

Does Solidarity Matter?

Social capital in land reform settlements in the northeast of Brazil.

By

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Introduction

Brazil is a country of dichotomies. On the one hand it is a powerful emerging nation with higher GDP growth than even the so called developed nations: a self-reliant, debt-free, and industrial Brazil. On the other hand a large segment of the population does not have access to basic sanitation and would not survive without government assistance: a subordinate, poor and unemployed Brazil. The economic rift is clearly visible among its five regions. The south is rich with industry and agricultural conglomerates while the north struggles with *microfundios* and deficient infrastructure. It is perhaps no surprise then that the majority of land reform is centered in the north and northwest regions. Given the multiplicity of settlements one might assume that the land is favorable for farming but the *sertão* is an inhospitable region marked by droughts and severe annual climate variation. During one year a farmer might lose his/her crops to drought, then the next year the same farmer may lose crops to flooding. During heavy rains, the dry soil cannot absorb the water, which causes runoff and flash flooding. The temperature does not oscillate much throughout the year and the seasons are marked by the amount of rainfall. Yet, against all odds, there are many land reform settlements in this type of barren landscape. Caninde, a municipality with an area of ~3000 square kilometers, is host to the densest concentration of settlements in all of Brazil (da Silva & Rodrigues, 2001). The official numbers suggest that the government's agrarian reform initiative has flourished in the North-East Region; however, off the main roads, a different reality emerges. While there are well-established, even prosperous settlements, there are also abandoned settlements whose infrastructure has been almost reclaimed by the native brush, the *caatinga*. Why does this happen? Why do some

settlements thrive and others fail when they are provided with the same tools and faced with the same obstacles?

At its core, my research was focused on community development and poverty alleviation. Specifically it sought, through an analysis of social capital in land reform settlements, to discover what variables helped beneficiaries escape poverty and create sustainable livelihoods. Scholarly analysis of the land question worldwide, including Latin America, has centered on one-size fits all technocratic solutions. These approaches to land reform are limited because they fail to take into account beneficiaries' agency, actions, and community. The multiplicity of results in Caninde reveals flaws in the model. My study did not reject the technical aspects of agrarian reform but rather built on the previous work, adding a crucial component, community. It was my contention that once the infrastructure and technical aspects were met, good predictors of settlement success were the levels of social capital within the settlement.

My research did not support the hypothesis. Given these results, the following chapters examine why, even though, theoretically, external social capital should matter, it does not unless it is rooted in community organization. The first chapter places the study within the general literature on agrarian reform and how it has been applied in Brazil. The second chapter examines social capital and how it is related to economic development. The third chapter lays the groundwork for the study and explains the methodology and methods. The fourth chapter examines market-based land reform settlements; highlighting the ways they follow the theoretical pathway and where they deviate. The fifth chapter focuses the same attention on the state-led land reform model. The sixth chapter brings the cases together and creates a new

possible pathway, questions the importance of social capital, and suggests further research questions.

Chapter 1: Land Reform

It is almost incomprehensible to think that over a billion people still live in absolute poverty, which the United Nations defines as “a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to social services” (United Nations, 1995). On the global scale and at the level of public policy, among all poor, the urban poor receive greater attention because it is a visible poverty. It is the poverty depicted in the pictures of slums, where people live in tightly packed shanties, practically on top of one another. This concentrated poverty is the poverty to which the majority of us, who live in urban areas, are exposed. Yet these are not the poorest of the poor. The poorest of the poor live in rural areas. They live in remote, difficult-to-access areas, where the general population cannot see them. They are the forgotten poor. If the goal of poverty eradication is to be achieved, countries must improve the lives of the rural populous. Some countries have attempted to improve the situation through agrarian reform.

Agrarian reform is inherently a political process and requires an overhaul of the agrarian structure. The agrarian structure is defined as “a set of institutions, norms and social, political, and economic relationships governing the access to and use of land as a productive resource” (Stavenhagen, 1970). To understand the current agrarian structure, and the debates surrounding it, it is important to understand its evolution. This chapter will first situate agrarian reform within the greater development debate in Latin America, and then examine how the debate played out in the Brazilian context.

What is the best way for a country to develop? The foundation of the Latin American

economy post independence was based on the export of primary goods. There was no impetus for change because the high market prices of the exported commodities suggested for the land-owning elite that their wealth would continue to grow. The external market seemed insatiable as exports increased throughout the 19th and beginning of the 20th centuries. A series of international events showed how precarious the position of the economy really was.

