****

**RESEARCH BRIEF**

**January 2024**

**Topic: Sustainability challenges of small-scale mining**

**Title: Small-scale gold miners’ preferences on formalization: first steps toward sustainable supply chains in Colombia**

By María Alejandra Vélez, Ximena Rueda, Juan Pablo Henao, Jorge H. Maldonado, Dayron Monroy, Dany Tobin, and Alex Pfaff.

*Based on an EfD Discussion Paper by Authors.*

Research questions

What bundles of benefits and commitments would miners be willing to accept to become formalized?

Are there differences in the preferences miners express depending on the community to which they belong?

Is gender a key factor in explaining differences in preferences?

|  |
| --- |
| Key Messages  * Artisanal and small-scale gold miners in remote areas of Colombia are willing to try formalization (obtaining a legal title to extract gold). However, they perceive costs can hinder the adoption of this formalization * Bundles of preferences about benefits and costs of formalization are not uniform across commodities and depend upon previous experience with formalization and the strength of social capital formation. * Gender seems to play an effect on preferences, but this impact is not consistent across the communities studied * Results suggest that policymakers should communicate transparently about the actual costs and benefits of formalization to avoid unmet expectations. |

**Background and Methodology**

Artisanal gold mining is a key income source for impoverished communities along Colombia's Pacific coast, particularly Afro-Colombian communities governed by Community Councils (CCs). These councils have collective rights and play a role in determining permissible activities and tools related to gold mining. Current legislation requires CCs with small-scale gold operations to fulfill formalization requirements, incurring an average cost of around US$50,000, making it challenging for many CCs to comply without external assistance. Traditional panners have simpler formalization requirements but face obstacles such as internet connectivity issues in registering online. The study aimed to comprehend the motivations and obstacles related to formalization for Community Councils (CCs) involved in gold mining. The research employed a multi-method approach, including 24 semi-structured stakeholder interviews and focus groups. A choice experiment was conducted to gauge participants' preferences on formalization, followed by a survey capturing individual and household-level characteristics, mining practices, governance structures, and gold-market outlets. The instruments were applied separately to male and female miners, and 423 participants from two CCs were surveyed: 219 in Yurumangui and 204 in San Juan, with different levels of formalization, social cohesion, and external actor interactions. San Juan has connections to urban markets and has received motivation from the World Wild Fund for Nature (WWF) to formalize, while Yurumangui lacks such external influence and faces challenges like distance from buyers, but is endowed with strong social capital.

**Results**

On average, Yurumangui miners are younger, better educated, and earn higher incomes due to increased gold extraction. San Juan faces challenges like illegal extraction and reduced surface gold availability, impacting income and satisfaction with gold prices. Yurumangui miners predominantly sell gold in their villages, where prices are lower. San Juan miners have better access to healthcare. Yurumangui exhibits stronger social cohesion and governance legitimacy. Choice experiment results show variations in preferences between communities, with Yurumangui miners favoring association but valuing restoration negatively. Both communities generally support formalization, but Yurumangui shows a stronger desire for change. Gender differences exist, with women willing to accept lower prices. Prior voluntary tree planting experience positively influences acceptance of restoration within formalization. Formalization is a crucial step for sustainable supply chains, influenced by councils' histories and contexts. Prior formalization experience reduces interest, but successful local organization increases perceived value.

**Policy Implications**

Public actors and civil society should communicate transparently about what formalization will truly bring—including restoration requirements—, and should facilitate the formation of groups to address legal processes and administrative burdens at lower transaction costs. Unfortunately, even if those barriers are addressed, other important issues such as illegal armed groups that threaten community-based organizations and miners’ livelihoods need to be considered. Without the permanent presence of the State, formalization will fall short. In fact, as expressed in interviews, miners wonder whether formalization would expose them to a higher risk of being targeted by armed groups in the region who try to capture the rents from mining exploitation.

Methodologically, we contribute a new area to a longstanding literature using choice experiments to understand the contexts for policies concerning the environment and various natural resources. Ours is the first study to apply this approach to miners’ preferences and reveals the role of the local context in responses to formalization options. Replication of such surveys in other contexts with gold mining communities could improve programs´ design within development interventions.

|  |
| --- |
| The Environment for Development initiative is a capacity-building program in environmental economics focused on international research collaboration, policy advice, and academic training. It consists of centres in Central America, Chile, China, Colombia, Ethiopia, Ghana, India, Kenya, Nigeria, South Africa, Sweden (University of Gothenburg), Tanzania, Vietnam, Uganda, and the US (Resources for the Future). Financial support is provided by the Swedish International Development Cooperation Agency (Sida). |