



## Business Case: Greenland Engineers – Formalization Journey

### 1. Introduction and Rationale

Agricultural mechanization plays a vital role in enhancing productivity, reducing drudgery, and improving the competitiveness of Pakistan’s farming sector. The manufacturing of agricultural implements and tools, though traditionally rooted in small-scale workshops, constitutes one of the most significant yet largely informal segments of the national industrial base. This sector caters to the growing domestic demand for farm mechanization and supports a wide range of agricultural activities; from land preparation and planting to harvesting and post-harvest handling.

In Pakistan, the production of agricultural implements is concentrated primarily in Punjab, which not only fulfills the provincial demand but also supplies to Sindh, Balochistan, and Khyber Pakhtunkhwa. Around 500 manufacturing units are engaged in this sector, clustered mainly in Daska, Faisalabad, Okara, and Mian Channu, with smaller concentrations in other provinces. These units are typically micro or small enterprises operating through workshop models, employing informal labor, and relying on traditional techniques. Despite their informal nature, they make a substantial contribution to the rural economy, employment generation, and local innovation.

The marketing and sales system of agricultural implements in Pakistan follows a mixed “push and pull” model. Farmers usually approach manufacturers directly—often through personal referrals or word of mouth—while a parallel network of public and private service centers provides affordable mechanization services such as land leveling, sowing, and harvesting. This dual model has expanded market outreach and generated sustained demand for agricultural implements.

The value chain of the sector is relatively short, involving raw material suppliers, specialized component manufacturers, assemblers, and final fabrication units. Key institutional actors include provincial agriculture departments, the Pakistan Agricultural Machinery & Implements Manufacturers Association (PAMIMA), business development service providers, and exporters. Pakistan also participates in the global low-end market for agricultural implements by exporting to neighboring and African countries. However, exports remain inconsistent due to lack of standardization, branding, and certification.

### 2. Why This Sector Deserves Incentivized Formalization

**Technical Working Group of Ministry of Industries and Production that is looking for the development of National Roadmap and Enterprise Formalization**, recognized the agricultural implements manufacturing sector as a critical area that remains **highly informal**

**but economically promising.** Based on this direction, a team visited **PAMIMA Daska–Sialkot** to gain on-ground insights into the sector’s structure, challenges, and opportunities. It was observed that while the sector contributes significantly to agricultural modernization and rural livelihoods, most units operate outside formal registration and compliance frameworks, limiting their growth potential and access to institutional support.



The **rationale for incentivizing formalization** in this sector is anchored in several interrelated factors:

1. **High Informality, High Impact:** The sector employs thousands of workers, mostly informal yet plays a key role in rural industrialization and farm mechanization. Formalization would enhance worker welfare, ensure occupational safety, and expand access to social protection programs like EOBI and Social Security.
2. **Untapped Export Potential:** Pakistan has a comparative advantage in producing low-cost implements suitable for developing markets. However, due to informality and lack of certifications, many manufacturers cannot access export contracts or participate in trade fairs. Incentivizing formalization would bridge this gap and help brand Pakistan’s agricultural machinery internationally.
3. **Technology and Productivity Gains:** Experience from donor-led programs such as the **USAID Firms Project (2013–14)** demonstrated that enterprises adopting formal systems achieved tangible productivity improvements up to ***21% higher output, 40% reduction in waste, and 20% increase in sales.*** Expanding such interventions through incentive-based programs could multiply these gains across the cluster.
4. **Improved Access to Finance and Procurement:** Formalization enables enterprises to meet bank documentation requirements, qualify for government subsidy schemes,



and participate in public procurement. SMEs with FBR and SECP registration can leverage institutional finance for technology upgrades and expansion.

5. **Level Playing Field:** Currently, formal enterprises face unfair competition from informal operators who avoid taxes and compliance costs. Incentivizing formalization—through reduced advance taxation, simplified digital systems, and access to low-interest finance—would create equitable market conditions and strengthen fiscal revenues in the long term.
6. **Sustainability and Cluster Development:** Formalization fosters the creation of industrial clusters with shared facilities such as testing laboratories, training centers, and common manufacturing services. These investments enhance competitiveness, enable quality assurance, and attract private investment.

Incentivizing formalization will not only strengthen enterprise-level competitiveness but also generate wider economic and social benefits e.g. higher productivity, enhanced exports, and improved working conditions. Donor agencies such as **SMEDA, ILO, UNIDO, USAID, and EDF** can play a catalytic role by designing challenge funds, matching grant schemes, and capacity-building programs targeting this sector.

In this context, ***Green Land Engineers of Daska***, an ISO-certified and partially formalized enterprise, has been selected as a **representative business case** to illustrate the benefits of transitioning from informality to formality. The case builds on lessons learned from previous case studies conducted in the **automotive and textile sectors**, thereby providing a comparative perspective on how formalization drives **competitiveness, sustainability, and resilience** across diverse industries.

### 3. About the Enterprise

Green Land Engineers, established in 1975 in Daska, Punjab, is one of the pioneering manufacturers of agricultural implements in Pakistan. Originally starting as a small workshop catering to local farmers, the enterprise grew steadily to meet rising demand for farm mechanization. During the 1980s, to qualify as a supplier under provincial agricultural subsidy programs, the firm registered with the Federal Board of Revenue (FBR) as a sole proprietorship. Over time, it extended formal registration to Social Security and EOBI, reflecting a gradual transition from informality toward a structured business model.