World War I was the first such shock. While most Latin American countries stayed out of the war, they were directly affected as their main trading partners diverted resources to the war effort. The price of luxury primary exports such as coffee and sugar plummeted. Then manufactured goods, readily imported by the elite, became scarce and expensive. The confluence of these two events created a market for domestic industry. Domestic entrepreneurs stepped into the vacuum left by the British goods and started manufacturing items for domestic consumption.

The War's debilitating effects on the national economy provided the opportunity to start post-war discussions about the best path for development. The illusion that late developing countries could catch up to industrialized nations based solely on the exports of rubber, bananas, or sugar, had been shattered. Agriculture was still dominant but industry had gotten a foothold.

The early debates regarding the relationship of agriculture to industry occurred in the Russian development discourse. Bukharin argued that agriculture was the bedrock upon which future industrialization should be based. He maintained that industry could only progress at the pace dictated by agricultural growth. Opposing Bukharin were a slew of Marxist thinkers, including Trotsky, who argued that the pace set by voluntary agricultural production increases was too slow and that industry had to be pursued by squeezing all the surplus they could out of agriculture (Bernstein, 2009).

These same questions were being grappled with in Latin America. Two further shocks, the Great Depression and WWII, further impressed that an economy based on exporting primary goods was not stable. Social scientists associated with the Economic Commission for Latin America, most famously Raul Prebisch and Hans Singer, argued that primary agricultural exports suffered from diminishing terms of trade; therefore, governments seeking to develop should focus on nurturing manufacturing industries (Prebisch, 1950). Latin American countries began to nurture their fledgling industries. In order to compete domestically against established foreign imports, the governments imposed tariffs. These protectionist policies, later called import substitution industrialization, were an important part of the dominant economic policy pursued in Latin America at that time.¹

Politically and amongst academics, industry became more important than agriculture. Social scientists concerned with development in Latin America saw agriculture as a secondary issue to be dealt with after modernization of the industrial sector (Groppo, 2006). Economists and practitioners assumed that after modernization the agrarian problem would resolve itself and inequality was tolerable because, in theory, once a certain threshold of development was reached, it would spontaneously fade away (Chang, 1949, Rangel, 1956).

Agriculture under ISI was milked dry through direct taxes on agriculture, overvalued exchange rates, import subsidies, and industrial protection (Krueger et al, 1991). For political reasons, taxes were not uniformly applied, “the tax system penalized the more productive farmers while enabling those with large, idle estates to escape virtually tax free” (Barraclough 70, p. 912). Agriculture also suffered from a lack of infrastructure investment and provision of

credit. The little investment that was provided was not part of a program for agricultural improvement but to purchase the rural elite's support of ISI policies.

Implementation of ISI protectionism and blanket industry subsidies worked at first; however, after the initial implementation stage, the weaknesses in the ISI model started to show. Using agricultural surplus as a springboard for industry while at the same time eroding its base is not sustainable. The destruction of the rural economy, through both direct and indirect measures, hit the small peasant farmers and the landless the hardest. Consequently, the small farmer's consumptive power became almost negligible, so the internal market was too small to support domestic industry. Further, industries had to import capital-intensive technologies in order to produce high-end consumer goods. The countries pursuing ISI therefore developed foreign exchange deficits. Within this political and economic context, the first push for agrarian reform began.

Agrarian reform in Latin America has always been political. As Alexander put it, "Agrarian reform is the fundamental revolutionary act in Latin America. It represents the definitive destruction of the power and position of the traditional oligarchy" (Alexander 1963, p. 559). In the early days of Latin American agrarian reform the political struggle was between the traditional, rural, political powerful landowners and the nascent, urban, economically powerful industrialist. In their political struggle, they mobilized both economic and social arguments.

