THE ROLE OF GOVERNMENT IN DEVELOPING AGRICULTURAL FINANCE:
A look at the history of Germany, the US, and South Korea

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Governments often directly shape the development of agricultural finance systems as they evolve. This briefing uses historical evidence from three advanced economies – Germany, the United States, and South Korea – to highlight policy considerations that will affect the growth of agricultural finance in today’s developing markets, where many of the world’s 450 million smallholder farmers live.

While there is no one-size-fits-all approach to agricultural finance policymaking, systems have most effectively met agricultural sectors’ needs when governments carefully designed policies to enhance rather than replace credit provided to farmers by private actors.

ABOUT THIS BRIEFING

This briefing is the fourth in a series by the Initiative for Smallholder Finance, a multi-donor effort designed to demonstrate how specific products and services can expand the reach of financing for smallholder farmers. Initiative activities include targeted market research, product development and testing, and investment facilitation in the smallholder finance market.

The first briefing in our series presented an overview of the size and scope of local bank lending to smallholder farmers.

The second briefing outlined what is required for a healthy, competitive smallholder banking sector, and identifies investment opportunities for public and commercial funders seeking to support smallholders.

In the third briefing, the Initiative for Smallholder Finance took stock of the existing landscape of smallholder impact and risk measurement and devised tools and suggestions to align these efforts for greater future impact.

Introduction

Historically, the agricultural sectors in Germany, the United States, and South Korea included large numbers of smallholder farmers with unmet credit demands, much like the situation in many of today’s developing regions.

Through evolving policymaking processes spanning several decades, governments and other actors in these three countries largely managed to meet this demand, overcoming fundamental challenges in agricultural finance delivery and ultimately improving the productivity and profitability of farmers’ livelihoods.¹

This briefing analyzes the development of agricultural finance in these three countries to distill from their example policy recommendations for how governments can meet the demand for agricultural finance while driving broader agricultural, economic, and political growth in their countries. Our discussion of each case is limited to its era of key agricultural finance milestones:

- **Germany from 1810-present**: The emancipation of Germany’s landless serfs gained momentum at the beginning of this period, marking a pivotal moment in the country’s transition from a mostly rural society to a modern and highly diversified industrial economy. State-supported innovations in agricultural finance played an important role in enabling this transformation.

- **The United States from 1860-present**: The 1860s were marked by expansion in the US’ territory and farmland, and a close government focus on agricultural productivity (e.g., the establishment of the US Department of Agriculture). The careful attention paid to agricultural finance policy since this period has helped the country become the world’s largest exporter of agricultural products.

- **South Korea from 1950-present**: In many ways, South Korean agriculture in 1950 resembled Germany’s in 1810 and the US’ in 1860 – productivity and profitability were constrained. The country’s strong, top-down emphasis on agricultural modernization has often explicitly focused on credit delivery, helping to enable impressive agricultural productivity gains and a globalized sector.
The four stages of agricultural development

The case studies of Germany, the US, and South Korea reveal four largely linear stages of agricultural finance development within each country. These stages are differentiated by sources of farm debt, government roles, and the nature of farm structure and productivity. This briefing classifies these stages of agricultural finance development as:

1. The informally-served stage
2. The government-entry stage
3. The bank-based stage
4. The market-based stage

The informally-served stage

GOVERNMENT ROLE

The informally-served stage describes agricultural finance systems prior to concerted government involvement.

SOURCES OF FARM DEBT

In the informally-served stage, agricultural lending poses high transaction costs and credit risks, which limit banks’ involvement in the agriculture sector. Accordingly, agricultural credit in this stage comes primarily from non-institutional moneylenders. Informal lenders held over 70% of total farm debt in the US and Germany and approximately 90% of total farm debt in South Korea during the informally-served stage.

