Gender as Material to Infrastructure Projects: Reaching Better Outcomes by Applying a Gender Lens from Project Inception

This paper argues for the application of a gender lens at the earliest stage of developing better infrastructure projects, both in terms of development outcomes and risk-adjusted returns for investors. Gender is material throughout the project lifecycle, as it influences long-term stability at both a project level and in a macro-economic context. Therefore, projects that are conceived and designed with a gender lens present reduced risk. The paper highlights the opportunity for blended finance in influencing the markets at the earliest stage of project development.

Introduction

Investment in improving infrastructure has been directly linked to economic development and, subsequently, poverty reduction by numerous studies over the past two decades. Infrastructure investment has hence become a central agenda in achieving global development priorities (World Bank, 2019) and the Sustainable Development Goals (SDGs). Developing infrastructure sustainability is a rising focus both from an environmental and a socioeconomic perspective (PIDG, 2016). In the wake of the economic crisis caused by COVID-19, infrastructure investments are expected to be a central component in recovery, and it is therefore an appropriate time to examine infrastructure investment in the context of a just, equitable recovery.

Infrastructure projects, by their nature as long-term projects, benefit from political and macroeconomic stability, while also contributing to it. A successful infrastructure project is likely to have longitudinal ripple effects over time with multiple levels of impact and positive development outcomes. In contrast, when poorly designed, they can have a detrimental effect on individuals, communities, and the environment that are not understood until long after the project is complete. Improved equity in a macroeconomic context in turn contributes to stability and lower risk for investments, including projects, in that context. Utilizing a gender-lens in the context of an infrastructure project is therefore critical to its long-term success in achieving its dual impact and investment goals.

The past decade has seen progress on the integration of a gender lens in infrastructure development. From being considered gender blind (World Bank and OECD, 2004) to gender neutral (IFC, 2012), there is now consensus among stakeholders that infrastructure is in fact, not gender neutral (PIDG, 2016, World Bank, 2019, OECD, 2019). The gendered nature of infrastructure projects has been evidenced at every stage in how they are planned, designed, financed, constructed, and operated, further resulting in the projects’ gendered nature of reach, price, and quality (World Bank, 2019).

This understanding has led to the development of a range of guidelines, tools, policies, and manuals by different actors that link gender and infrastructure (OECD, 2019). Improving gender equality has emerged as a key objective of infrastructure development, as higher levels of gender equality are correlated with lower rates of poverty, a higher standing in the Human Development Index, and less environmental degradation (Government of Canada, 2013). Actors
within infrastructure investment, like other investment agendas, are increasingly recognizing the value of a gender lens in improving the financial and social returns of investments.

Corresponding with the understanding of the gendered nature of infrastructure projects, the sector is also transitioning from incidental to intentional in comprehension and assessment of outcomes with a gender lens. This is a critical shift, as incidental outcomes could easily entrench and enhance socioeconomic disparities by unintentionally restricting the intended benefits of a project. However, infrastructure development continues to reflect a traditional approach to risk management, whereby risks are addressed through a series of contracts that still either unprice or underprice risks associated with gender.

Therefore, the full application and assessment with a gender lens is central to a good infrastructure investment. While the benefits or impact of a successful project cannot always be directly monetized, they contribute to and create value for the economies in which they occur, reducing risk over the life of the project.

**Gender and Infrastructure: Advancing the Discussion**

The current discussion around incorporating a gender lens in infrastructure needs to evolve in two ways. The first shift required is **moving beyond minimum compliance standards, and a ‘do no harm’ approach, to intentionality in creating positive impact.** The IFC Performance Standards (2012) include a number of gender-related standards, within sections on Assessment and Management of Environmental and Social Risks and Impacts, Labour, Land Acquisition and Involuntary Resettlement, and Indigenous Peoples. This is a good starting point, but it is critical to address gender as material to infrastructure beyond assessing and mitigating negative impacts of infrastructure. Without this recognition, the opportunity for infrastructure to directly enable women’s economic empowerment, and further address broader issues of systemic equity and access, will be missed.