The economic arguments for land reform in the middle of the 20th century were dominated by the urban sector. First, the agrarian structure restricted industrial growth. Industry requires workers to produce products and consumers to buy them. The land tenure system prevented industry from having either workers or consumers. The subsistence crop sharing

system hid high levels of underemployment (Barraclough & Domike, 1970, p. 55). The industrialists wanted to reform agriculture so they could siphon off the surplus labor into their factories (Lewis, 1958). There is a correlated problem: workers need to eat. Large farming estates, with their focus on export crops, did not produce subsistence crops for the growing army of urban workers. The urban elite needed to change the structure of the land tenure system to change the focus of crop production. By providing land to small farmers, they were ensuring that more food would enter production. Those favoring industry argued that by transferring surplus labor from the fields to the factories national productivity would increase. Not only would the new urban workers increase industrial productivity but increased demand would be a boon for agriculture as well (Lewis, 1958). The problem of a labor shortage would be solved through agrarian reform because the extra workers would come to the urban centers and the farmers left on the land would grow food to feed them.

The second way the traditional feudal system restricted economic growth is that it did not create consumers. The farmers worked the landowner's tracts in exchange for the use of small plots for subsistence crops to feed their families. The farmers therefore did not generate an income sufficient to buy consumer goods. Any goods they needed were procured from the landowner. Money generally did not change hands as the items were bought in exchange for work hours or the landowner coined his own currency. Without income, a large part of the population could not participate in the market economy. Without a domestic market to consume their products industry could not grow and become competitive (Alexander, 1963).

Agrarian reform, in the minds of the urban elite, would solve both problems. After reform, displaced workers would migrate to the urban centers. Here the subsistence farmer

would be converted into a wage earner. This served multiple purposes. Industry is supplied with a workforce overcoming the labor bottleneck. At the same time the new wage earner has an income and can participate in the national economy.

Furthermore, the urban elite wanted reform because they felt the rural elite was not putting their land to the most efficient use (Barraclough & Domike, 1970). Industry required the agriculture sector's foreign revenue to balance payment deficits (Hirschman, 1968). Brazil's industrial development was predicated on importing capital-intensive technologies. These imports needed to be offset by exports from the agricultural sector.

Neither the landlord nor the tenants had any incentive to increase production. The tenants had no incentive to invest in the land, as it was not theirs. They also did not have an incentive to work more than the minimum required because their labor benefited the landlord. The landlords had no incentive to improve the land because labor was cheap. As a result countries in Latin America imported much more than they exported, which lowered exchange rates and made it difficult for domestic industries to compete with foreign imports.

International social pressures also fortified the economic argument. Latin American countries were heavily influenced by exogenous factors such as the Cuban revolution and the US response, the Alliance for Progress. The Cuban revolution instilled fear in politicians, especially politicians in the United States, that if agrarian reform was not undertaken within the confines of the system, it would be sought in a revolutionary manner (Barraclough, 1970, p. 924, Theisenhusen, 1995). The Alliance for Progress was the American response to the threat. The US government pledged to provide aid to the region so long as the countries pursued certain policies such as agrarian reform.

The international political climate after WWII was propitious for the politicization of marginalized segments of the population. There was a surge in civic participation and social movements started to push for equality and justice.

In 1964, the Inter-American Economic and Social Council issued a statement:

The structural changes implied by agrarian reform are a fundamental requisite for development of the countries of the area; and that, to be effective, agrarian reform must: a. produce a change in the structure of land tenure..., b. give the land its social function..., c. modernize rural life..., d. improve the power structure by giving the farmer a real voice in decisions and a share in political, economic and social opportunities (Stavenhagen, 1970, p. 98).

The statement recognized that the agrarian structure was unjust and, without fundamental change, constrained people's livelihood choices and predetermined them to a life of poverty. The goal, as advocated by the Council was a change in the structure of the land tenure system.

However, the question remained, what should the post reform structure look like?

Most scholars agreed that the agrarian structure had to change, but they did not agree on what should replace it or how reform should be implemented. Kay (2009) summarized the arguments into two positions: the neo-populist agriculturalists and the neo-classical agriculturalists. The neo-populists wanted an agricultural structure oriented around small farms, whereas the neo-liberal side preferred large-scale industrial agriculture.

The neo-classical agriculturalists argued that large-scale modern farms specializing in cash crops should form the backbone of the agrarian structure and lead development efforts. Farms, they argued, would achieve economies of scale and produce for the external market, bringing in foreign exchange.