For this much lending to come from informal sources is far from efficient. Not only do informal lenders usually fail to meet farmers’ credit demands, but they also tend to charge high interest rates. Informal moneylenders in the 1950s in South Korea, for example, routinely charged 2500 basis points above the government-set interest rate for agricultural loans. Without alternatives, smallholders in the informally-served stage are typically forced to either pay high rates or forego the loan.

FARM STRUCTURE AND PRODUCTIVITY

Smallholders and tenant farmers with low productivity typify an agricultural sector in the informally-served stage. Additionally, in this stage formal land-tenure (land ownership) systems are usually underdeveloped, which has two important consequences. First, because it is many farmers’ most valuable resource, land is an important form of collateral for securing agricultural loans from...
institutions lenders (banks); underdeveloped land-tenure systems undoubtedly contributed to the absence of more risk-averse institutional lenders. Second, without land ownership, agricultural populations usually have little political voice. Such voice is necessary for farmers to mobilize and pressure their government to resolve agricultural market failures. Indeed, in each country studied, a change to land ownership laws provided the impetus for farmers to organize into associations and cooperatives, eventually bringing agricultural finance to the attention of national policymakers.3

The government-entry stage

GOVERNMENT ROLE

The next stage begins when governments purposefully step in to improve agricultural finance delivery. Governments’ decision to intervene is often prompted by agricultural or political crises that highlight the need to improve farmers’ livelihoods (e.g., the post-WWI collapse of US land values), and the resulting policy debates and increase in farmer coordination.

The government-entry stage began in Germany in 1889 (with the Genossenschaftsgesetz, or Law of Cooperatives), in the US in 1916 (with the passage of the Federal Farm Loan Act), and in South Korea in 1961 (when the military regime of Park Chung-hee passed the Agricultural Cooperative Law).

Community lenders such as credit unions and savings and credit cooperatives often gain traction around this stage. Such institutions are usually introduced and owned by farmers themselves, drawing on the community’s social capital to pool and redistribute typically small sums of money among their members. Because they are not motivated by profit, community lenders, and credit cooperatives in particular, can be important sources of credit for low-income smallholders. They have the ability to easily access information on potential borrowers, which lowers the transaction costs of lending. Community lenders also tend to focus on savings products, which improves their liquidity and smooths smallholders’ consumption.

Figure 2: Sources of farm debt throughout the stages of agricultural finance development
Directed credit – direct loan transfer from the state to targeted borrowers at concessional rates – is often used by governments during the government-entry stage. Such credit is commonly injected into markets through farmer-owned credit cooperatives. State funding for credit cooperatives may be one element of broader policies that facilitate the top-down reorganization of these institutions, for example, by creating new cooperatives (as in the US), consolidating existing cooperatives (as in South Korea), or formalizing credit cooperatives’ operations and addressing liability concerns (as in Germany). Channeling funds through community lenders allows governments to tap into the existing reach and knowledge of these farmlevel organizations while enabling them take on a greater share of the lending traditionally filled by informal moneylenders, ultimately paving the way for the entry of profit-driven commercial banks.

Directed credit policies have had mixed effects on agricultural finance development. In the three countries studied, directed credit policies helped address longstanding problems stemming from asymmetric information between informal lenders and borrowers.

Increasing the supply of credit available to farmers led to improved competition among lenders, and lower interest rates in nascent agricultural credit markets. For example, in the US, commercial banks’ average interest rates decreased from 7.2% to 5% between 1916 and 1926, the first ten years of the FCS. Direct government support also helped the countries studied shift from informal to institutional lenders by increasing farmers’ familiarity with formal banking systems and by pushing many informal lenders out of the market. As government-supported credit increased between 1910 and 1950 to account for roughly 20% of the country’s total farm debt, the share of informally-held debt decreased from 80% to approximately 30%; commercial banks captured much of the difference.

