovereign and 2 non-sovereign operations). The eight projects were selected based on their evaluability, type of transport project, geographical coverage, diversity in terms of financing window (see Technical Annex 3).

A desk review of ten transport projects approved recently, between 2017 and 2019 (see Technical Annex 4). In addition to the year of approval, the ten projects were selected based on geographical and sector representativeness.

The evaluation was both summative and formative, the analysis combines an assessment of completed/close to completion and recently approved projects. The methodological approach suggested for this evaluation focuses on the micro-level and revolves around a combination of qualitative and quantitative methods, including documentary analysis, interviews, case studies, focus groups with project beneficiaries, site visits, and scoring grids. This analysis was complemented with a portfolio review and strategic interviews that addressed some of the evaluation questions at the macro level.

### Table 2: Projects selected for desk review

<table>
<thead>
<tr>
<th>Project name</th>
<th>Country</th>
<th>Sub-sector</th>
<th>Type of project</th>
</tr>
</thead>
<tbody>
<tr>
<td>RÉHABILITATION DE LA RN1 - KINSHASA-KIWIT</td>
<td>Dem Rep Congo</td>
<td>Road Transport / Highways</td>
<td>Sovereign</td>
</tr>
<tr>
<td>RING ROAD PROJECT PHASE 2</td>
<td>Cameroon</td>
<td>Road Transport / Highways</td>
<td>Sovereign</td>
</tr>
<tr>
<td>ROAD NETWORK REHABILITATION PROJECT</td>
<td>Comoros</td>
<td>Road Transport / Highways</td>
<td>Sovereign</td>
</tr>
<tr>
<td>KAMPALA CITY ROADS REHABILITATION PROJECT</td>
<td>Uganda</td>
<td>Road Transport / Highways</td>
<td>Sovereign</td>
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<td>ROSSO- BRIDGE CONSTRUCTION PROJECT</td>
<td>Multinational/Senegal</td>
<td>Road Transport / Highways</td>
<td>Sovereign</td>
</tr>
<tr>
<td>MULTINATIONAL (BURUNDI/ ZAMBIA): LAKE TANGANYKA TRANSPORT</td>
<td>Multinational BURUNDI/ ZAMBIA</td>
<td>Water &amp; Fluvial Transport / Ports</td>
<td>Sovereign</td>
</tr>
<tr>
<td>ROAD CONNECTIVITY SUPPORT PROJECT IN THE NORTHEAST</td>
<td>Tunisia</td>
<td>Road Transport / Highways</td>
<td>Sovereign</td>
</tr>
<tr>
<td>MADAGASCAR-INDIAN OCEAN: CORRIDORS DEVELOPMENT PROJECT</td>
<td>Madagascar</td>
<td>Road Transport / Highways</td>
<td>Sovereign</td>
</tr>
<tr>
<td>MAIO AND PALMEIRA PORTS CONSTRUCTION PROJECT</td>
<td>Cape Verde</td>
<td>Water &amp; Fluvial Transport / Ports</td>
<td>Sovereign</td>
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<tr>
<td>COTTON ROADS DEVELOPMENT PROGRAM</td>
<td>Benin</td>
<td>Road Transport / Highways</td>
<td>Sovereign</td>
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</tbody>
</table>

### Data collection methods

Project performance evaluations are the bulk of the evaluation. They provide answers to the evaluation questions by explaining the underlying mechanisms (the how and the why) behind the observed project performance. The project evaluations analyse the rationale underlying the decision to finance the projects, the quality of their design, the role of the different parties involved in their design and implementation, and their relevance, effectiveness, efficiency, and sustainability.

Local consultants were responsible for on-site data collection and preparing the Project Performance Assessment Reports (PPARs). The evaluations relied on multiple sources of quantitative and qualitative information, and local consultants were encouraged to triangulate evidence as much as possible in their analyses and conclusions. These sources include:

- Documentary evidence, project reports (project appraisal and completion reports, progress reports, supervision reports), independent studies and monitoring reports, national statistics, country and regional strategy papers.
Interviews with a representative group of project stakeholders, executing agencies and AfDB task managers, project beneficiaries (population living in the projects areas, non-governmental organizations (NGOs) and private sector associations), relevant public agencies, and ministries.

Site visits to the main infrastructure works and the project ancillary components (schools, health centers, women associations).

For the desk assessment of Project Appraisal Reports (PARs), an assessment grid was developed in an Excel spreadsheet that specified the evaluation criteria and metrics for rating projects. Each project was rated against its performance (relevance, coherence, effectiveness, efficiency, and sustainability) and against the performance of the three major parties involved in project design and implementation (the Bank, the borrower and other co-financiers and service providers). The assessment and rating of additionality were included only for non-sovereign operations. In accordance with the IDEV evaluation manual, a four-level scale was used for project rating, namely: Highly Satisfactory, Satisfactory, Partly Unsatisfactory or Unsatisfactory. To apply this four-level scale, a scoring grid was developed to define how to rate the projects against each evaluation criterion (see Technical Annex 5). The metrics and thresholds included in the rating grid were defined as much as possible to be precise and unequivocal to limit the risk of having different evaluators providing different ratings for the same level of achievement. In addition to that, further calibration of the rating was carried out when IDEV reviewed the project evaluations. Finally, the overall cluster project rating across each evaluation criterion was calculated as the arithmetic mean of the projects’ individual scores. Figure 1 illustrates the ratings of each criterion according to the four-level scale.

Limitations

This evaluation was confronted with several unique circumstances:

- Heterogeneity of approaches. The project evaluations included two non-sovereign projects (in Gabon and Côte d’Ivoire) that IDEV had evaluated in the context of other evaluations. The available reports were transposed into the template developed for this transport cluster evaluation to facilitate the synthesis. IDEV held additional interviews with task managers to discuss relevant issues that had not been addressed in the existing reports.

- Data availability to assess development outcomes. Although all projects had provisions for monitoring development outcomes, monitoring reports were not available for all projects (Tunisia, Tanzania, Rwanda). When available, monitoring reports did not include sex-disaggregated data for an assessment of project benefits for women. To mitigate the lack of data, local experts collected some anecdotal evidence through interviews and site visits to provide examples of how the project had benefited local populations, especially women.

- Travel restrictions. Due to travel limitations and social distancing measures imposed by authorities in response to the COVID-19 pandemic, on-site project evaluations usually conducted by Bank staff were done by local consultants under IDEV’s remote guidance. Despite these difficulties, site visits were organized for all completed projects, except for the project in Tunisia due to travel restrictions between the different governorates of the country. In some instances, virtual meetings were held to collect the missing data.
Overview of the AfDB Transport Sector Portfolio

This section provides an overview of the AfDB portfolio in the transport sector over the period 2012–2019. The review focuses on the sub-sectoral distribution of the amount approved for the transport sector; the evolution of the Bank’s commitments compared to the period 2000–2011; the geographical distribution; and the projects’ completion status.

The main database used for the portfolio analysis is the Bank’s Systems Applications and Products in Data Processing (SAP). The crossing of the SAP data with the Bank’s Infrastructure and Urban Development Department and Non-Sovereign Operations and Private Sector Support Department’s databases made it possible to validate the data and collect some missing information. An analysis of the project duration and of the time-lapse between project approval and the first disbursement could only be performed for the projects for which this information was available.

Transport Sector Volume and Trends

Transport infrastructure is particularly crucial for attaining most of the High 5 priorities. Over the period 2012–2019, the volume of transport projects approved amounted to approximately UA 3.84 billion and represented 22 percent of funding for all sectors (Figure 2). Compared to the last decade, 2000–2011, the Bank increased its financial pledge to transport infrastructure from UA 6.57 billion to UA 8.4 billion (Figure 3), which represents a 27.8 percent increase. During the same period, 175 projects were approved among which, 146 are infrastructure projects, and 29 are studies/technical assistance.

Total approvals allocated to the transport portfolio increased more than twofold between 2012 and 2019, from UA 595 million in 2012 to approximately UA 1.3 billion in 2019.
This increase underlines the strong commitment of the Bank to adequate infrastructure and the promotion of regional integration. Also, an increasing share of the transport portfolio is dedicated to the two sub-sectors road/highway and water & fluvial transport.

According to the Infrastructure Consortium for Africa’s (ICA’s) annual report 2018, the AfDB was one of the leading institutions funding the transport sector in Africa in 2018. After China ($3200 m), the Bank comes second on the continent ($2122 m). The Bank is ahead of the World Bank ($603 m), the European Investment Bank ($442 m), and other developed countries’ funding agencies.

The Bank’s financial approvals among the transport sub-sectors over the period 2012–2019 mainly went to the road sub-sector, which absorbed 81 percent of the available funding. The sub-sectors that benefitted the least from the Bank’s support were water and fluvial transport and air transport, with respectively 4 percent and 5 percent of the total funds dedicated to the transport sector. This highlights the strong commitment of the Bank to road/highway projects as its primary strategy to integrate the continent and improve mobility; it further reflects the strong aspiration of the Bank to expand the business environment.

**The Bank is also dedicated to improving urban mobility.** Within the road sub-sector, the share allocated to urban transport amounts to 12 percent over the period, 2012–2019. This includes projects for building or rehabilitating urban roads and bridges, urban public transport infrastructure, and the purchase of bus fleets.

**Geographical Distribution**

The Banks’ support to the transport sector is geographically well balanced and reflects its support for regional integration. The distribution of the Bank’s commitments by region shows that the East African region is benefitting the most from the Bank’s support to the transport sector, with 30 percent of total approvals; this is followed by the West African region (26%), the Central region (14%), the Southern region (11%), and the Northern region (6%). Multi-region projects make up 13 percent of the total funding allocated to the transport sector. In addition, it is important to note that some national transport projects have a regional relevance (e.g., ports, national sections of international corridors). Regarding
national projects, the five top recipients of AfDB project approvals over the period 2012-2019 were Côte d’Ivoire (692.71 UA million), Uganda (685 UA million), Kenya (662.5 UA million), Tanzania (552 UA million), and Cameroon (513 UA million). The dedication of the Bank to better connectivity between African countries is shown by the importance given to multinational projects. As highlighted in the 2018 AfDB Annual Report, fostering regional integration increases trade and economic cooperation.

Low-Income Countries (LICs) received an average of 59 percent of the approved funding, followed by Middle-Income Countries (MICs) (16%) and Fragile countries (12%). The Bank’s approvals for fragile countries increased from 122 million UA to around 156 million UA, in line with the Bank’s strategy on addressing fragility. However, the years with the highest approvals for fragile countries were 2013 to 2015.