By 2013, the enterprise's formal status enabled its selection for a USAID vendor development program, which marked a major turning point. Through this initiative, the company implemented lean manufacturing, upgraded its welding and machining processes, introduced product development practices, and participated in international exhibitions and study tours. These interventions resulted in significant improvements e.g. productivity increased by **21%**, wastage and rework dropped by **40%**, and overall sales rose by **20%** etc.

Building on this success, Green Land Engineers won a Challenge Fund program under USAID in 2018, installing its first laser cutting machine, a transformative technology in the local industry. By 2025, the enterprise had expanded this capacity to three laser cutting machines, offering precision services to peer manufacturers and becoming a hub of innovation within the agricultural implement cluster. The company now operates under ISO 9001:2014 certification, ensuring quality assurance and compliance with international standards.



#### 4. Journey of Formalization

Before formalization, the enterprise operated in a typical informal workshop setup characterized by:

- Cash-based transactions and manual bookkeeping
- Unregistered labor and absence of social protection coverage
- Minimal compliance with tax or environmental standards
- Low technology adoption and productivity constraints
- Dependence on informal suppliers for raw materials
- Limited market access beyond local buyers

While such informality provided flexibility, it also restricted Green Land Engineers from accessing formal supply chains, institutional finance, and large-scale government tenders. The absence of certifications, compliance documentation, and traceability meant the enterprise could not compete for contracts with OEMs or export buyers requiring documented assurance of standards and ethical production.

## 5. Benefits of Formalization – Green Land Engineers

Aspect	Pre-Formalization	Post-Formalization
	(Before 1980s)	(After 1980s)
<b>Market Access</b>	Local workshops and informal buyers	Qualified supplier for public sector and OEMs
<b>Technology</b>	Conventional welding and machining	Laser cutting, lean manufacturing, ERP system
<b>Workforce</b>	Informal labor, no training or safety	Registered workers with Kaizen, safety, and skills training
<b>Finance</b>	Personal savings and informal credit	Access to institutional finance and challenge funds
<b>Quality Systems</b>	No certification or documentation	ISO 9001:2014 certified processes
<b>Productivity</b>	Low efficiency, high rework	+21% output, -40% wastage, +20% sales growth

## 6. Challenges Faced by the Enterprise

The enterprise highlighted several challenges in sustaining growth and competitiveness:

- **Uneven Competition:** Informal enterprises avoided tax and compliance costs, creating unfair price competition.
- **Regulatory Complexity:** Multiple registrations (FBR, SECP, EOBI, SESSI) required extensive documentation.
- **High Cost of Compliance:** Consultant fees, audit charges, and technology costs burdened small manufacturers.
- **Informal Supply Chain:** Around 70% of suppliers remained unregistered, complicating record-keeping and tax claims.
- **Limited Access to Finance:** Collateral-based lending and high interest rates constrained investment capacity.
- **Skilled Labor Shortage:** Advanced machinery required technical expertise not readily available locally.



## 7. Strategies to overcome these challenges

To address these challenges, Green Land Engineers emphasized;

- Phased registration with FBR, Social Security, and EOBI to manage compliance gradually.
- Collaboration with **USAID** and local industry associations for capacity building.
- **Lean manufacturing and Kaizen** training to enhance workforce productivity.
- Introduction of **ERP system** for inventory and quality control.
- Networking with OEMs for vendor qualification and joint product development.
- Offering laser cutting services to other firms to diversify revenue and sustain technology investments.

## 8. Recommendations and Incentives

The management of Green Land Engineers emphasized several policy measures to encourage sector-wide formalization:

- **Incentivized Taxation:** Introduce advance tax reliefs and lower interest rates for SMEs adopting formalization.
- **Access to Finance:** Simplify loan processes, introduce guarantee schemes, and encourage digital financial services.
- **Technology Upgradation Support:** Expand matching grant programs for machinery and certification.
- **Testing and Standardization Labs:** Establish local labs for quality testing and product certification.
- **Market Linkages:** Facilitate participation in OEM vendor programs and export trade fairs.
- **Awareness Campaigns:** Increase SME understanding of tax, compliance, and digital record systems.
- **Cluster-Based Approach:** Develop industrial clusters with shared services (training, testing, logistics).
- **Partnership with Donors:** Encourage SMEDA, ILO, and development partners to revive challenge funds and on-site training programs like those under USAID.

## Conclusion

The journey of Green Land Engineers demonstrates that formalization is not merely a regulatory requirement but a catalyst for competitiveness, sustainability, and innovation. The enterprise's gradual and deliberate transition from informal operations to a registered, ISO-



certified manufacturer proved that adopting compliance systems, documentation, and certifications can unlock market access, improve productivity, and enhance credibility with both domestic and international buyers. The company's experience also revealed that

successful formalization depends on a step-by-step approach; beginning with registration, followed by financial transparency, and then capacity building through technology and workforce training. Moreover, partnerships with development programs, donor agencies, and OEMs played a crucial role in enabling access to resources, technical expertise, and new markets.

At the same time, the case highlights broader lessons for policymakers and the industry. Formalization initiatives are most effective when accompanied by incentives such as tax relief, affordable financing, and simplified digital processes. Trust and collaboration between regulators and enterprises are vital to reduce compliance burdens and ensure sustainability. The experience of Green Land Engineers also emphasizes that supply chain formalization and skill development must move in parallel with enterprise-level reforms. When supported through coordinated efforts by institutions like SMEDA, ILO, and donor-funded programs, such transformations can drive competitiveness, create decent work, and position Pakistan's agricultural implement manufacturing sector for integration into global value chains.