Yet while directed credit can improve competition in agricultural finance markets, if imprudently applied, it can also crowd out private lenders. Whereas the US and German government-entry stages were characterized by the presence of diverse commercial and cooperative credit providers, South Korea’s government essentially monopolized institutional farm debt. NACF, Korea’s National Agricultural Cooperative Federation, continues to provide credit to roughly 90% of Korean farmers.

Contrasting the US and German cases with South Korea reveals that the share of government-held debt during this stage may explain its potentially problematic persistence over time. In South Korea, extensive subsidized loans (intended to encourage government-sponsored farm practices) led to the near-absence of commercial banks in rural areas. South Korea’s difficulty reversing this deeply ingrained government presence has caused its agricultural finance development to stall in the government-entry stage.

**FARM STRUCTURE AND PRODUCTIVITY**

Significant policy changes and state investments in agricultural productivity are also common in the government-entry stage. In all three countries studied, government agricultural agencies coupled credit with extension services, promoting small farmers to use their new resources for farm mechanization and the increased application of inputs (e.g., fertilizer). By using directed credit to promote potentially costly farm intensification, governments thus help augment both credit supply and demand. In South Korea, the beginning of the government-entry stage coincided with the technological intensification of the Green Revolution, contributing to a 30% increase in farm input use between 1961 and 1980. Similar trends in the US led total farm debt to increase...
from less than $5 billion in 1910 to roughly $50 billion in 1960.

In the same vein, the government-entry stage marks the emergence of a correlation between access to agricultural finance and land consolidation, which is generally associated with a diminished smallholder presence in the agriculture sector. Credit allows farms to expand and increase their use of inputs. Larger, more technologically intensive farms demand more credit than small farms and tend to be seen as more creditworthy by banks.

In all of the case studies, larger farm sizes paralleled greater farm debt: the average US farm size ballooned between 1910 and 1970, from 138 to 390 acres, and average German farm size rose from roughly 7.5 acres in the 1850s to almost 25 acres in 1960. Even in South Korea, which had a stringent 7.5-acre limit on landholdings, the average farm size increase by over 60% between 1970 and 2002, from 2.3 to 3.6 acres. While credit provision is only one of numerous context-specific factors that drive structural change in agriculture, it seems to contribute to an increase in average farm size over time.

The government-entry stage is a pivotal period of restructuring and reform. The case studies demonstrate that a government’s overall approach during this period affects the nature and extent of private actors’ participation in the market. While governments play an important role in agricultural finance development, prolonged and extensive state involvement may exacerbate existing market failures. Governments must have a plan for how they will wind down subsidies to make way for the more self-sufficient and viable bank-based stage of agricultural finance. This transition often requires concerted campaigns to mobilize farmers’ formal savings, which will improve private agricultural banks’ liquidity and sustainability.

**The bank-based stage**

**GOVERNMENT ROLE**

The bank-based stage of agricultural finance development is defined by decreased government involvement and a well-established, soundly-regulated commercial bank presence. By this stage, total farm debt has increased substantially, informal lenders hold a minority share of the market, and commercial lenders account for at least as large a share as government-sponsored institutions. To maintain stable market conditions, governments’ primary role becomes oversight and regulation.

The bank-based stage is illustrated by the German agricultural finance system since 1990 (when the country’s re-unification led to larger and more profitable farms) and the US system between 1968 (when the farmer-owned FCS repaid its early government capitalization) and 1987 (when liberalization prompted further transformation).

**SOURCES OF FARM DEBT**
In the bank-based stage, credit availability and improved agricultural productivity have substantially increased farmers’ incomes, boosting commercial bank deposits and increasing the amount of cash that banks have on-hand to lend. Between 1963 and 1982, US farmers’ commercial bank deposits increased by approximately 500%.

Cooperative community lenders often remain widespread in the bank-based stage. While they continue to support smallholders (sometimes through government mandates), their activities typically broaden as overall agricultural productivity increases. Indeed, cooperative banks may hold a greater share of total farm debt than commercial banks in this stage. In Germany, the historical importance of agricultural credit cooperatives partly explains their status as the sector’s most significant lender (with almost 50% of total farm debt); however, such institutions may also succeed because their members’ loyalty makes them particularly resilient in times of economic crisis.