Intentional design of infrastructure projects can promote participation, expand the benefits of growth and development, and support securing women’s rights in the long-term (Government of Canada, 2013). Yet, this intentionality requires a deep understanding of communities from a socioeconomic perspective – as potential customers, employees, suppliers – and beyond that to understand the power dynamics impacting who benefits and who is further disenfranchised by these new developments. **Power, access, and equity must all be critical considerations in order to reduce risk over the lifecycle of any infrastructure project.**

The second shift involves **moving beyond a focus on efficiency when considering a gender lens in infrastructure.** Gender is material and can be used to make a business case, such as including a deeper pool of talent or more effectively engaging communities. The next stage of progress recognizes gender equality and women’s empowerment as goals in and of themselves (PIDG, 2012). Empowerment must be an objective of the infrastructure project as it is conceived and initiated. This focus leads to a shift to addressing the ‘why’ of infrastructure and gender, rather than simply the ‘how’. Central objectives of infrastructure development – economic...
development, inclusive growth, and reduced poverty — will not be possible without understanding gendered inequities within these processes.

**Gender and Infrastructure: The ‘Why’ and the ‘How’**

The OECD calls for recognition of a gender and sustainable infrastructure nexus, with an integrated approach to infrastructure development with a gender lens. The proposed approach has two pillars. The first pillar is to, “consider the specific gender aspects of infrastructure strategies, policies, and projects” (OECD, 2020, p.2). This pillar requires understanding and analyzing, “women’s needs and preferences,” as well as evaluating trends that will impact them, with the ultimate objective of improved well-being. Although not named by the OECD, in our assessment this pillar should be interpreted as the ‘why’ of the gender-sustainable infrastructure nexus. Naming this focus will allow a structured approach to intentional impact (OECD, 2020).

OECD’s second pillar focuses on the ‘how,’ “to ensure the engagement of women in the design of infrastructure strategies and plans and in implementation, as well as due consideration of the well-being of female employees along infrastructure supply chains” (OECD, 2020, p. 2). Essentially, women are considered across every stage of infrastructure development, not just as potential users or employees or contributors, but throughout the supply chains that are impacted by the infrastructure development. This focus implies not only engaging women from across socioeconomic backgrounds through consultations, but also having women in decision-making positions across the spectrum of stakeholders involved in the project, particularly in positions of governance (OECD, 2020).

There continues to be progress on the ‘how’ in infrastructure, with gender experts now integrated within teams in order to increase engagement levels and oversight throughout the process. In contrast, the progress on decision-making positions and governance is gradual. Addressing the first pillar, the ‘why’, remains a significant challenge. The gender analysis and gender action plans that have become standard operating procedure in the field are executed after a project has been conceived and proposed, and reflect the established process. Therefore, gender remains a backend consideration and metric rather than a project-driving analytic.

In shifting the focus from the ‘how’ to the ‘why’ of infrastructure development, stakeholders involved in identifying and designing the project have the opportunity to be intentional about the positive impact a project will have, and can further create a positive multiplier effect (Grown, 2018). Intentionality in addressing the ‘why’ of infrastructure will achieve the dual objective that underlies infrastructure investment, strengthening both the impact case as well as the investment case. The investment case benefits from the impact case, through reduced risk and higher returns.
Risk through the Project Lifecycle: Analysis with a Gender Lens

Figure A: The Project Lifecycle and the Use of Concessional Capital (Convergence)

In considering the link between gender and risk in infrastructure projects, considering risk through the stages of a project lifecycle is an ideal starting point. A typical project moves sequentially through five broad stages (USAID, 2020):

- **Project Preparation** – The origination and initial design of the project. This stage is typically initiated by the project sponsor, a private company that conceives a commercial opportunity based on previous experience.
- **Project Formation** – The design and planning of the project with a larger group of stakeholders that include the investors, off-taker(s), and government, amongst others. This is a critical stage that includes assessment, due diligence, negotiation, and legal evaluation by both equity and debt investors before financing.
- **Project Construction** – The procurement and implementation stage of the project typically involves an Engineering, Procurement, and Construction (EPC) Contractor that manages the construction of the project.
- **Project Management** – The operation and maintenance of the project over an extended period of time, typically with an operation and maintenance (O&M) contractor.
- **Project Exit** – The completion and closure of the project, typically represented by the financial exit of investors and the closure of the project company, rather than the physical closure of the infrastructure associated with the project itself.