The neo-populists argued that land reform should create family farms. They argued that the family farm, by virtue of having free labor, was the most efficient method of farming. These

farms would also produce food for internal consumption thus reducing or eliminating their food imports. Reducing these imports would improve their balance of trade.²

In addition to having disagreements over the general structure of agriculture, policy makers also had disagreements on the methods to implement reform. Answers ranged from indirect reform, via taxes or subsidies etc., to direct reform via an upheaval of the rural power structure (Barraclough & Domike 1970, p. 72). Work on Latin America has shown that where indirect forms of reform have been undertaken, not only has enforcement been lax, but also ineffective (Barraclough & Domike 1970, p. 77). However, direct land reform, through expropriation and redistribution, according to J.Kenneth Galbraith is, “a revolutionary step; it passes power, property, and status from one group in the community to another” (Carroll, 1970).

The first wave of reform

Each Latin American country that implemented reform did so in its own manner, but there were similar characteristics. The model of the first wave of reform was based on the power of the state to expropriate and distribute land. Choncol (1970) argued that there were eight conditions for agrarian reform. Reform should be “massive, rapid, and drastic” because anything less would not change the structure. Reform should be the responsibility of the state because the state is the only actor powerful enough (a) to implement reform and (b) to ensure integration of reform’s many elements, preventing ad hoc implementation. The state is responsible for redistributing land, organizing beneficiaries, providing credit and training, creating markets for products and providing roads and effective transportation for product transportation to urban

² These debates have continued unabated through the present and vestiges of each are recognizable in the present models of reform we will see later in the chapter.

centers (Chocol, 1970, p. 169). A true reform should also have limited payment for the land.

These were the major tenants of the first wave of agrarian reform under the state redistributive model.

After the first wave of land reform receded, several scholars and organizations issued critiques of the state's redistributive model.³ The Food and Agriculture Organization of the United Nations released a document showing eight distinct but interwoven problems with state land reform:

- The inefficiencies of state bureaucracies
- Inability to avoid opportunism and rent-seeking behavior
- Lack of control exercised by beneficiaries in regards to land selection
- Stringency of tenure controls
- Lack of technical assistance
- Weak managerial capacities by the beneficiaries
- Dysfunction of markets
- Bullying of landlords
- The weakness of the government's commitment to break up large estates

(International Land Coalition & FAO, 2006).

Political problems arise because of the contentious nature of land reform. The politically powerful elite does not want to relinquish their land and will therefore oppose state efforts at

³ There are authors who argue the World Bank critique of redistributive land reform is a caricature of what redistributive reform can be. For example see Pereira, J. (2005) A Disputa Político-Ideológica Entre a Reforma Agrária Redistributiva E O Modelo De Reforma Agrária De Mercado Do Banco Mundial (1994-2005). *Sociedade e Estado* 20:611-46.

redistribution (Hammond, 1999). In rural areas the landed elite monopolize political power and the government is not strong enough to break up large land holdings. In areas where the elite have captured the local government, the money earmarked for rural development benefits the large landholders instead of the rural poor (Darrow & Tomas, 2005 p. 475). Furthermore, even if the state is able to break down large estates, the real winners of land reform are those who are able to capitalize on the reconsolidation of the estates into mid-sized estates (de Janvry et al, 2001). The true winners of the first round of land reforms were therefore, “landowners, urban professionals, and agro-industrialists” (de Janvry et al, 2001, p. 289).

Was there a better way? A second round of land reforms started in Latin America and other parts of the world in the 1990s. Some of these types of reforms were modified versions of the state model.

The 1990s in Latin America generally saw a shift to follow the Washington Consensus. Governments focused on creating efficiency by privatizing national companies and opening their markets to foreign finance. After decades of ISI, Latin America returned to export-oriented growth. The market was again deemed reliable, and foreign investments were welcomed with open arms. Traditional agrarian reform did not fit this model, scholars within the World Bank Developed a new model.

Market-Based Land Reform (MBLR) theory is based on “willing sellers, willing buyers” and claims to remove coercion from the equation.⁴ Landowners voluntarily sell their property for one hundred percent of the market value and are paid in tender instead of bonds. Additionally

⁴ This is a controversial statement as those who advocate MBLR argue there is no coercion from the state and therefore politically feasible, and those against MBLR argue that coercion is no longer from the state, instead it now comes from the landowners.

this method is proposed to be better than the redistributive mechanism because “the transaction costs embedded in the expropriation mechanism may increase land prices up to three times its market value” (Souza et al, 2000, p. 5). Therefore, “it leads to a more efficient use of resources and a quicker transfer of land” (De Medeiros, 2007, p. 1505). In fact it was initially billed as “agrarian reform without bureaucracy, without conflict, without the need to resort to Justice” (De Medeiros, 2007, p. 1506).