By this point, most government support to the sector is delivered through private creditors. Government loan guarantees, for example, are widely used to incentivize banks to lend to smallholders or otherwise disadvantaged farmers. Though such guarantees can potentially encourage irresponsible lending, backing loans that have a high likelihood of default, they can also foster bank innovation and help integrate smallholders into the formal financial system. Successful loan guarantee policies have supported loans that would not otherwise occur, rather than replacing existing ones. In the US, Farmers Home Administration loan guarantees made up over 85% of US government credit support during the bank-based stage, with commercial banks distributing approximately 80% of their dollar volume.

**FARM STRUCTURE AND PRODUCTIVITY**

Further bolstering commercial banks’ agricultural lending, the land consolidation trends that emerged in the government-entry stage intensify during the bank-based stage and typically increase agricultural profitability. Average US farm size during the bank-based stage reached 450 acres, and in the German agricultural sector, the total percentage of smallholder farmers decreased from 95% in 1850 to roughly 20% by the mid-2000s.
The market-based stage

**GOVERNMENT ROLE**

The market-based stage is marked by the introduction of more sophisticated agricultural finance instruments and the increased importance of private equity, as government deregulation leads to greater diversification. Agricultural finance systems in this stage differ greatly from those in most of today’s developing markets.

While Germany and South Korea display some of the market-based characteristics, the US is arguably the country studied that has entered the market-based stage. Therefore, the market-based stage may be understood as a construct that is grounded in projections of how broader agricultural, political, and economic developments may come to affect the agricultural finance sector.

In the market-based stage, governments’ main responsibility is to soundly deregulate the agricultural finance system to diversify risk and increase competitiveness.

**SOURCES OF FARM DEBT**

In 1987, when an agricultural downturn in the US led the FCS to require renewed congressional funding, legislators deemed it necessary to spread the institution’s portfolio risk. As policymakers implemented measures to support indirect debt investments and commodity speculation (e.g., the Commodity Futures Modernization Act), investment banks became much more involved in agricultural finance. Unlike commercial banks, investment banks do not accept deposits, instead raising capital through company stock or bonds; therefore, they have a unique relationship with large, profitable agricultural corporations.

Because the agricultural sector in the market-based stage is industrialized, technologically advanced, and credit-intensive, farm debt reaches unprecedented levels (nearly $300 billion in the US by 2013). By this point, banks and the securities market will meet most farms’ credit needs in a manner similar to other commercial firms.

Additionally, informal credit undergoes an important transformation in the market-based stage. Typically, the broad category of “informal credit” groups agribusinesses (merchants and processors) with moneylenders and individuals. While this categorization may be appropriate in less-developed agricultural finance systems, farm growth in the market-based stage supports a new class of large “merchant creditors” that represent the bulk of the category. These “merchant creditors” supply significant credit through vertically-integrated contract farming, also known as captive finance.

Captive finance arrangements fund farmers either to produce or to buy the merchant creditor company’s product. In addition to providing a reliable market for production inputs and outputs, large agribusinesses acting as merchant creditors can also offer lower interest rates than traditional institutional sources because agricultural lending benefits their main business. These actors reverse the decline of informally held debt. It is estimated that such large firms now hold 25% of intermediate-term debt in the US (though a lack of transparency in reporting makes the exact figure unclear).

**FARM STRUCTURE AND PRODUCTIVITY**

As noted, the agriculture sector in general at this stage is industrialized, technologically advanced, and credit-intensive. As the agricultural sector becomes more competitive, smallholders will continue to decline in number. In the US, farms smaller than 5 acres represent only 4% of landholdings, while just 2% of the country’s largest farms produce over half of all farm sales. Remaining smallholders largely operate in niche markets (e.g., organic production or agri-tourism). These farmers may continue to depend on subsidized loans to support their operations, but as rural economies develop, they depend more on diversified sources of income. For example, more than 60% of US smallholder farm families earn a majority of their income outside of the farm.