Sources of Financing

Unsurprisingly, the transport sector approvals for the private sector are much lower (9%) compared to the approvals for the public sector (91%). Opportunities for supporting private operators lie more in the port and airport sub-sectors, which constitute a small part of the transport sector portfolio. Other challenges with private sector projects are due to limited use of PPPs, implementation difficulties, lack of a strong legal framework, political choices, etc.

The primary financing source of the transport sector is the African Development Bank window, with 51 percent of all approvals, followed by the African Development Fund (ADF), which totals 39 percent, and other windows with 10 percent of the total approvals. The commitments from the Fragile States Facility are negligible compared to the overall ADF window with only 3 percent of total approvals.
Project Cluster Performance

This section summarizes the findings and ratings of the evaluation reports for the eight completed projects in the cluster along the international evaluation criteria of relevance, coherence, effectiveness, efficiency, and sustainability. For the two non-sovereign operations, the criterion of additionality is also assessed. In addition, complementary analysis from the Bank’s overall transport project portfolio and the assessment of ten recently approved transport projects are included in illustrative boxes.

Relevance

Relevance examines the extent to which project objectives are consistent with beneficiary needs, countries’ development priorities and strategy, the Bank’s Country Strategy Paper (CSP), and the applicable Bank sector strategies. The assessment of relevance also considers the quality of project design, including the soundness and completeness of project intervention logic; the inclusion of thematic issues of relevance for the Bank (analysis developed in chapter 4); and the adequacy of project implementation and delivery frameworks.

Overall, the relevance of the completed projects was found satisfactory (Figure 4). The projects were well-aligned with national and Bank strategies. However, weaknesses were reported in projects’ technical design and their capacity to integrate cross-cutting issues, such as gender and state fragility.

Alignment with the Bank’s and country strategies

Project alignment with the Bank’s relevant strategies was assessed as highly satisfactory given the importance of the transport sector in the Bank’s overall strategy. In 2013, the Bank’s Board approved a Ten-Year Strategy (TYS) covering the period 2013–2022. The strategy has two overarching objectives: inclusive growth and the transition to green growth, and five operational priorities: infrastructure development, regional economic integration, private sector development, governance and accountability, and skills and technology. In addition, the TYS highlights three areas of special emphasis: gender, fragile states, and agriculture/food security. Documentary research for the project evaluations shows that the objectives of all projects were well aligned with the Bank’s objectives of improving infrastructure and regional integration, private sector development (improving access to markets and reducing costs of transport),

Figure 4: Summative project ratings – Relevance

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Rating</th>
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<tbody>
<tr>
<td>Riviera Marcory Toll Bridge (Côte d’Ivoire)</td>
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<tr>
<td>New Port of Walvis Bay Container Terminal (Namibia)</td>
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<tr>
<td>Road Infrastructure Development Project (Madagascar)</td>
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<tr>
<td>Road Sector Support Project II - Phase (Tanzania)</td>
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<tr>
<td>Project to Develop Roads (Burundi/Rwanda) and Facilitate Transport on the North-South Corridor - Phase III</td>
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<tr>
<td>Matotoka – Sefadu Road Rehabilitation Project (Sierra Leone)</td>
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<tr>
<td>Road Infrastructure Modernization Project (Tunisia)</td>
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<tr>
<td>Gsez Port Project (Gabon)</td>
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and improving governance (capacity building within ministries of transport and road agencies). Agriculture and food security objectives were pursued through project ancillary components (e.g., provision of equipment for food processing) and improved and faster connections to markets. Gender and fragile state issues were addressed with the relevant approach when these projects were appraised.

In the Bank’s regional integration strategy, transport plays a vital role in improving connectivity and logistical services, but the expected contribution of transport projects to regional integration may be overstated. The contribution of transport projects to regional integration was often emphasized in project appraisal documents, but it was not translated into specific activities and outputs. Only two operations, namely, the multinational road project between Burundi and Rwanda and the port project in Namibia, included trade facilitation activities, but none of these were completed.

The cluster projects intended to contribute to inclusive growth through the ancillary components, while the green growth objective was not satisfactorily addressed. Beyond the provision of projects and the ESMP to mitigate the adverse environmental effects of transport projects, no specific activities were included to support a transition towards green growth. By increasing motorized traffic, the cluster projects contributed to environmental degradation and carbon emission. The extent to which mitigation measures counterbalanced these negative effects is unclear. Although increased carbon emissions due to the transport sector are limited in Sub-Saharan Africa due to the low level of traffic along main national roads, the increase in car and motorcycle ownership needs to be taken into account in project design.

Furthermore, the recently approved transport projects are well aligned with the Bank High 5. In 2015, building on its existing TYS, the Bank set down a new agenda articulated in five development priorities: Light up and Power Africa; Feed Africa; Industrialize Africa; Integrate Africa; and Improve the Quality of Life for the People of Africa. Recently approved transport projects contributed to more than one High 5. Half of the projects contribute to at least three priorities among “Feed Africa,” “Industrialize Africa,” “Integrate Africa,” and “Improve the quality of life for the people of Africa.” Half of the reviewed projects are expected to contribute towards the “Feed Africa” priority, highlighting the role of the transport sector in unlocking agricultural potential and facilitating access to food.

This strong alignment is based on two factors: Transport projects generally trigger development by improving domestic and inter-regional trade thanks to improved infrastructure. In addition, transport project design within the AfDB integrates ancillary components that aim to leverage transport projects’ development outcomes. These objectives are pursued through specific activities geared towards reinforcing existing agricultural production and food processing activities, improving linkages in agricultural value chains, empowering women, and facilitating intra-regional and international trade. The assessment of ten recently approved projects shows that all recently approved projects contribute to the Bank’s High 5s. (Box 1).

All evaluated project objectives were aligned with the objectives and priorities set in the Bank’s CSPs. The transport sector was, and still is, a priority area of intervention in most countries. Some projects (Tunisia, Rwanda/Burundi, Tanzania) completed previous Bank road transport projects in other sections on the same corridors. In the case of Gabon, the project was not mentioned in the CSP, but it aligned well with the objectives of the Bank’s strategy in the country that promotes economic diversification and private sector development. However, this evaluation noted that projects lacked rigorous discussion about project alternatives beyond the discussion of technical features of the infrastructure (e.g., the type of pavement to be used).
Project alignment with country and regional strategies, as well as local needs, is well demonstrated. All reviewed projects were priority interventions in national and regional strategies. They were included in national growth strategies and in national and regional transport master plans. Interviews with public authorities at national and local levels pointed to three main constraints (long, costly, and unsafe journeys) that unpaved roads posed for people and businesses. Interviews carried out with transport associations and local populations also showed that the projects were beneficial (Box 2).

Quality of project design

The technical design had to be adjusted in most projects (7 out of 8). For the road projects, changes were needed to adapt to local conditions, such as when materials could not be available locally (Sierra Leone), or to improve road performance and sustainability (Madagascar). Changes resulted in the redesign of pavement structures (Sierra Leone, Tanzania), adjustments of the bill of quantities, reinforcement of crossing structures and drainage systems (Madagascar). For the port project in Namibia, geotechnical investigations revealed that the sub-standard piles for the quay walls needed to be reconstructed. All these changes had no impact on project outputs and outcomes. They were introduced to ensure the good quality and sustainability of the infrastructure, but they all affected project implementation performance by delaying implementation. A desk review of past evaluations of the Bank’s transport projects, that was conducted for this evaluation, also pointed out that the low quality of feasibility studies is a recurrent problem that often delays project implementation and requires changes in budgetary allocations (see the section on project efficiency). Project evaluations reported that executing agencies often do not have the capacity to assess the quality of feasibility studies that are carried out by consultants that are often international consulting companies. Local consultants flagged the review and update of feasibility studies as an area where improvement of local capacity is strongly needed.

The two port projects overestimated freight growth in the short term and had to downscale the expected works in response to lower demand and updated freight forecasts. Retrospectively, for both ports, the projected increase of goods to be handled appears overly ambitious, even when accounting for the drop in freight traffic due to the COVID-19 crisis. For the Walvis Bay port in Namibia, the volumes dropped in 2018 and 2019. Based on the growth experienced before project implementation, the forecasts seem to have focused on potential opportunities without considering possible risks due to increased port competition and slower growth for international trade to and from Africa. A well-justified correction in project
design led to the cancellation of a project component that would have increased the number of cranes to handle containerized cargo. For the port project in Gabon, the current depth is -10m compared to the -14m required in the contract. This may prevent the port from accommodating bigger vessels in the future if not corrected. However, this may not be necessary at present, as the dredged areas appear to be sufficient for the smaller vessels currently calling at the port.

All projects had well-defined and complete result-based logframes, although the selected long-term outcome indicators could have been more realistic and connected to the project activities. The projects’ intervention logics were generally clear and well-articulated, and the inputs/activities were connected to project outputs and short-term outcomes. In one case, Madagascar, the project aimed at improving tourism without having defined activities that would have helped the development of this sector. Impact indicators, such as the increase in country GDP or external trade, were often included, but this is not credible, and attribution/contribution cannot be established. In this respect, more efforts could have been put into selecting long-term outcomes that were more directly connected to the inputs/activities conducted by the project and a measure of the impact of projects on people’s livelihood. As an example, project monitoring systems have not captured changes in road safety.

All projects included ancillary components to reinforce transport project development outcomes, but they did not outline consistent and convincing strategies for addressing the drivers of poverty and fragility. For the two non-sovereign operations (Côte d’Ivoire and Gabon), the road project in Tunisia and the port project in Namibia, these components focused on supporting the capacity of private operators to properly address Environmental, Health, and Safety (EHS) standards and to increase institutional capacity in the transport sector (Tunisia and Namibia). For the other road projects, in addition to improving capacity-building in road project management, the ancillary components focused on delivering socio-economic infrastructure and services for the local population, especially for women. These activities contributed to delineating the Bank’s integrated transport project approach, but there were many differences across the evaluated projects on how these activities were identified and combined with the main construction works. This indicates that related to the implementation and monitoring of ancillary components, there is a need to define the responsibilities of the executing agencies clearly.

Project socio-economic components were designed to improve the local population’s living conditions but remained insufficient to make a difference. The importance of revenue-generating activities (e.g., entrepreneurship training for women, trade facilitation) was too low compared to the enormous challenges that local populations face to ensure a livelihood (e.g., Burundi/Rwanda). Ancillary components were often spread thinly along the project areas, reducing their capacity to generate a transformational change (Box 3).

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**Box 2: Extracts from interviews with project beneficiaries**

**Project beneficiaries appreciated the new transport infrastructure**

- Truck drivers (Tanzania): “Driving on the roads was a courageous undertaking. Some road sections were impassable during the rainy season, and even during the dry season, many hours on the road were needed. Sometimes the vehicles would break down in the middle of the forest and had to wait many hours before finding assistance”.
- Bike rider union (Sierra Leone): “Before there were a lot of potholes and the road was quite bushy. Now we can ride easily, and accidents have declined. As a result, we save a lot of time and fuel, and we make more profit than before.”
- Women’s group (Sierra Leone): “Before we had serious constraints to buy and transport our goods from one location to the other. We at times used to spend days on the road but now it has made life easier for us”.