MBLR’s goal is to increase efficiency in the agricultural sector. MBLR assumes that land markets work to increase efficiency and therefore equity (Deininger & Binswanger, 1999). The two keys for well functioning markets are (a) secure land titles and (b) no restrictions on land sales (Deininger et al, 1993). The model is theoretically cheaper because beneficiaries seek better, less expensive land (Deininger, 1999).⁵ Secure titles enable the beneficiaries to apply for and receive credit, which they can use to improve their lots. Secure titles also make people work harder (Deininger & Binswanger, 1999). The problem with land distribution lies not in the market, nor in the structure, but in market distortions, which are the products of politics (Binswanger et al, 1993, p. 1247). The role of the state is to provide the rules and infrastructure so that those markets can function well (Binswanger et al, 1993 p. 1248). These scholars advocate the indirect methods of land redistribution, which do not alter the power structure (Carter, 2006).

The members of MBLR settlements are self-selected. Individuals interested in the program must form associações to collectively petition local authorities (Deininger & Squire, 1998, Deininger & Binswanger, 1999). Beneficiaries are pre-screened to fulfill the requirements

⁵ Deininger estimates that the cost will be a fourth of current prices, “by avoiding the need to pay for expensive land improvements” p.335

of the settlements and to ensure that they will be able to repay the loan. “(The) beneficiary profile indicates that they are poor, but not discriminated or excluded from the local economy” (Souza, 2000 p. 22). MBLR also claims that beneficiary pre-screening, while limiting access to the program, also works to limit settlement failure rate (Souza, 2000, p. 22). The beneficiaries in MBLR are active in their quest for land. They are involved in the process from inception to distribution, so they become invested in the project.⁶

After organizing, an *associação* must construct a plan for land development. The beneficiaries develop the plan, which makes the model responsive to individual needs. The lenders must approve the plan. Once the plan is approved, the *associação* finds suitable land and negotiates a price with the landowner. The limited number of actors in the process, and the use of market mechanisms make the process efficient. This model therefore avoids the inefficiency and non-responsiveness traps of bureaucratic redistribution.

After the price is settled, the *associação* receives a loan and a grant. They receive a loan for the purchase price of the land while the grant is to be used as start-up capital.⁷ The community decides how the money should be used, and although the beneficiaries can do what they want with the grant, program coordinators suggest they use it to bring in technical assistance to help with the implementation of the plan.

The MBLR model makes improvements on the state model in terms of responsiveness to the population and efficiency. In addition, it also alleviates the political problem because it is

⁶ The degree to which this is in practice true is debated, because of the beneficiaries relative lack of power in front of either the agents or the landowners, they are frequently cowed into buying an inferior piece of land at an inflated price (Cuame, 2006).

⁷ Each beneficiary has a cap of how much can be spent. The price of the land is deducted from that amount and whatever is left over is given as a grant. This varies depending on the type of program and land type.

voluntary and, therefore, does not trouble those who would like to keep their land. Finally, the pre-screening process resolves the problem of finding qualified beneficiaries.

To summarize, advocates for MBLR and for redistributive land reform both acknowledge that the current land tenure structure is untenable. MBLR argues that the present land market is distorted and the resulting consolidation left many people without access to land. Land reform is necessary to correct market distortions and provide the basis for a well functioning land market (Binswanger et al, 1993, p. 1247). Advocates for redistributive reform reject the idea that the market can ameliorate poverty, for poverty is embedded in an unjust structure and MBLR could only exacerbate the problem (Veltmeyer, 2009, Sauer, 2009). Redistributive reform is needed to change the land tenure structure to one that can provide sustainable livelihoods for the rural poor. Instead of large landholdings coupled with Lilliputian plots of land that are too small to provide subsistence to those that work it, they argue for a shift to plots that are large enough for a family to work.

The Brazilian Context

While it is important to situate the current agrarian reform debates into the larger Latin American development discourse, to understand the specific cases in the study it is even more important to understand the particular history and development of land in Brazil.