Each stage of the project lifecycle outlined above brings in additional stakeholders, adding to the complexity of managing them. From an investor’s perspective, this complexity is managed through a series of contracts that allocate risk to the stakeholder that is considered to be in the best position to understand and actively manage that risk. The project sponsor plays a critical role throughout the process and is involved at every stage from preparation onwards.

In infrastructure projects that are intended to achieve development outcomes, it is critical to understand who the project sponsor is, the motivation for the project, and the short-term and long-term benefits that they would accrue as project sponsors. Typically, project sponsors conceive and initiate projects without a gender lens. Incorporating a gender lens at this stage is
considerably more difficult than at subsequent stages; yet, application at this stage represents transformative change. A gender lens applied from the very inception of an infrastructure project, and throughout each stage of development, will benefit that project by increasing stability and reducing risk.

To assess these macroeconomic stability and risk impacts, it is useful to imagine the point when the project reaches the final stage of closure with unserved or underserved communities in mind. Framing what a successful project would look like through this approach will provide insight to the risks at each stage of the project lifecycle and their link to gender, ultimately influencing the decision-making process at every stage.

**Project Preparation (Origination and Design)**

This stage remains the most significant challenge for gender analysis in the project lifecycle, as it would need to address existing power structures that define who has a voice in imagining, initiating, and designing projects in the first place. For infrastructure to be truly transformative it requires not only improved access to decision-making for underrepresented groups (including women), but also shared control over resources. With “true participation and decision-making power” in project preparation, there is a positive impact on agency and empowerment (USAID, 2014). With this focus as a starting point for project sponsors in project development and subsequent project finance, investors would benefit from significantly lower risk through every stage of the project lifecycle. Beyond diversity in representation amongst project sponsors, empowerment and decision-making authority within them is critical.

While unfortunately there has been limited progress at the origination stage, there are examples that suggest the far-reaching implications of empowering women to conceive and design projects. For example, with higher participation in gram panchayats, the local political bodies in India, infrastructure projects are conceived differently. These gram panchayats play a role in selecting which infrastructure projects are executed in the village, such as public buildings, water infrastructure, and roads. In gram panchayats that had higher representation of women, investments in drinking water infrastructure increased. The study further showed that the priorities of projects shifted to a broader base of development, including children’s needs, and resulted in ripples of positive impact that improved stability. There was a subsequent increase in participation of women in village meetings, as well as an increase in reporting of crimes against women, and more arrests for such crimes (Chattopadhyay & Duflo, 2004).

Beyond project origination, incorporating a gender lens in project design is also important. The World Bank’s 2008 project focused on integrating gender analyses into a rural water supply and sanitation project in Tanzania further demonstrates the benefits of incorporating these considerations into the front-end of the project preparation stage. According to the study, “Gender analysis was incorporated into two key activities: gender-segregated focus group discussions with community members to assess the quality of existing water services and semi-structured, key-informant interviews with water facility management staff to analyze the financial, technical, and institutional arrangements at each project site” (World Bank, 2008, p.16). By applying the information obtained in these discussions to the project site selection
decision, the distance traveled to water sources was minimized and the risk of sexual assault and animal attacks were reduced.

Similarly, El Metropolitano, the Bus Rapid Transit system of Lima, Peru, is another project that was conceived with a direct objective of positively impacting the lives of marginalized communities and was able to mitigate risks as a result. The aim of the transit improvement project was to increase efficiency and affordability of services, particularly for low-income people, women, people with disabilities, and the elderly (Inclusive Infrastructure, 2018). Women’s needs, as well as those of the elderly and children, were prioritized in the design, with allocated red seats for their exclusive use. In addition, to specifically increase access to transportation for those living on the outskirts of the city, Stairs of Solidarity (Escaleras de la Solidaridad) were constructed (Inclusive Infrastructure, 2018). This eliminated safety risks that were prevalent in the past, which had previously forced women, the elderly, children, and those with disabilities in these locations to trek through unsafe routes and difficult terrain.