Sources: interview transcripts from site visits in project evaluations
Coherence

The analysis of coherence refers to the complementarity and compatibility of projects with respect to other ongoing or planned interventions supported by the AfDB (internal coherence) and the other development partners (external coherence).

**Both internal and external project coherence were found satisfactory.** The summative project ratings are the average of project scores for internal and external coherence (Figure 5). Internal coherence within transport operations was found to be strong. It is based on the inclusion of the evaluated projects in CSPs (except Gabon) that often identify the transport sector as a key sector of Bank intervention in the concerned countries. In addition, some projects build on previous phases of Bank financing for the transport sector in the country (Tanzania, Rwanda/Burundi, Madagascar, Tunisia).

External coherence was also assessed as strong for most sovereign operations, with the exception of Madagascar, where the project was approved during the transition, a period during which most of the development partners had ceased all cooperation with the country. Corridors and national roads are typically constructed in sections often financed by different donors (Namibia, Sierra Leone, Rwanda/Burundi, Tunisia, Tanzania) or from studies funded by other partners (Namibia). This was facilitated by the fact that most countries have formal or informal thematic donor coordination platforms for the transport sector that ensure that transport investments are well coordinated.

Project evaluations were not able to document how the transport projects complemented interventions in other sectors, such as agriculture and the private sector, that were supported by the Bank or by other development partners. These aspects are very important since the impact of transport projects on the achievement of the High 5s stems from the identification of synergies with other sectors. In this vision, transport is an enabling infrastructure, laying down the conditions for development, while other measures are needed to ensure the materialization of broader, more inclusive, and long-lasting development outcomes. In this respect,
synergies with projects in the agricultural sector or with the private sector could help to enhance the development impacts of transport projects further (see example in Box 4).

**Effectiveness**

The assessment of effectiveness evaluates the extent to which the project achieved its stated results, i.e., the intended set of outputs and outcomes. The analysis was based on a comparison between the planned and the achieved project objectives, as these were set in the project result-based logframes. The summative project ratings (figure 6) are the average of project scores for outputs and outcomes.

The projects were found to have delivered most of the expected outputs, achieved high transport efficiency gains, and contributed to improving people’s living conditions, while the achievement of other development outcomes was less satisfactory. Therefore, the rating on project effectiveness had to combine both project performance in achieving the expected outputs with the expected development outcomes. In terms of outputs, only the toll bridge project in Côte d'Ivoire was rated highly satisfactory as the project was delivered exactly as planned. All the other projects had some changes in their design that led to the cancellation of components and activities, especially the ancillary activities. The positive ratings on project outcomes were driven by the achievement of transport efficiency objectives (increased traffic, time, and cost savings). In contrast, performance on other dimensions (capacity building, regional integration) was more mixed. The unsatisfactory rating for the port project in Gabon was driven by several factors, including the lack of completion of an important project output, the low traffic, the poor performance in implementing and documenting the agreed Environmental and Safety measures, and the insufficient evidence on development outcomes.

**Box 4: Illustration of the Bank’s approach to a coherent transport project portfolio**

**Insights from the Walvis Bay Port project - Namibia**

The project effects were reinforced by complementary transport infrastructure interventions carried out by the AfDB and other donor organizations. To support the entire corridor concept, the AfDB is currently funding the rehabilitation and upgrading of about 212 km of railway line between Walvis Bay and Kranzberg. This rail section is part of the larger Walvis Bay – Tsumeb line, prioritized in the National Development Plan 5, which eventually aims to connect it to Zambia. The port authority confirmed that even though the port is the lynchpin for the logistic hub, the corridors leading to and from the port are important, and especially the railway line is in urgent need of rehabilitation and upgrading.

Source: project evaluation new port of Walvis Bay container terminal
Achievement of projects’ outputs

An assessment of the achievement of the project outputs was performed by comparing the level of achievement of the actual outputs with the targets set at project appraisal within each project component.

Works for the main infrastructures were found to have been successfully carried out (Table 3). Overall, the main construction works were well implemented and supervised, and the delivered infrastructure complied with the required quality and safety standards. Some adjustments were needed following design reviews and changed project conditions (e.g., two extreme weather events in Madagascar, an economic scenario in Namibia), but these changes did not affect the main project outputs and the project outcomes. In some cases, savings during the procurement process and unused funds allowed to further extend the main works by building additional sections of road or by adding civil engineering structures, such as bridges, roundabouts, and speed-reducing structures (Madagascar, Tunisia). In this respect, the Bank proved to be quite flexible, although some changes would not have been necessary if better quality feasibility studies had underpinned the projects.

Outputs related to the ancillary components were difficult to document and were often carried out partially. The ancillary infrastructures provided by the evaluated transport projects included a variety of interventions that could be classified into three categories:

- Institutional and technical support (feasibility studies for new roads, studies for road asset management, trade facilitation, training for local staff in transport ministries and road/port agencies).
- Support for the local population (provision of equipment for agricultural works or food processing, rehabilitation of schools and healthcare centers, rehabilitation of rural roads, rehabilitation of local markets).
- Implementation of the ESMP (resettlement and compensation, sensitization activities, environmental mitigation measures).

From data collected in project evaluations it appeared that most of the expected ancillary works and services were delivered (Table 4). Interviews with the local population, including groups of women, confirmed that the outputs received were useful. However, some projects had important data gaps in reporting about progress on ancillary components (Tanzania, Sierra Leone, Rwanda) since project monitoring was not implemented. The project sample includes cases where some activities on these components were downscaled or cancelled (Sierra Leone, Madagascar, Tanzania, Rwanda). Most projects reported that the implementation of ancillary components was often delayed. Studies and other institutional activities were typically delivered at the...
very end of the project’s implementation (Tunisia, Rwanda, Namibia) or even cancelled (Tanzania). These delays were attributed to procurement issues, but it is more likely that the executing agencies were less interested in these types of products compared to the importance of the main construction works.

Ancillary components (works and services) often fell under the responsibility of different ministries or agencies; therefore, follow up by the executing agency, which is generally a unit within the Ministry of Transport, was difficult to ensure. In some project implementation arrangements, the ancillary infrastructures (feeder roads, local schools and healthcare centres) were contracted out to local NGOs that struggled financially when they had to comply with the Bank’s procedures (e.g., Madagascar, Sierra Leone). Procurement issues and severe delays were also reported when activities had to be contracted out to consultants or consulting companies. At the same time, it was noted that supervision missions and reports did not pay sufficient attention to ancillary components. The implementation of these activities poses a challenge to the Bank since activities are often too small and dispersed, making supervision more difficult.

The implementation of an ESMP in the evaluated projects was found to have been done well overall, but at least two projects reported severe problems. The evaluated transport projects all included an ESMP due to their high impacts on the environment and populations living in the project areas. Despite some glitches, these schemes were found to have been appropriately implemented, although some difficulties were encountered, particularly in relation to the management of resettlement and compensation plans, which underwent very lengthy processes. However, for the road project in Tunisia, the executing agency did not provide sufficient evidence regarding compensation due to the local population. This is a serious shortcoming, since resettlement and compensation schemes should be delivered before the start of construction works. The proper implementation of such schemes is often a condition for the disbursement of the Bank’s loan. For the non-sovereign operation in Gabon, the private operator delayed the submission of the ESMP report for over

| Table 3: Summary table of achievement of project outputs (main infrastructure works) |
|---------------------------------|---------------------------------|---------------------------------|
| Project name                     | Implementation status (November 2020) | Comments |
| Road Infrastructure Development Project (Madagascar) | 98% (1.4 km in Toliara to be yet constructed) | Additional works were added (Ranozaza Bridge) and will be financed with project savings. |
| Road Sector Support Project - Phase II (Tanzania) | 100% | |
| Project to Develop Roads (Burundi/Rwanda) and Facilitate Transport on the North-South Corridor - Phase III | 100% | In Rwanda the adoption of a different road trajectory resulted in fewer km constructed and savings that were used to build 18 additional km. |
| Matotoka – Sefadu Road Rehabilitation Project, Section I: Matotoka – Yye Sierra Leone | 100% | |
| Road Infrastructure Modernization Project (Tunisia) | 100% | The Bank agreed with the Tunisian government to use the project savings for increasing the number of roads built/rehabilitated. |
| Riviera Marcory Toll Bridge (Côte d’Ivoire) | 100% | |
| Gsez Port Project (Gabon) | 93% | The dredging works did not reach the initial target depth of 14-meter depth. The current 10m depth is sufficient to dock vessels and cargo but cannot accommodate larger ships. |
| New port of Walvis Bay container terminal project (Namibia) | 100% | Rubber tyred Gantry cranes were not provided as planned since they were not needed anymore. Savings were used for civil works |

Source: project evaluations (data from project completion reports and site visits)
Achievement of projects’ development outcomes

The cluster projects were assessed on the actual achievement of the development outcomes identified at project appraisal. Expected project outcomes generally related to improved connectivity, transport efficiency and safety, better living conditions for the local populations, increased road and transport project management capacity, and improved regional integration.

Improved connectivity and transport efficiency gains

Traffic volumes were found to have increased, but this assessment was limited by the availability of detailed and updated traffic data (Table 5). Traffic increases were found to be substantial in three projects, Madagascar, Burundi/Rwanda, and Tanzania. An increase in motorized traffic, especially motorcycles, taxis and minibuses, was observed from site visits and interviews with local populations. The new or rehabilitated road sections improved access to existing corridors, and traffic is projected to increase further as more sections are constructed. Nevertheless, traffic data are not regularly collected, which impaired this evaluation. And, more importantly, the lack of data limits the capacity of road agencies to plan maintenance based on continuously updated traffic data by types of vehicles. Thus far, the Riviera Marcory Toll Bridge has not achieved the expected traffic forecasts, which were probably too optimistic given the novelty of the toll bridge. The COVID-19 context has also contributed to compromising the achievement of the 2020 target in terms of the level of traffic.