The captive finance arrangements that proliferate in this stage may slow farm consolidation by enabling loose ties between numerous independent farmers and a larger
consolidator. However, as the term “captive” suggests, farmers in such arrangements don’t retain the autonomy traditionally associated with smallholders.

What can the historical examples of Germany, the US, and South Korea tell us about agricultural finance development?

Our examination of the historical trajectories of agricultural finance in Germany, the US, and South Korea reveals several conclusions:

- Governments play an important role in boosting the supply of credit and market competition, but excessive government involvement can limit commercial lenders’ presence and effectiveness. Successful policies set caps on government resource allocation and are designed to improve links between farmers and non-state financial institutions.

- Agricultural finance development involves the predominant source of credit shifting from informal lenders to institutional lenders. However, the countries studied demonstrate that even in advanced systems, a diverse mix of actors with varying financial and social priorities continue to hold farm debt.

- Land tenure reform is an important prerequisite for commercial agricultural credit systems. Such reforms not only address deficiencies in farm collateral, but also increase farmers’ economic and political rights.

- Agricultural finance is connected to larger agricultural market developments. Commercially served agricultural credit markets typically contribute to significant changes in the structure of the agriculture sector, including the growth or exit of lower-income smallholders. As agricultural finance systems develop, there is a correlation between total farm debt and farm size (i.e., the number of smallholders in the agriculture sector). While correlation does not imply causation, the trend warrants further consideration.

- Smallholders may be fundamentally disadvantaged in their access to commercial credit and, therefore, may indefinitely remain dependent on a degree of government support.

Recommendations for effective agricultural finance policymaking

Policymaking in the agricultural finance sector can be complex. Our analysis prompts several recommendations for governments supporting agricultural finance in today’s developing markets:

1. Governments may benefit from outside guidance and oversight when entering and exiting agricultural finance systems. To maximize the efficiency and sustainability of agricultural finance, early policy decisions should incorporate the expertise of donors.
and socially-responsible commercial actors. Similarly, oversight from advocacy organizations or regulators can ensure a government’s timely withdrawal from the sector, which can prevent “rent-seeking” behavior and allow commercial actors to occupy the market space carved out by the state.

2. **Governments and other actors should recognize that agricultural finance is not an end in itself.** Directed (or government-subsidized) credit may provide important early support to agricultural finance systems, but it should be limited and coupled with funding for public goods, such as collateral registries or research and extension programs, that can enhance the sector and broader agricultural markets. Subsidized loans are most effective when they are part of policy packages that support agricultural finance development or improve agriculture’s profitability. Indirectly subsidizing agricultural finance can have a greater and more holistic effect on credit availability than cheap loans alone (e.g., investing in bank management information systems can improve credit assessments and decrease lending costs).

3. **Policies should support existing community lenders without supplanting them.** By funding these typically capital-scarce lenders – such as credit unions and savings and credit cooperatives – government or other investors can increase their capacity to meet smallholders’ credit needs. However, excessive government support can foster detrimental dependency. Outside support to scale up credit cooperatives has succeeded when actors have respected cooperatives’ democratic nature, provided capacity building to local administrators, and placed limits on the volume and duration of direct funding.

4. **When developing agricultural finance systems, policymakers may need to put social and environmental safeguards in place to preserve smallholders’ livelihoods and guide the sustainable development of larger agricultural markets.** Government actors and policy advocates should recognize a potential positive feedback loop between credit provision, technological intensification, and increased farm size. Though larger farms benefit from economies of scale in agricultural production, smallholders make important contributions to local food security and often play important roles as environmental and cultural stewards. Governments and other actors should appreciate smallholders’ unique contributions and implement policies to ensure that agricultural finance development benefits rather than marginalizes such farmers.