Project Formation (Assessment, Planning, and Financing)

Over the past decade, the stage of project formation has seen the most progress on integrating a gender lens. The stage of project formation typically starts when a project sponsor presents a plan to a potential investor for assessment. As a part of the assessment and due diligence process, DFIs, IFIs, and MDBs typically include gender on their checklists while assessing if a project qualifies to reach the next stage in the process. Financing institutions, including Development Finance Institutions (DFIs), International Financial Institutions (IFIs), and Multilateral Development Banks (MDBs), have been working towards integrating a gender lens at every stage in their process. The most advanced have integrated gender experts on every team within the organizations.

During this process, collecting sex-disaggregated data with a cross-section of women through community consultations and explicitly incorporating gender into questionnaires, checklists, and assessments, is becoming established best practice (World Bank, 2020). The IDB’s gender risk assessment toolkit is one example. This tool is organized as a list of questions across five categories: identification and management of risks and impacts, consultation and engagement, working conditions, community health, and safety and resettlement (IDB, 2020).

These institutions also work with external consultants as experts in understanding the local context, providing depth to the analysis process. Given the consensus around the correlation between ESG risk and gender, many ESG assessments now integrate gender into their assessments and recommendations (World Bank, 2020). Recommendations from both the gender and ESG assessments are presented to the project sponsors and subsequently developed into an action plan. The action plan then provides milestones linked to fund disbursement in legal contracts as a measure of control. For example, the Green Climate Fund identifies gender outcomes such as employment for women, reduction in health risks for women, skill building, and regulations that specifically aim to support women, as activities to monitor in its gender action plans (Green Climate Fund, n.d.).
Legal contracts that allocate risk to different stakeholders now also include gender considerations (Public-Private Partnership Legal Resource Center, 2020). These include compliance mechanisms on clauses such as safeguarding and grievance redressal, and clauses on diversity in employment, management, and sub-contracting. There is significant focus on this aspect of project formation, as it is used to proactively address potential future risk.

However, until this point in the project lifecycle, the focus is still on the ‘how’ rather than addressing the ‘why’. Until the transition to focusing on the earliest stage of a project lifecycle, projects will follow the more traditional approach of development, resulting in more risk that has to be actively managed and controlled through contracts.

**Project Construction (Procurement and Implementation)**

During the construction phase, projects typically create short-term jobs in the local area in both the formal and informal economy. Construction of projects characteristically entails teams of workers brought in from outside the community and ‘parachuted in.’ This approach creates a natural tension between the community and the groups of people associated with the project.

In order to address Construction and Completion Risk, community engagement is paramount. Jobs created through the construction phase are an opportunity to engage the local community positively, though the jobs typically do not have any long-term benefits. Beyond this, the majority of the jobs in the informal economy are associated with women, such as laundry services, cleaning services, and food services.

At this stage it is also vital to assess the nature of the employment created through a gender lens, including how women are being employed, and the quality of that employment. This can include unfair or even exploitative pay practices, as well as opportunities for growth. Meaningful engagement during this phase implies meaningful job creation – in the formal and informal economy, with the possibility of increased training, opportunity, and responsibility.

The intent of the gender action plan for a Dam Rehabilitation and Safety Improvement Project in Vietnam, for example, was to, “facilitate the full participation of women in the project construction stage, providing opportunities for women to boost their income, without increased burden on their lives, and contributing to the enhancement of women’s role and status in the project areas” (World Bank Group, 2016, p.19). With a named objective to have at least 30 percent of local contractors in maintenance, construction, and repair work identifying as female, the gender action plan also mandated that for similar types of work, female workers would be paid equal rates and experience the same safety conditions as men (World Bank Group, 2016).