For port projects, the actual level of cargo volumes is far lower than expected, even when considering the impact of the economic crisis generated by the COVID-19 pandemic. In 2019, before freight volumes were affected by the pandemic, traffic volumes were far lower than initially planned:

Table 4: Summary table of achievement of project outputs (ancillary components)

<table>
<thead>
<tr>
<th>Project name</th>
<th>Implementation status (November 2020)</th>
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<tr>
<td>Road Infrastructure Development Project (Madagascar)</td>
<td>- Feeder roads (50%)&lt;br&gt;- Sensitization campaigns, provision of equipment, school rehabilitation, study on road maintenance, training activities (100%)&lt;br&gt;- Participation in Cost and technical audit (0%)</td>
</tr>
<tr>
<td>Road Sector Support Project - Phase II (Tanzania)</td>
<td>Not available</td>
</tr>
<tr>
<td>New port of Walvis Bay container terminal project (Namibia)</td>
<td>- Road Safety Action Plan for the Trans-Cunene Corridor, capacity building for the Walvis Bay Corridor Group (100%)&lt;br&gt;- Permanent secretariat for the Walvis Bay-Ndola-Lubumbashi Development Corridor Management Committee established (60%)&lt;br&gt;- Training for freight forwarders (73%)</td>
</tr>
<tr>
<td>Project to develop roads (Burundi/Rwanda) and facilitate transport on the North-South Corridor - Phase III</td>
<td>- Sensitization campaigns, provision of equipment, health care center, and market rehabilitation (100%)&lt;br&gt;- Impact assessment study (50%)&lt;br&gt;- Studies (Rwanda 40%, Burundi 100%)&lt;br&gt;- Equipment of the border control post (0%)</td>
</tr>
<tr>
<td>Matotoka – Sefadu Road Rehabilitation Project, Section I: Matotoka – Yiye Sierra Leone</td>
<td>- Sensitization campaigns, market rehabilitation, feeder roads (100%)&lt;br&gt;- School rehabilitation (70%)</td>
</tr>
<tr>
<td>Road Infrastructure Modernization Project (Tunisia)</td>
<td>- Two studies for the road sector (80% and 50%)&lt;br&gt;- Impact assessment study (50%)</td>
</tr>
</tbody>
</table>

Source: project evaluations (data from project completion reports)
nearly 70 percent lower in Namibia and 72 percent lower in Gabon with respect to the initial forecasts. Project evaluations indicate a few factors contributing to this unsatisfactory performance, including increased competition by other African ports, slow increase in maritime freight traffic, insufficient road/rail infrastructure to connect the ports to inland corridors, and high port tariffs. Such large differences between expected and achieved traffic volume suggest that traffic forecasts delivered overly optimistic projections that could not be achieved in a short period even under normal market conditions.

All road projects brought about substantial time and cost savings. Road projects consisted of building new roads or rehabilitating existing bitumen roads that had deteriorated over time due to lack of maintenance. Before the projects, roads were generally in deplorable conditions: they could not be used all-year-round; they were not safe; vehicles were frequently damaged, and passenger services were minimal and costly.

According to data included in project monitoring reports and interviews with users and transport associations, the road projects provided good quality and safe transport infrastructures that reduced travel time and vehicle operating costs (Table 6)\(^9\). Travel time has also become more predictable, which helped users to plan their journeys better. In some cases, the expected time savings were not fully achieved because it was necessary to add speed-reducing measures (Madagascar) and introduce speed limits (Tanzania) to improve safety along the road, especially near villages and cities. However, time savings remained substantially high.

Table 5: Traffic volumes were generally higher than planned

<table>
<thead>
<tr>
<th>Project name</th>
<th>Expected traffic increase* (absolute and %)</th>
<th>Actual traffic increase (absolute and %)</th>
<th>Last year of measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Infrastructure Development Project (Madagascar)</td>
<td>490 (115%)</td>
<td>559 (146%)</td>
<td>2017</td>
</tr>
<tr>
<td>Road Sector Support Project II Tanzania</td>
<td>137 (5%)</td>
<td>436 (38%)</td>
<td>2018</td>
</tr>
<tr>
<td>Project to Develop Roads (Burundi/Rwanda) and Facilitate Transport on the North-South Corridor - Phase III</td>
<td>N/A</td>
<td>Burundi 1557 (35.7%)</td>
<td>2018</td>
</tr>
<tr>
<td>Matotoka – Safadu Road Rehabilitation Project, Section I: Matotoka – Yiye Sierra Leone</td>
<td>N/A</td>
<td>1.31%</td>
<td>2017</td>
</tr>
<tr>
<td>Road Infrastructure Modernization Project (Tunisia)</td>
<td>N/A</td>
<td>Data is available only for the baseline scenario</td>
<td>2017</td>
</tr>
<tr>
<td>Riviera Marcory Toll Bridge (Côte d’Ivoire)</td>
<td>100,000 (100% in 2020)</td>
<td>81,152 ** -18%</td>
<td>2020</td>
</tr>
</tbody>
</table>

*Average daily traffic. **As measured in Sept 2020 to mitigate the impact of Abidjan lockdown (traffic in April was 46,060).

Source: project evaluations (data from project monitoring or project completion reports)

Travel costs generally decreased, and transport services improved (Box 5). Collective transport services (minibuses) were introduced or increased their frequencies once the roads were asphalted. Interviews with users show that bus fares were reduced (Tanzania, Rwanda/Burundi, Madagascar), and that considerable savings were achieved as the projects made it possible to travel within the day. At least one project reported that transport service costs for goods were also reduced (Madagascar). For the toll bridge project, travel costs have been mitigated by the low fare and the savings in vehicle operating costs.

Port projects also had efficiency gains, although cumbersome custom operations reduced these\(^11\). The port in Namibia reported gains in vessel waiting time, which was reduced from over 8 hours to less than 8 hours. In addition, the anticipated reduction of container dwell time was fully achieved. It was reduced from 14.5 days to 9.5 days against a target of 8 to 10 days. The overall increased capacity, faster and more reliable cargo handling, combined with automated administrative processes
at the port entrance and exit, has increased container turn-around times while also reducing costs. As a result, the port has also improved its position in the Logistics Performance Index. Nevertheless, slow and cumbersome customs operations are still hampering the full realization of time and cost savings.

**Transport safety**

All road projects reported road safety issues due to increased speed and unenforced speed limits. The evaluation did not find reliable statistics on the number of car accidents along the evaluated roads (except Riviera Marcory Toll Bridge in Côte d’Ivoire, which reported 323 accidents in 2019), given that accidents often go unreported to the police due to the lack of appropriate insurance policies. Interviews with local populations showed that the lack of enforcement of speed limits and imprudent driving are a major issue of concern and the main reason for most accidents. All road projects included traffic calming/speed-reducing measures and appropriate signalization, but these measures were not sufficient. Improving project design and raising awareness of traffic rules amongst the local population proved insufficient to avoid the larger number of casualties on the roads. An overall improvement in road governance is needed.

**Capacity and institution building**

The projects’ training and capacity-building activities were appreciated and deemed useful by direct beneficiaries, but the long-lasting benefits could not be measured. A major limitation in the analysis of the results of capacity-building activities stemmed from the lack of appropriate assessment frameworks and baseline data that should have been embedded into projects’ design. Capacity-building objectives were pursued by training the existing staff or by recruiting specialized experts. These activities aimed to increase capacity

<table>
<thead>
<tr>
<th>Project name</th>
<th>Time saved* (hours)</th>
<th>Average costs saved (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Infrastructure Development Project (Madagascar)</td>
<td>4.5</td>
<td>-19.4</td>
</tr>
<tr>
<td>Road Sector Support Project II Tanzania</td>
<td>2, 1, 0.5</td>
<td>-32.4</td>
</tr>
<tr>
<td>Project to Develop Roads (Burundi/Rwanda) and Facilitate Transport on the North-South Corridor - Phase III</td>
<td>1.5 (Burundi), 3.5 (Rwanda)</td>
<td>-81</td>
</tr>
<tr>
<td>Matotoka – Sefadu Road Rehabilitation Project, Section t: Matotoka – Yye Sierra Leone</td>
<td>1.1</td>
<td>-39</td>
</tr>
<tr>
<td>Riviera Marcory Toll Bridge (Côte d’Ivoire)</td>
<td>Between 0.5 and 0.8</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Multiple values are provided for projects that had different road sections.

**Box 5: Cheaper and more comfortable transport services**

**Insight from the Road Sector Support Project II - Tanzania**

Due to the introduction of short and long travel minibuses and large passenger buses, there is competition among the operators, reducing travel fares considerably. Field interviews confirmed that, after project completion, passengers are paying 50 percent lower fares and that the availability of buses to any destination has improved. Road users also confirmed comfort gains. Driving comfortability has tremendously improved despite sharp corners on some stretches of the roads. A bus operator also commented that before upgrading the road, women were paying a higher fare than men because they could not assist in pushing a stuck bus on the gravel road. Bus operators were not allowing more than ten women in a bus with a sitting capacity of 65 passengers because women could not help push a stuck bus.

Source: Project evaluation: Road Sector Support Project II (Tanzania)
within public transport ministries or road agencies by improving competencies in procurement, financial management, and environmental monitoring. Thanks to these activities, project staff in Project Implementation Units (PIUs) were reported to have considerably improved their understanding of the Bank’s procedures. However, it is difficult to say to what extent this expertise will remain available after the projects’ completion, given high staff turnover.

All sovereign operations included in the cluster planned to deliver special studies (e.g., road fund revenue in Tanzania, road standards and road sub-sector reforms in Tunisia), but project evaluations could not assess to what extent the studies’ recommendations were followed through since this was not part of the project monitoring. Furthermore, projects that included capacity-building components faced many challenges in delivering the expected outputs, including poor identification of capacity-building needs, underestimating costs, etc. Therefore, the projects’ contribution to institution building has most likely only been moderate.

In non-sovereign operations, capacity-building activities focused on improving environment EHS management for private operators. This was important since it was linked to the non-financial additiveness of the Bank’s intervention. The improvement in EHS management was considered a development outcome and contributed to justifying the Bank’s intervention. As a result, trainings were delivered, and EHS experts mobilized. But for the project in Gabon, the company documentation is incomplete, leading to some concerns about the progress achieved thus far.

**Living conditions of local populations**

Project monitoring reports and site visits show that transport projects have improved the living conditions of the local populations in many ways (Table 7). First of all, the projects provided direct employment opportunities in construction sites, although these effects were more moderate when contractors used foreign laborers (Namibia) or employees from other regions (Tunisia). Temporary sources of income were also created by the need to supply workers in construction sites with basic services. After project completion, villages benefited from increased traffic along the roads for selling their agricultural products, processed foods, and beverages. Women also benefited from new job opportunities, but in lower numbers. Improved mobility favored local trade, access to markets and local tourism (Burundi/Rwanda). However, in two projects (Madagascar and Sierra Leone), interviewees pointed out that the road benefits for the local populations would have been much larger if the roads had been connected to a larger network of well-developed rural roads.