**Conclusion**

Today’s advanced economies have overcome many of the supply and demand barriers in agricultural finance, resulting in significant increases in total farm debt, decreased agricultural interest rates over time, and diversification in the types of institutional lenders supporting the sector. These trends in turn contribute to broader agricultural transformation – specifically, a transition to larger-scale and more technologically intensive farming operations.

This briefing proposes a four-stage trajectory for agricultural finance development that highlights the importance of government in the sector. The studies of Germany, the United States, and South Korea demonstrate that governments can play an important role in strengthening the enabling environment for agricultural finance. Ultimately, while there is no one-size-fits-all approach to agricultural finance policymaking, systems have been most successful when governments have carefully designed policies to enhance rather than replace credit provision by private actors.
NOTES

1 The Initiative for Smallholder Finance also chose to focus on these three cases studies for practical reasons. The development of these countries has been relatively well-studied elsewhere, making the relevant data accessible so that this analysis could more rigorously investigate the correlations between agricultural finance and larger trajectories of agricultural, economic, and political transformation. While these case studies were selected for their broad applicability to today’s developing markets, the development of agricultural finance systems is ultimately context specific. The trends and recommendations described in this brief may play out differently depending on countries’ particular circumstances. Local context and priorities should always be granted the greatest consideration in local decision making.

2 A unit that is equal to 1/100th of 1%, and is used to denote the change in a financial instrument. Source: Investopedia.com

3 While they stemmed from different motivations and circumstances, the German/Prussian Edict of Regulation (1811), the US Homestead Act (1862) and the South Korean Land Reform Law (1959) all played similar roles in establishing a new class of poor landed farmers with distinct economic and political priorities.

4 Though widely discussed, directed credit is not the only intervention that tends to happen during the government-entry stage. Agricultural finance may be understood as just one sphere within concentric policymaking areas; for example, financial transactions (e.g., loans) benefit from legal institutions that provide remedy when contracts are not honored, and investments in rural infrastructure (e.g., roads) may make it more profitable for banks to serve rural clients. Accordingly, in the government-entry stage, state actors often seek to improve agricultural finance markets through broader legal or financial sector reforms. Such reforms often aim to foster competitive lending through interest rate ceilings (Korea’s Rural Usurious Loans Clearing Law, 1961) or limits on bank monopolies (the US’s McFadden Act of 1927). As with directed credit, these regulations have sometimes attracted criticism from proponents of more liberal markets. The delicate interplay between public and private interests in agricultural finance highlights the need for balanced regulation of the space.

5 Another notable example of a country that may be considered to have entered the market-based stage of agricultural finance is the Netherlands, the world’s second largest agricultural exporter after the US. Like agriculture in the US, Dutch agriculture is technologically intensive and highly productive – approximately five times the European average – and the sector is increasingly facing consolidation by influential actors including Unilever (a Dutch corporation). While operating under broader EU policies of state support for agriculture (i.e., the Common Agricultural Policy), the country has moved increasingly toward liberalization since the late 1990s. For more information on the Dutch case, see Haas 2013.

6 While the 1980s farm crisis ushered in these policy changes, the evolution also reflected trends in the overall US financial sector, highlighting the nested nature of agricultural finance within larger policy spheres.

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For bibliographic information for data used in figures, please visit www.globaldevincubator.org/isf/briefing4bibliography.
ABOUT THE INITIATIVE FOR SMALLHOLDER FINANCE

The Initiative for Smallholder Finance is a multi-donor initiative hosted by the Global Development Incubator to build research and development infrastructure in the smallholder finance industry and make progress toward filling the gap in financing through targeted product development, piloting, and partnerships.

For the original report that led to the creation of the Initiative for Smallholder Finance, see “Catalyzing Smallholder Agricultural Finance” (2012).

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