Gender-based violence continues to be unrepresented in these situations, despite the fact that it presents political, regulatory, operational, and reputational risks (Criterion Institute, 2020). Although standard legal language and procedures have been adopted in infrastructure projects, a significant gap remains in implementation that must be addressed. **USAID’s Toolkit for Integrating GBV Prevention and Response into USAID Energy and Infrastructure Projects** gives examples for the questions that need to be asked in project design and measures that can be implemented to prevent gender-based violence. Practical tools to assist with safety audits and
community mapping are also included (2015). Basic considerations for preventing or mitigating gender-based violence in infrastructure projects might include the provision of vibrant lighting in public spaces, accessible public restrooms, the usage of low-fuel stoves to reduce the time women might need to travel in isolation to obtain fuel, and a requirement for all stakeholders in the project to instate and abide by strict sexual harassment policies (USAID, 2015).

Project Management (Operation, Maintenance, and Monitoring)

The demand dimensions are central to the project management stage, including the assessment of who uses the infrastructure, for what purposes, how it is paid for, and with what impacts on individuals, households, and communities (World Bank, 2012). To give one example of mainstreaming gender in project monitoring, the Botswana Power Corporation worked with the Energy Affairs Division to integrate questions on, “connection and access rates of female and male-headed households; electricity and other energy uses impact on women and men; obstacles to connection and energy access for women and men; and actual and potential energy uses by women and men” (Energia, 2011, p.104), into the methodology of future national energy needs surveys.

In projects that do not incorporate a gender lens, risks can be consistently underpriced, particularly considering the long-term nature of infrastructure projects. Demand Risk, for example, implies that a project can rely upon a consistent revenue stream. As a function of both price and size of market, the socioeconomic context has significant implications for Demand Risk.

For a successful project, pricing is sensitive to the ability of the end user to pay in an inclusive way, improving access through affordability, and growing both depth and breadth of the served market. Contrast this model with a pricing model that is exclusive, limiting access, and therefore entrenching existing inequality. An exclusive model is likely to strain the project over the long term, potentially linking Demand Risk to Operating Risk, and could threaten the operation of the project. If Demand Risk is assessed from the narrow viewpoint of financial viability, it is likely to be underpriced; therefore, ensuring continued operations and monitoring with a gender lens contributes to the stable operation of the project over the long life of its duration.

Project Exit (or Project Close)

A successful infrastructure project, as established by the World Bank as a part of its 2016-2023 strategic plan, contributes to both growth and resilience (World Bank, 2019). This is not just at the level of the economy; it is expected to impact both the community and household level. The strategic plan names gender as a pillar that is fundamental to achieving these objectives.

There is a growing body of research that links the stability of the political environment and the economy to gender equality (Bergman, Fe Aguilar and Nikolova, 2020). Gender equality issues, such as the prevalence of gender-based violence, are directly correlated with instability of a country (Ballif-Spanvill, Caprioli, Emmett, Hudson, and McDermott, 2009). There is therefore a straightforward connection demonstrating that the earlier in the project lifecycle these risks are assessed and addressed, the better the implied exit and investor returns will be.
For a successful project that achieves these objectives, there is an implication of stability of both the model (as revenue stream) as well as the broader macroeconomic environment. From the perspective of an investor, macroeconomic risks are a concern, particularly in regard to the foreign exchange risk and political risk. For projects that have a long lifecycle, investors are exposed to both long-term depreciation as well as short-term shocks.

**Understanding the Potential of Blended Finance**

Blended finance is, “the use of catalytic capital from public or philanthropic sources to increase private sector investment in sustainable development” (Convergence, 2020). Its purpose is to adjust the risk-return profile of a transaction in order to make an investment attractive to private sector investors. Blended finance transactions include the participation of multiple investors, including development-driven organizations such as public agencies and philanthropic foundations, as well as private investors. While blended finance is a structuring approach, and does not require each participant to be impact-driven, the participation of development funders in blended finance presents a unique opportunity to leverage private sector investments to achieve sustainable development, including gender goals.

Infrastructure, including energy and non-energy related infrastructure, is a dominant sector in the blended finance market. For example, 38 percent of all blended finance transactions captured in Convergence’s historical deal database (HDD) were in infrastructure, of which 26 percent were in Energy Infrastructure, while a further 12 percent were in Non-Energy Infrastructure. Integrating a gender-lens therefore has particular potential in blended finance, given the market prominence of the sector.