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased number of direct and indirect jobs</td>
<td>Tanzania (1,100 direct, 200,000 indirect); Sierra Leone (544 direct); Namibia (505,965 direct); Côte d’Ivoire (1,400 temporary and 194 permanent); Rwanda (25,147 direct); Burundi (4,000 direct); Gabon (300 permanent); Tunisia (2602).</td>
</tr>
<tr>
<td>Provision of more frequent, cheaper and more comfortable transport services</td>
<td>Tanzania, Madagascar, Sierra Leone, Burundi/Rwanda</td>
</tr>
<tr>
<td>Local trade and in the surrounding villages has flourished</td>
<td>Tanzania (newly built fuel stations), Sierra Leone (car service centers), Namibia (a new jetty with restaurants and small shops), Madagascar, Rwanda/Burundi (kiosks, restaurants, microfinance institutions)</td>
</tr>
<tr>
<td>Improved basic services</td>
<td>Tanzania (water in burrow pits, sensitization campaign); Sierra Leone (school and market improvements, feeder roads, sensitization campaign); Madagascar (equipment, school, feeder roads, sensitization campaign); Rwanda/Burundi (equipment, healthcare centers, sensitization campaign)</td>
</tr>
</tbody>
</table>

Sources: Project evaluations (data from project monitoring or project completion reports)
The COVID-19 crisis has temporarily reduced the impacts on the private sector and small businesses. This was particularly evident for port projects, where the lower level of traffic could not sustain additional employment and business opportunities. Socio-economic infrastructure (rehabilitation of schools and healthcare centers) and sensitization campaigns did improve basic living conditions. However, it is important to note that most of these benefits could not be quantified across projects because impact assessment studies with baseline scenarios and survey works were not available or were not completed. Another important limitation for a cross-project analysis of transport project socio-economic benefits is the lack of consistency in setting a core number of indicators that could be tracked for all projects.

Regional integration

The contribution of the projects to regional integration as expected in the appraisal reports is not perceptible at this stage. The sample includes only one multinational operation (Burundi/Rwanda), where the outputs related to regional integration (delivery of equipment for the border posts, study on trade facilitation) were not delivered. For the other projects, it is not possible to conclude on the impacts of regional integration outcomes on trade enhancing activities due to a lack of data and attribution problems. Moreover, the full potential of these transport infrastructure projects can only be achieved once transport corridors are completed, customs procedures have been streamlined, and red tape substantially reduced.

Government revenue

Non-sovereign transport operations were set to generate revenues for the government, but the results are mixed. The toll bridge in Côte d’Ivoire is generating a lower-than-expected revenue because traffic has not achieved the initial targets in terms of traffic level and because the government of Côte d’Ivoire decided to reduce the user fee. Because of this, the government agreed to compensate the private operator for the unexpected loss through subsidies that have offset the revenue generated by the bridge. This was a sovereign choice by the national government based on political considerations; it did not undermine the PPP agreement, but it has reduced its expected development benefits. The fiscal effects of the port project in Gabon cannot be fully appreciated due to a lack of data. Despite that, the port has been underperforming since its inauguration, and the COVID-19 crisis has further affected its operations. Nevertheless, net payments from GSEZ port to the government of Gabon have increased, from $2.62 million in 2019 to $5.9 million in 2020. In any case, the two projects represent important showcases of how PPPs can be used to finance transport infrastructure when there is an appropriate regulatory framework in place and a financially strong and competent private operator.

Unintended project effects

Projects’ negative effects were anticipated and mitigated by the ESMPs, and no major unexpected effects were reported in the project evaluations. Only one project (Rwanda/Burundi) reported problems due to an increase in the local population attracted by the new road. Population increase is associated with increased deforestation, changes in local cultural norms, and increased cost of living. The surge in land prices located along Lakes Kivu and Tanganyika was also mentioned as a source of concern. These are changes that could only be partly mitigated by the project and that could be only offset by an enhanced use of the socioeconomic components (e.g., economic empowerment of local population, entrepreneurial training).

Efficiency

Efficiency measures the quality of project implementation (timeliness, cost overruns, efficient use of resources, implementation progress) and the soundness of the project’s economic rationale (cost-benefit analysis).
While projects had limited cost overruns and performed well on economic efficiency, the ratings on project efficiency were negatively affected by project delays. This combination of satisfactory and unsatisfactory ratings delivered a mixed picture (Figure 7). The two non-sovereign operations could not be rated on project efficiency using the same judgment criteria, as data on investment costs were not disclosed.

**Timeliness**

All projects were found to have challenges in following the expected activity schedule, and most of the delays were accumulated in the first year of the project (Table 8). This finding is further confirmed by the transport sector project portfolio analysis (Box 6). Construction works progressed as planned during work execution for most projects and were only affected by unforeseeable events (e.g., extreme weather conditions, Ebola crisis, COVID-19 for projects not completed by 2020). Most issues were reported at project onset when feasibility studies had to be updated and revised (Madagascar, Sierra Leone, Tanzania, Rwanda/Burundi). Countries struggled to implement the agreed resettlement and compensation schemes (the project in Tunisia still needs to provide adequate documentation). The process of procuring works and services was generally very slow due to specific country and Bank procedures (some examples on procurement procedures that could keep project implementation on track are presented in Box 7).

Construction works of the main infrastructure component generally required 2 to 3 years to be completed in the absence of unexpected problems, while time contingencies had to be added to account for local capacity in managing procurement processes, such as the recruitment of contractors and consultants, and administrative issues related to the proper implementation of the resettlement schemes. Nevertheless, projects performed well during the construction phase, and in one case, Tanzania, the time allocated to construction works was even overestimated. In this road project, construction works were divided into several lots contracted out to different constructors. This choice allowed the parallel execution of construction works, and good supervision ensured that quality differences among different lots were minimal.

Challenges and considerable delays were reported in implementing institutional components, as priority was given to speeding up and supervising the main infrastructure works. These activities often started late and could not be completed by the end of the projects. Examples include establishing a Permanent Secretariat for the Walvis Bay – Ndola – Lubumbashi Corridor, transport sector reforms for the Ministry of Infrastructure, Communication and Transport (MoICT) in Zanzibar, and the participation in the CoST initiative for Madagascar and Burundi. These activities proved to be more challenging and time-consuming than expected. It also appeared that the Bank did not possess adequate mechanisms to follow through on these processes effectively.

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**Figure 7:** Summative project ratings – Efficiency

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Infrastructure Development Project (Madagascar)</td>
<td></td>
</tr>
<tr>
<td>Road Sector Support Project - Phase II (Tanzania)</td>
<td></td>
</tr>
<tr>
<td>Road Infrastructure Modernization Project (Tunisia)</td>
<td></td>
</tr>
<tr>
<td>Matotoka – Sefadu Road Rehabilitation Project (Sierra Leone)</td>
<td></td>
</tr>
<tr>
<td>Project to Develop Roads (Burundi/Rwanda) and Facilitate Transport on the North-South Corridor - Phase III</td>
<td></td>
</tr>
<tr>
<td>New Port of Walvis Bay Container Terminal (Namibia)</td>
<td></td>
</tr>
</tbody>
</table>
Cost overruns

The projects were found to have some limited cost overruns that were absorbed by increased government contributions and the use of Engineering Procurement Construction contracts (Namibia). However, it is important to note that projects set aside large technical and price contingencies and that project budgets were adjusted during implementation as some activities were cancelled and funds were transferred to other activities (e.g., additional works). Almost all projects required some technical adjustments following the design review that modified the initial bill of quantities. These cost increases were absorbed by project budget contingencies (between 15% and 20%), savings in procurement processes, or changes in the provision of other works and services included in project ancillary components. These contingencies were adequate and worked well to absorb changes due to technical reviews.

Table 8: Summary table of project implementation timeframes

<table>
<thead>
<tr>
<th>Project name</th>
<th>Reported delays</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Infrastructure Development Project (Madagascar)</td>
<td>2 months, 2 addendums needed</td>
<td>Additional works needed</td>
</tr>
<tr>
<td>Road Sector Support Project - Phase II (Tanzania)</td>
<td>No delays, but construction works started 2 years late</td>
<td>Technical reviews needed</td>
</tr>
<tr>
<td>Project to Develop Roads (Burundi/Rwanda) and Facilitate Transport on the North-South Corridor - Phase III</td>
<td>3 years ; 4 addendums</td>
<td>Fulfillment of conditions for the first disbursement (delays in implementing resettlement and compensation schemes, mobilization of the counterpart funds) Administrative procedures and procurement issues Additional works needed</td>
</tr>
<tr>
<td>Matotoka – Sefadu Road Rehabilitation Project, Section I: Matotoka – Yiye Sierra Leone</td>
<td>2 years</td>
<td>Procurement issues Technical reviews needed Ebola outbreak</td>
</tr>
<tr>
<td>Road Infrastructure Modernization Project (Tunisia)</td>
<td>2 years likely ; 1 addendum</td>
<td>Security issues in one of the project areas Resettlement and compensation</td>
</tr>
<tr>
<td>Riviera Marcory Toll Bridge (Côte d’Ivoire)</td>
<td>9 months</td>
<td>Longer time required to start the operations</td>
</tr>
<tr>
<td>GSEZ Port (Gabon)</td>
<td>No delays</td>
<td>Bank’s loan approval took a long time, and when the loan was approved, the construction works were almost completed.</td>
</tr>
<tr>
<td>New Port of Walvis Bay Container Terminal</td>
<td>9 months</td>
<td>Technical issues during construction (construction works required 27 additional months)</td>
</tr>
</tbody>
</table>

Sources: Project evaluations (data from project monitoring or project completion reports)

Box 6: Transport project implementation delays in the portfolio analysis

Projects implementation often experiences delays of almost two years

As shown in the table below, transport projects are delayed on average by about 32 months before completion, with some differences across sub-sectors.

<table>
<thead>
<tr>
<th>Overall</th>
<th>Airport</th>
<th>Port</th>
<th>Railways</th>
<th>Road</th>
<th>Multisector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average delay in months</td>
<td>22.85</td>
<td>22.28</td>
<td>18</td>
<td>38</td>
<td>22.45</td>
</tr>
<tr>
<td>% of projects completed on time</td>
<td>12%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>15%</td>
</tr>
<tr>
<td>Number of projects</td>
<td>74</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>59</td>
</tr>
</tbody>
</table>

Source: Bank’s transport portfolio for the period 2012-2019

Portfolio data also show that it takes an average of 26 months before conditions for the first disbursement are fulfilled.
Project budgets were found adequate, but addendums were often needed to spend the allocated funds fully or justify project budget allocations. Disbursements were often delayed, and addendums were sometimes necessary (e.g., Madagascar, Burundi/Rwanda) to spend unused funds, especially in connection with the implementation of projects’ ancillary components and institutional capacity building activities. These addendums were often used to extend the length of the road constructed or improve road security in the proximity of villages. Some projects also had savings that were used to increase initial project outputs. For instance, for the road project in Tunisia, the local currency’s devaluation contributed to achieving large savings that could be used to extend the project further.