Convergence’s analysis has indicated that gender has not been incorporated in the same deliberate or comprehensive way in blended finance transactions. In a recent blog, Convergence noted that only ten percent of transactions in their historical deals database signaled an intentional aim to achieve women’s empowerment or gender equality, while a further 14% of transactions had a partial focus on gender outcomes” (Convergence 2020). This is similar to trends in bilateral aid, where four percent of transactions had a focus on gender outcomes, with a further 33 percent with a partial focus (OECD, 2018). If gender is understood to be a material risk affecting the long-term stability of investments, blended finance is a critical tool that can be used to directly influence markets.

As an example, the Inter-American Development Bank private sector group (IDB Invest), with support from the Canadian Climate Fund (C2F), provided financial incentives based on the generation of meaningful employment during the construction phase of a solar power plant in Uruguay. The project trained over 100 women to become certified installers of photovoltaic panels and increased employment of women in the project to 17.5 percent, overachieving the target of 15 percent. In another example, recognizing the limited number of women professionals in the sector, IDB worked with Óptima Energía to design a professional paid internship program for university students (IDB, 2018).

Blended finance is a diverse tool that can support gender lens strategies using a variety of approaches, including through the use of concessional debt or equity, technical assistance, early-
stage design funding, guarantees, and risk insurance. For example, the garment manufacturer, Classic Fashion, received a guarantee from GuarantCo to support its infrastructure expansion with the integration of a gender lens, including evaluating the governance, workforce, products, supply chain, and community to identify how best to improve outcomes for women. Additional funding was used to create a training center to provide training and employable skills for its employees, consisting mainly of migrant women.

Requiring the inclusion of a gender analysis and sex-disaggregated data is another way for concessional capital providers to strengthen the gender lens of a blended finance transaction. This can turn a gender-neutral infrastructure project into a gender-sensitive project. Moreover, once an organization that places priority on gender becomes involved, this can send an important signal to other funders and investors about the importance of gender considerations in their investment decisions.

There is an emerging set of social enterprises that set up and operate infrastructure with a gender lens. One example is Jibu, a for-profit social enterprise that enables locally-owned franchise business owners to sell affordable drinking water to customers. Jibu’s model offers entrepreneurs, many of which are young women, access to both the upfront asset financing needed to launch a business and the ongoing infrastructure support to keep profits aligned with impact. Another example is EarthSpark, a women-run enterprise that increases the participation of women in rural Haiti across infrastructure planning, training and employment, local business support, and domestic energy use. Blended finance allows investors and funders with different risk-return profiles to jointly support these social enterprises.

Convergence is seeking to more effectively integrate gender considerations into the design of blended finance transactions. In order to support the early stage of the development of blended finance solutions, Convergence offers a unique market acceleration opportunity through its Design Funding program. This offers early-stage design grants for feasibility studies and proof of concept for practitioners to develop blended finance vehicles in emerging markets that aim to attract private capital to sustainable development at scale. The Indo-Pacific Design Funding Window that was launched with the support of the Australian Government supports the design of blended finance solutions focusing on gender equality and sustainable and resilient infrastructure. The Indo-Pacific Design Funding window encourages practitioners in the space to incorporate a gender lens at an early stage of the design process.

Conclusion

The current state of integration of gender and sustainable infrastructure represents significant positive progress. A multitude of stakeholders, particularly investors, have established that using a gender lens at every stage of project development reduces risk. Yet, as these stakeholders are currently involved after a project has been envisioned and initiated, their approach relies on assessment and control. **Projects that have been designed at the very start through a gender lens and with participatory processes that include unserved and underserved communities have demonstrated the greatest impact, and the least risk, throughout the project lifecycle.** However, developing participatory processes remains an implementation challenge that established stakeholders are unable to cross due to underlying power dynamics. The utilization of a power
analysis framework, which assesses power and gender dynamics in processes using seven key indicators, including knowledge, access, decision making, timing, transparency, risk sharing, and alignment/incentives, should be explored. Specifically, the framework should be applied to project inception and design to make the project more equitable across its life cycle. At this earliest stage of project development, blended finance offers an opportunity to directly influence the market and incentivize a participatory process.
References


*We are grateful to Convergence Blended Finance for their contributions and review of this paper.*