Overall, transport project financial planning was found to suffer from any uncertainty that surrounds the project design and context. When projects are approved, design reviews and additional geotechnical investigations, which are likely to bring about technical changes, are already expected and reflected in budget contingencies. At the same time, during project appraisal, there seems to have been little clarity about the extent of ancillary components, given that there were numerous cancellations and changes, which made the budgeting for these activities extremely difficult to predict and often resulted in unused funds. These components are key to sharing the benefits of transport projects with the local population, with more attention being paid to how these resources are planned and used.

**Economic performance**

The project evaluations could not rigorously assess the projects’ economic rate of return, but the initial projections of positive and considerable economic gains are likely to be confirmed for most projects. This good performance was driven by the achievement of traffic and efficiency gain objectives and limited cost overruns. This shows that projects were based on sound economic rationales. However, this evaluation could not perform a more in-depth assessment of the methodology used to calculate project net benefits. Only the port project in Namibia delivered a negative ex-post economic rate of return due to the considerable difference between the planned and achieved traffic volumes.

**Implementation issues**

Financial management issues and delays in implementing financial and technical audits were the most frequently reported issues. Several glitches were reported in the quality...
of financial reporting and implementation of recommendations (Madagascar, Sierra Leone, Burundi/Rwanda). Past experience in PIUs with the Bank’s procedures helped to speed up processes. Still, it was not sufficient to fully mitigate administrative capacity and a lack of staff in executing agencies (e.g., Tunisia). Supervision missions by the Bank’s task managers were regularly carried out, and the executing agencies deemed that these missions were useful to them. For the non-sovereign operation in Gabon, severe quality issues and delays in reporting by the private operator were reported and undermined a proper ex-post assessment of the effectiveness of the Bank’s non-financial additivity to the project.

**Sustainability of Results**

The assessment of sustainability considers the extent to which the projects have addressed risks during implementation and put in place mechanisms to ensure the continued flow of benefits after completion. Such an analysis is based on four separate elements: i) technical sustainability, ii) financial sustainability, iii) institutional sustainability and strengthening of capacities and iv) environmental and social sustainability (this only applies to Environmental and Social Category I and II projects).

Sustainability proved to be critical for the road projects (sovereign operations) that did not score well on this criterion (see figure 8); several factors threaten sustainability, including:

- Fast deterioration of roads due to usage, heavy-duty traffic, and climatic conditions
- Large work backlog for regular and periodic maintenance
- Inadequate funds for road maintenance.

In the evaluated sample, the toll bridge project in Abidjan constitutes a good practice example in terms of adequate provision of regular maintenance. In this case, the private operator ensures the bridge maintenance and this is included in the PPP agreement.

*Figure 8: Summative project ratings – Sustainability*

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riviera Marcory Toll Bridge (Côte d’Ivoire)</td>
<td>★★★★</td>
</tr>
<tr>
<td>New Port for Walvis Bay Container Terminal (Namibia)</td>
<td>★★★★</td>
</tr>
<tr>
<td>Road Infrastructure Modernization Project (Tunisia)</td>
<td>★★★★</td>
</tr>
<tr>
<td>Road Infrastructure Development Project (Madagascar)</td>
<td>★★★★</td>
</tr>
<tr>
<td>Road Sector Support Project - Phase II (Tanzania)</td>
<td>★★★★</td>
</tr>
<tr>
<td>Project to Develop Roads (Burundi/Rwanda) and Facilitate Transport on the North-South Corridor - Phase III</td>
<td>★★★★</td>
</tr>
<tr>
<td>Matotoka – Sefadu Road Rehabilitation Project (Sierra Leone)</td>
<td>★★★★</td>
</tr>
</tbody>
</table>
Technical sustainability

Roads and ports were constructed with appropriate quality standards, and provided that regular maintenance is ensured, they should last for 15–20 years. The infrastructure works were found to be technically sound and benefitted from rigorous supervision by executing agencies and work supervision companies. Their reviewed designs has ensured appropriate quality standards of the roads and improved resilience to extreme weather events and rising sea levels (ports). In road projects, traffic calming measures were added to reduce speed and accidents that can prematurely deteriorate the road pavements. This is in line with findings from past evaluations, where it is also emphasized that the transport projects delivered by the Bank are technically sound.

However, the project evaluations found that the most critical threat to road technical sustainability is the lack of appropriate maintenance. The roads have been recently constructed and are all in good condition, but may deteriorate quickly without appropriate usage and regular maintenance. This has been a recurrent problem for road projects in Sub-Saharan Africa, and reforms are ongoing in several countries to improve the way road maintenance is planned and carried out. These are structural problems that can only be partly addressed by the Bank’s transport projects, for instance, by including studies on setting up or improving road funds (Tunisia, Tanzania). The lack of maintenance results from poor governance of the transport sector and needs to be addressed through a more comprehensive and sector-wide approach. Past evaluations of transport projects in Africa (AfDB, EU) show that building new transport infrastructure does not create incentives for better maintenance. On the contrary, countries with more extensive road networks struggle even more to maintain their networks in good condition and accumulate even larger maintenance work backlogs.

Though pavement design was in principle assessed as adequate, its durability depends on the monitoring of traffic conditions, since the effects of vehicle overloading have not been considered in project design. For example, the projects’ design did not incorporate weighbridges for vehicle overload controls. In Madagascar, the purchase of weighbridges was a planned project output, but they were never delivered due to procurement issues. In Tanzania, the traffic model did not consider the induced changes in traffic demand (diverted traffic-trips, accelerated modal shift) that brought about a huge increase in road usage. The planned expansion of the port in Mtwara and heavy-duty traffic from a cement factory and coal mines poses a considerable risk to the road pavement.

Financial sustainability

All the evaluated road projects reported insufficient funding and issues of resource mobilization. In all projects reviewed, including the more recent ones, the available resources were found insufficient to cover road maintenance costs, which poses a serious threat to their sustainability. Project evaluations point to the weak capacity of governments to raise enough money to replenish the road funds through charges and taxes and the inadequacy of their administrative and governance frameworks. Therefore, the sustainability of road projects cannot be taken for granted and depends on how countries will plan and prioritize maintenance. Amongst all projects, the port of Walvis Bay stands out with a good performance on financial sustainability. The port is a revenue-generating project and can generate enough resources to cover maintenance needs. Continued and long-term sustainability relies on expanding traffic volume, which is expected to bounce back once the world economy recovers from the COVID-19 pandemic. In addition, the port business plan includes a Maintenance Reserve Account dedicated to equipment replacements and/or purchases. For instance, the assessment of ten recently approved projects shows that the financial sustainability of transport infrastructure is well explored during the PARs, but the proposed solutions require broader reforms that go beyond the perimeter of activities of transport projects (Box 8).
The financial sustainability of the two non-sovereign operations relies on the solidity of the PPP agreements and the projects’ viability. For the toll bridge project in Côte d’Ivoire, the profitability of the private operator is ensured by: (i) the PPP agreement, which includes compensatory payments by the national government; and (ii) the traffic volumes, which are close to the initial targets. For the port project in Gabon, the situation is more uncertain due to a severe drop in traffic volumes and the fact that the port operator’s revenues are not based on long-term contracts with diversified clients.

**Institutional sustainability**

Transport projects do not aim at setting up new institutions, and the institutional sustainability of transport goes beyond the projects’ line of action. The evaluated projects did not address the governance frameworks of the countries’ transport sectors, nor did they include technical assistance aiming at introducing reforms. Therefore, institutional sustainability rests on existing institutions and their internal capacity to properly manage road networks. The studies and training provided in transport projects improved internal capacity, but there are concerns in terms of adequate staff coverage in view of an expanding transport project portfolio (Tanzania).

**Environmental and social sustainability**

The sustainability of the environmental and social activities promoted by the projects was assessed as uncertain. An analysis of projects indicates that ESMPs, environmental works and sensitization campaigns were successfully implemented and may ensure the sustainability of the facilities left by the projects (feeder roads, burrow pits, and tree planting along the roads). However, these awareness-raising activities’ long-term effects cannot be predicted and vary depending on project contexts. Similarly, it is often unclear how local authorities will be engaged in local works, such as removing small vegetation and keeping ditches clean. Although the road projects included sensitization campaigns about the safe and proper use of the roads by the local population, the site visits reported a proliferation of commercial activities along the roads and some episodes of vandalism.

**Additionality**

The additionality of non-sovereign transport projects looks at whether the project could have been implemented by the market with the same...
quality, scope, and timeframe. The assessment of additionality is built on two elements: i) an analysis of the country financial market to assess if the project could have been financed by the private sector, and ii) non-financial additionality that includes the improved development outcomes that could not have been achieved without Bank support and political risk mitigation.

The Bank’s transport project portfolio does not include many non-sovereign operations since transport investments in Africa, especially in the road sector, are still largely financed by the public sector, and public-private partnerships are still rare. This evaluation assessed two non-sovereign operations for which the score on additionality is displayed in Figure 9.

**Overall, the Bank’s private sector intervention in the transport sector was found to be conducive to improved project design and better use of environmental and safety standards, but performance on additionality was mixed.**

For the Riviera Marcory Toll Bridge project, the Bank’s financial and non-financial additionality was based on its leading role in the financial closure of the PPP agreement. At the time of project approval, financial risk was very high in Côte d’Ivoire since the country was recovering from a period of instability and violence. The Bank’s participation in the PPP was key to improving the government’s creditworthiness and convincing other investors.

For the GSEZ Port Project, the Bank’s additionality was less clear. The project was important for Gabon to expand its exporting and importing capacity and to diversify its economy. However, the rationale for the Bank’s private sector intervention was thin. The Bank’s financing was mobilized after project completion (when the Bank’s loan was approved, the new terminal was already operational), and political instability was not an issue in the country. In addition, the project sponsor, a large multinational food and agri-business, already had a strong market presence in Western and Central Africa and could have accessed other sources of financing (the Bank’s share of the project cost was 13%). Finally, the Bank’s loan could have had a reputational and signalling effect to enhance the company’s activities in the African continent. This was intended to occur thanks to the implementation of higher and stricter EHS standards, but the company has struggled to provide evidence that such standards are duly enforced.

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**Figure 9: Summative project ratings – Additionality**

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Score</th>
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<tr>
<td>Riviera Marcory Toll Bridge (Côte d’Ivoire)</td>
<td>Green</td>
</tr>
<tr>
<td>Gsez Port Project (Gabon)</td>
<td>Yellow</td>
</tr>
</tbody>
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Assessment of Cross-cutting Issues

This chapter provides a more in-depth assessment of how transport projects have integrated important cross-cutting issues, including gender, climate, and state fragility, in their design and delivery frameworks.

Gender

A gender-sensitive design based on including women-specific activities was applied in five projects out of eight. These projects included gender-specific activities and objectives that were included in the projects’ socio-economic components. The two non-sovereign operations and the road construction project in Tunisia were less explicit in applying a gender lens in their design. For instance, for the project in Tunisia, no convincing evidence was provided that the project would have benefited women, and the project did not include socio-economic components.

That said, the projects which integrated elements of gender sensitivity in their design did not keep a good record of how projects improved the living conditions of women. The analysis of project impacts on women has been constrained by the lack of sex-disaggregated monitoring data and incomplete reporting on ancillary activities, despite focus groups having been organized to collect anecdotal evidence on how the projects contributed to improving the life of women living in the project areas. At appraisal, these projects included activities expected to benefit women the most, such as sensitization activities on sexually transmitted diseases, rehabilitation of local markets, schools, and healthcare centers. Two projects planned to achieve quotas for women’s employment in construction works (Namibia, Tanzania); however, these objectives proved rather difficult to achieve, mostly due to cultural barriers. For example, in Tanzania, it was planned to train woman contractors for road maintenance, but this activity was not implemented, and no explanation was provided. Furthermore, activities for women belong to the project ancillary services and, as such, suffered from implementation shortcomings as documented in the “Achievement of projects’ outputs” section.

The evaluated projects had very few activities planned for empowering women and helping them seize the new opportunities offered by improved connection to markets. Nonetheless, good examples were found in the ten recently approved transport projects. In road projects, women benefited from improved access to basic services and markets and safer travel conditions. They could sell their products (food and beverages) to workers during construction and later along the road. However, projects did not address equality issues that stem from a lack of economic and social power. The types and quantity of activities proposed remained inadequate to bring about a major change in the living conditions of women. Recently approved transport projects were found to be underpinned by a more careful gender analysis and to include entrepreneurial training to support women’s empowerment (Box 9).

Climate

Project design was found to have integrated the risks posed by climate change and extreme climate events. The possible damages of increased temperature and rainfall were mitigated in project design by providing better
drainage structures, mulching, gabions work, and benching on high road cuts/fill embankments. In port projects, rising sea level effects were considered when calculating the height of quay walls (Namibia). For the project in Madagascar, changes in project design had to be included during project implementation when two extreme weather events laid bare the need to mitigate the damages caused by excessive flooding on road structures. The resilience of transport infrastructure to a changing climate has become more critical and is well reflected in the design of recently approved transport projects (Box 10).

Project impact on greenhouse gas emissions could not be demonstrated. The projects reviewed did not collect any data about the expected and actual carbon emissions. A major limitation of this analysis also stems from a lack of disaggregated and updated traffic data. The observed substantial increase in motorized traffic has probably increased air pollution and carbon emissions. In some projects, tree planting along roads was carried out as part of project ESMP (e.g., Tanzania and Rwanda/Burundi), but it is unclear to what extent these measures were sufficient to offset the impact of traffic increases. The assessment of ten recently approved transport projects is provided in Box 10.

Box 9: Mainstreaming of gender issues in recently approved transport projects

| Transport project design increasingly adopts a gender-inclusive design |
| In 2014, the Bank elaborated a gender strategy (Investing in Gender Equality for Africa’s Transformation) aimed at mainstreaming gender through gender-sensitive and gender-responsive projects. Two of the strategy’s pillars, economic empowerment and knowledge management and capacity-building, are generally included in transport projects. All the assessed PARs show that the gender dimension is satisfactorily integrated. Compared to past transport projects, the newly approved projects are based on a more thoughtful gender analysis that helps to identify gender-specific activities to enhance the inclusiveness of project development outcomes. However, the extent to which design is gender-sensitive varies from project to project. In all projects, women are identified as the main beneficiaries of the projects’ socio-economic components since these are meant to improve the provision of healthcare and education. Gender-specific targets are often set to ensure that women can also benefit from the opportunities offered by the project, such as employment creation and skill development. In a more limited number of projects, there are activities (or entire project components) that support women’s empowerment by improving their entrepreneurial capacity in sectors that are particularly relevant in the project area. These activities go beyond the provision of basic work equipment and include capacity building for women’s associations, and are delivered by specialized organizations. |

Source: Desk assessment of 10 recently approved transport projects

Box 10: Mainstreaming climate change in recently approved transport projects

| Climate risk management and adaptation is well integrated in transport project design, but the climate effects of transport projects are not well discussed |
| Overall, PARs perform well in identifying how projects contribute to implementing the Bank’s climate change action plan in its adaptation component, but do not analyze and quantify project contribution to curbing greenhouse gas (GHG) emissions. Project resilience to extreme climate events is well described in all projects, and technical design integrates these aspects. The transport sector is a major fossil resource consumer and one of the highest GHG emitting sectors. Road construction and rehabilitation often increase heavy-duty traffic, which is not sufficiently addressed in the PAR analysis. Although half of the assessed projects include some carbon sequestration (e.g., tree planting) or traffic calming measures, the potential impacts of these measures are not quantified, and it is unclear to what extent these mitigation measures will be sufficient to offset the increase in motorized traffic. Only two projects, both with an urban dimension, considered the reduction of air pollutant and GHG emissions in the project results matrix. |

Source: Desk assessment of 10 recently approved transport projects
approved projects shows that this is a dimension that has not yet been well considered in the Bank’s transport projects (Box 10).

**State Fragility**

The evaluation found that state fragility was not holistically addressed in project design prior to the introduction of Bank’s fragility strategy. The sample of eight completed projects includes projects in three fragile states (Madagascar, Sierra Leone, Burundi), and at the time of their approval, the Bank had not yet developed its new approach to fragility (2014). In only one project (Madagascar) did the project’s contribution to reducing fragility in all its main aspects emerge. In particular, the road project in Madagascar served a remote and disadvantaged area (the South-West of the island). By doing so, the project aimed at improving territorial cohesion, mitigating poverty, and providing secure and reliable transport infrastructure in an area prone to natural disasters (flooding). Nevertheless, the assessment of the ten recently approved projects shows that fragility is a dimension that has now been well considered in the Bank’s transport projects (Box 11).

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**Box 11: Mainstreaming fragility in recently approved transport projects**

The socio-economic components of transport projects are designed to address the drivers of fragility and build resilience.

The sample of the ten recently approved projects included four projects in fragile states (Madagascar, Comoros, Burundi, and Congo DRC). All projects’ PARs include improved access to basic services and activities that aim at empowering the local population, in particular by helping women to integrate into economic activities in the relevant agricultural supply chains. The projects also contribute to state-building by connecting remote areas. Two projects (Congo DRC and Comoros) also requested a waiver for the counterpart contribution, which is justified by high debt exposure and the Bank’s commitment to implement the countries’ development agenda with regard to fragility.

Source: Desk assessment of 10 recently approved transport projects
Conclusion and Lessons

Conclusion

Are the Bank’s transport projects strategically aligned with the Bank’s TYS and the needs of regional member countries?

Projects’ alignment with the Bank’s relevant strategies was found highly satisfactory due to the relevance of transport in the Bank’s overall development strategy. The evaluated transport projects contributed to at least four operational priorities of the Bank’s TYS covering the period 2013–2022. These are: (i) infrastructure development, (ii) regional economic integration, (iii) private sector development, and (iv) governance and accountability. Such a broad alignment with several Bank priorities was possible due to the multidimensional nature of the transport projects, which integrated transport infrastructure investments with ancillary components pursuing broader development objectives, including in the areas of gender, fragility, agriculture, and food security.

The reviewed projects supported African countries’ need to expand their transport network and services and were identified by countries as investment priorities. Projects aligned well to countries’ transport and logistical development needs and addressed the needs of the local populations through project socio-economic components. All projects were included in national strategies or were part of regional corridors where transport was identified as a key sector for enabling economic development. The design of project socio-economic components was geared towards improving the living conditions of the local populations by mitigating the effects of poverty (improving access to basic services, providing work tools). The funds allocated to these components were generally modest and spread too thinly to unleash substantial development opportunities, which could have been achieved by better exploiting synergies with other ongoing projects supported by the Bank or by other development partners.

To what extent do recent operations incorporate innovative approaches and lessons learned from previous evaluations, and are they strategically aligned with the High 5s?

The appraisal reports of the recently approved transport projects show a good understanding of the main issues that can negatively affect project implementation and sustainability, but they do not outline new approaches to address these problems. Factors that have hampered transport project implementation in the past are well identified and described in PARs. These include insufficient capacity in executing agencies, the need to review and update the feasibility studies, lengthy procurement processes, and slow mobilisation of counterpart financing. However, the proposed mitigation measures do not introduce elements of novelty and are based on approaches that were already implemented in the past and found unsuccessful in reducing the long preparatory phase that precedes the construction works. The critical problem of sustainability is also addressed in the design of new projects. Still, the solutions proposed assume that countries will considerably improve the governance of their transport sectors, which is not convincing in view of past experiences.

Recent transport operations in the cluster have integrated High 5s objectives into their design. Generally, the link is with more than one of the High 5s, with five of the 10 reviewed projects contributing to at least three priorities among “Feed Africa,” “Industrialize Africa,” “Integrate Africa,” and “Improve the quality of life for the people of Africa”. Half of the projects are expected to contribute towards the “Feed Africa” priority, highlighting the role of the
transport sector in unlocking agricultural potential and facilitating access to food. These objectives are pursued through specific activities included in ancillary components aiming at reinforcing existing agricultural production and food processing activities, improving linkages in agricultural value chains, empowering women, and facilitating trade.

The cross-cutting issues of gender, climate, and fragility are better integrated in the design of recent transport projects, but the contribution of transport projects to green growth is not well defined. Compared to the past, the reviewed projects outline a better approach to tackle the drivers of fragility and gender inequality by providing ancillary services that empower local populations. This performance can be explained by the fact that the Bank has equipped itself with practical tools (fragility lens and gender mainstreaming) to better consider these two cross-cutting aspects. Regarding green growth, the evaluated projects systematically integrated resilience to climate change in project design, but they do not define to what extent they can mitigate climate change.

To what extent did the interventions achieve the intended results for the direct beneficiaries in terms of regional integration, connectivity, affordability, safety, and transport sector governance?

The reviewed projects were found to have achieved high transport efficiency gains that benefited the local populations and businesses. Apart from the two port projects and the toll bridge, the projects achieved or largely exceeded traffic forecasts. In all projects, cost and time savings were substantial and benefitted transport operators and transport service users. The road projects allowed people to reach the main market centers and services at a lower cost and made transport more accessible, including for women.

The outcomes of projects’ socio-economic components often remained insufficiently reported.

To reinforce the benefits and inclusiveness of transport projects and mitigate their negative impacts on the environment and on social structures, the evaluated projects often included ancillary components providing socio-economic infrastructure and services to the local populations. These ancillary components were useful and appreciated by the beneficiary population because they made a difference in their everyday life. All projects brought about an increase in temporary jobs, but it is unclear to what extent local populations were able to benefit from these opportunities.

To what extent was the Bank’s assistance delivered efficiently in terms of both timeliness and cost-effectiveness?

The evaluation found no evidence of project effects on improving transport sector governance and regional integration. Capacity-building activities and the provision of studies aimed at improving transport sector governance, but project designs did not include appropriate objectives and indicators for evaluating the effectiveness of these activities (what skills and competencies should have been improved in the beneficiary organizations? What was the baseline scenario?). The impacts and usefulness of the studies financed by the projects could not be assessed since, in most cases, these were still pending or delivered at the very end of the projects. Although regional integration was considered an important objective in almost all projects, the evaluation team found no evidence of increased intra-regional trade flows that could be linked to the projects. These effects might take longer to materialize and are often held back by the lack of progress in customs regulations and management.

Project outcomes on road safety are uncertain.

Qualitative analysis showed that the improved road conditions made traveling less risky, while increased vehicle speed was often reported as an issue of concern for the local populations. However, without data on traffic accidents, it was impossible to verify to what extent projects contributed to road safety.

The planning of transport project timelines and budgets was found to be challenging. Like the Bank’s overall transport project portfolio, the projects
included in this cluster evaluation experienced considerable delays. While construction works were managed effectively, capacity and administrative constraints in executing agencies delayed the disbursement of funds and the implementation of activities according to the projects’ workplans. Recurrent obstacles included lengthy procedures for resettlement and compensation, the procurement of works, the disbursement of the counterpart financing, and the recruitment of necessary staff. Design reviews also resulted in delays and required budgetary reallocation. Cost overruns were limited because project budgets included appropriate contingencies (between 15%-20%), and there were savings on procurement processes. Funds allocated to ancillary components were more difficult to disburse because these were spread across multiple service providers.

The implementation of the main infrastructure works was well supervised while the ancillary components were not sufficiently followed up. Most of the Bank and executing agencies’ supervision efforts were devoted to the main construction sites. Socio-economic infrastructure and capacity/institution-building components were often delayed, and there seem to be no appropriate mechanisms in place to follow through and speed up the delivery of these activities. For some projects, glitches and delays in the correct implementation of project ESMPs were also reported and required the Bank’s continuous action to ensure that Bank standards were properly followed.

To what extent are the achieved results sustainable?

The sustainability of road transport projects remains questionable, as ongoing reforms of road funds and road agencies are not yet completed. The assessment of the projects’ sustainability needs to consider how maintenance is ensured for the entire network. In the current conditions, lack of adequate road maintenance at the country level is likely to cause the rapid deterioration of the assets built by the projects unless countries substantially improve their road asset management frameworks. Furthermore, there is no certainty that the measures built into projects to mitigate vehicle overloading and excess speed and promote safety will be sufficient, mostly due to a lack of enforcement. Finally, if traffic measurements are not carried out regularly, it will not be possible to plan maintenance works.

The involvement of the private sector in the Bank’s financing of the transport sector proved to be efficient and to ensure financial sustainability, but the financial risks remain high. This cluster evaluation included two non-sovereign operations that showcased how the private sector can build and maintain transport infrastructure. However, there are many limitations in their use, given that country investment pipelines do not include many revenue-generating transport projects. As shown in the two projects analysed, the risk of such operations remains high because unilateral changes in PPP agreements might occur. This evaluation also showed that revenue-generating projects are better at securing sufficient funds for maintenance when revenues are ring-fenced for this purpose.

Lessons

The following lessons could be learned from this cluster evaluation.

Project development outcomes

Greater development outcomes can be achieved through more thoughtful design and follow-up of project ancillary components, and exploiting synergies with other development projects. The ancillary components are useful to improve the well-being of the local population and to mitigate the negative effects of transport projects on the environment and social structures. However, the current approach has delivered mixed results. Ancillary components were often partially implemented, delayed, and their sustainability is
uncertain. The executing agencies did not effectively supervise their implementation due to a lack of capacity and incentives. All these issues pointed to some problems in how these components were integrated into project design and implementation frameworks. To increase the impact of these components and ensure their sustainability over time, it is important that the relevant ministries (education, healthcare, environment, agriculture) be involved in their design and implementation, and that the executing agencies possess the necessary expertise and resources to supervise the ancillary activities. At the same time, examples from recently approved transport projects show that exploiting synergies with other projects in the agriculture and private sectors could enhance the development impacts of transport projects on the local populations and the objectives of “Feeding Africa” and “Industrialising Africa.”

**Project performance**

The timely implementation of transport projects can be improved if binding constraints are removed. Implementation risks and possible delays were properly identified in transport project appraisal documents but were not reassessed during project implementation. Furthermore, the proposed mitigation measures were not sufficient to ensure a timely start of construction works and ancillary components, as the solutions proposed did not focus on removing binding constraints (inadequate procedures, poor governance, inefficient public services) and were not underpinned by a more in-depth analysis of the project-specific context, which could have revealed some flaws in project readiness analysis. A good example identified by this evaluation is the request for a waiver for counterpart financing for fragile countries since this addresses a recurrent source of delay.

Compared to the traditional procurement route, alternative procurement routes can help to reduce delays in transport project implementation and reduce the need for extensive design revisions. Most transport projects assessed in this evaluation were procured through traditional procurement that included a long pre-tendering phase and design revisions prior to construction. The non-sovereign operations financed through a PPP were implemented on time, while the use of an EPC contract ensured that the constructor absorbed additional and unforeseen costs. The Bank could consider using more design and build or construction management contracts if local conditions are favorable (capacity in executing agencies and appropriate legal frameworks).

**Project sustainability**

Embedding a revenue generating mechanism in transport projects can be an effective way to address the lack of funding and capacity for maintenance. The sustainability of transport projects was generally found questionable in the cluster evaluation, which confirmed the findings of
past evaluations carried out by the Bank. From the analysis of transport projects, it also appeared that the Bank has not yet identified an approach that could deliver good results, since solutions to these problems depend on country-specific conditions and the quality of institutions. Supporting countries by providing studies on how to improve road governance and management is useful but does not lead to substantial changes unless recommendations are followed through. However, the evaluation showed than integrating a cost recovery mechanism into transport projects can be a more effective way to address the lack of funding and capacity for maintenance, as revenue-generating projects are more likely to be well-maintained.

Data collection and monitoring

Activating project monitoring and evaluation systems in a timelier fashion can make more information available about the development outcomes of transport projects. Transport projects had good monitoring and evaluation systems embedded in their design, but their usefulness depended on how these activities were carried out, the capacity of the service provider, and their timely implementation in relation to established project baseline scenarios. Moreover, results frameworks focused on the macro-level benefits of transport projects that are easier to measure through national statistics, but that cannot be attributed to the projects. For a better assessment of the overall contribution of transport projects to development outcomes, it would be useful to establish a set of core indicators collected by all projects and reflecting the Bank’s policy priorities. For example, within the High 5s, the benefits of transport should be linked to the objectives of feeding and industrializing Africa. More evidence could be collected through surveys carried out locally on how transport projects foster the creation of local agricultural value chains. Geospatial data could also be used to assess changes in settlements and in agricultural activities. More efforts in collecting sex-disaggregated data could also help to understand how women benefit from improved transport infrastructure and services, in addition to the anecdotal evidence that can be collected through site visits.

A more accurate traffic demand forecast could help improve project design and increase project sustainability. This evaluation found that traffic data was not collected consistently for the road projects and that it was not possible to gather recent traffic measurements (2019/2020). Better traffic analyses at project appraisal, which are based on rigorous demand forecasts and integrating the effects of complementary investments, could help avoid overdesign and develop more balanced PPP agreements. The frequent and regular collection of traffic data, that could be done through sensors and cameras, could help to increase the effectiveness of traffic control measures (speed control and weighbridges) and plan maintenance works.
<table>
<thead>
<tr>
<th>Annex</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Annexes</td>
<td>50</td>
</tr>
<tr>
<td>References</td>
<td>50</td>
</tr>
<tr>
<td>Endnotes</td>
<td>51</td>
</tr>
</tbody>
</table>
Technical Annexes


1. The Transport Sector Theory of Change
2. The Evaluation Questions
3. Projects Selected for In-depth Evaluation
4. Projects Selected for Desk Review
5. Rating Grid for the Project Evaluations
6. Gallery of Project Photos

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Endnotes


2 Developed in the Synthesis Note of PARs assessment.

3 Unit of Account

4 Source: SAP and private sector database


6 Addressing Fragility and Building Resilience in Africa, 2014 – 2019

7 The desk research was based on a stock tacking exercise of BDEV database of main findings emerging from project completion reports and project completion evaluation notes.

8 Gross Domestic Product

9 Technically the implementation of an ESMP is not considered a project ancillary component. However, in the design of the cluster projects, the activities that constitute the ESMP were included in the ancillary components.

10 Data for the project in Tunisia are not available yet.

11 Information on time gains was not available for the project in Gabon.

12 Infrastructure Transparency Initiative

13 A form of building contract where the builder (the EPC contractor) delivers a completed project on a turnkey basis.

14 Non-sovereign operations are excluded from this analysis.

15 See chapter on projects’ effectiveness.

16 The port project in Gabon could not be scored for this criterion due to a lack of sufficiently robust evidence.

17 In 2020 the Bank conducted the study “Road Asset Management Study - Accelerating Road sector Reforms” that provides an analysis of the state of reforms in a selected number of African countries and examples from peer countries in Asia and South America.
About this evaluation

This report presents the findings and lessons of a cluster evaluation of 18 transport projects funded by the African Development Bank Group (AfDB or “the Bank”) in the road transport and ports/water & fluvial transport sub-sectors, comprising eight completed or close to completed projects (USD 805.5 million) and ten recently approved projects (USD 1.2 billion) over the 2012–2019 period.

The evaluation, among other things, concluded that the reviewed projects supported African countries in their need to expand their transport network and services, which were identified as investment priorities by the countries themselves.

Completed projects were found to have achieved substantial transport efficiency gains that benefited the local populations and businesses. However, the planning of transport project timelines and budgets proved to be challenging, and their sustainability remains questionable due to ongoing reforms to road funds and road agencies not being completed.

The evaluation also drew lessons from the design and implementation of road and port projects in the areas of project development outcomes, project performance, project sustainability, and data collection and monitoring. These provide insights for future strategic and operational directions for the Bank’s assistance in the transport sector and can inform any revision to the AfDB Transport Policy (1993).