The concentration of land in Brazil can be traced back to its colonization. The Portuguese crown, afraid of foreign invasion, divided Brazil into large tracts of land called *Capitanias Hereditárias*. The crown gave the *Capitanias* to select Portuguese noblemen in exchange for defending the territory. Even though the *Capitania* system proved to be a complete failure and was replaced by a centralized government, the concentration of land it engendered remained.

Prado (1967) argues that even the type of colonist that came to Brazil facilitated a concentration of wealth (p. 17). Portugal had plenty of unused land so there was no incentive for the average person to emigrate. The first colonists were Portuguese nobles who came to establish large estates. “The European settler came to the tropics only when he could be in a position of command, when he had the means or aptitude to become a master, when he could count on others to work on his behalf (Prado, 1967, p. 17)”. With labor scarce, due to a small indigenous population, colonists almost immediately began importing slaves. Slave labor allowed the colonists to put large tracts of land into production.

In Prado’s view the Portuguese who colonized Brazil thought of it as a commercial venture. “If we look for the vital element in Brazil’s formation, the element that lies at the very roots of its subsequent growth, we will find it in the fact that the colony was established to provide sugar, tobacco, and certain other commodities; later gold and diamonds; then cotton; then later still coffee for the European market. This was the objective in the establishment of the Brazilian economy, an externally oriented objective, turned away from the country itself and taking account of nothing more than the commercial interests involved” (Prado, 1967, p. 21).

The landed elite forged titles to claim public land and enlarge their estates. They drew up fake titles and supporting documents and placed in a box with crickets. The crickets then artificially aged the documents by defecating and chewing on them. The practice was so common that the act of forging titles received the name *grilagem*, in reference to the crickets (*grilo* in Portuguese).

All of these element—the legacy of the *capitanias*, type of settlers, the forging of land titles—created an unequal distribution of land and laid the foundation for the agrarian structure

of the Old Republic (Holston 1991). Many argue, the agrarian structure defined as, “a set of institutions, norms and social, political, and economic relationships governing the access to and use of land as a productive resource”, has not changed much since the Old Republic (Stavenhagen 1970).⁸

The period of the Old Republic is characterized by highly concentrated political and economic power in the hands of the landed elite. The alliance of the *Partido Republicano Paulista* (Sao Paulo) and Partido Republicano Mineiro (Minas Gerais) resulted in a *quid pro quo*, where the presidency alternated from one party to the other. The “coffee with milk” alliance as it was called ensured that the landed elite maintained a monopoly on political power.⁹ Policies enacted by the government were designed to benefit the rural elite and favored exports over the creation of national industries.

Domestically the landed elite had control over Brazil and, if not for World War I (1914-1918), might have maintained control. World War I affected Brazil like the rest of Latin America, primary exports decreased and at the same time consumer goods, previously imported, were unavailable. The market space gave Brazilian industries the opportunity to fill the gap. These new industries presented a potential new locus of power: urban elite. The war indirectly led to the emergence of this class.

Brazilian industry essentially began because of World War I, and then the beginning of the Great Depression in 1929 intensified the decline of the landowners’ political power. The

⁸ In an effort to be comprehensive, analysis of the agrarian structure reveals that the structure is not neatly separated into the large estate and the subsistence farmer. According to Furtado while the *minifundio-latifundio* dichotomy defined the agrarian structure, there was a middle group of family farmers.

⁹ The alliance received that name because Sao Paulo was the leading producer of coffee and Minas Gerais led in cattle and milk production.

decline culminated in the military coup of 1930 led by Getulio Vargas (Skidmore, 2004).¹⁰

Vargas ruled from 1930-1945 and ushered in a period of industrialization and inward looking development

Vargas divested provincial governments of their power and transferred it to a centralized bureaucratic government ((O'Donnell, 1973). The centralized bureaucracy determined Brazilian political and economic policies. Military strength, urban interest groups, and the part of the traditional oligarchy co-opted by the patronage system of the bureaucratic government's patronage system, all made the centralizing power shift possible. The State, previously an extension of the landed elite, took control of the economy.

The larger State, with Vargas at the helm, was able to focus on reducing Brazil's foreign dependence and stimulate the growth of domestic industry. The government pursued policies such as import tariffs and overvaluing the exchange rate to stimulate the creation of and protection for new industries. To support new industries, the government also founded national industries in key parts of the economy such as steel and mining.

Agriculture was subjugated to the urban sector and import substitution industrialization (ISI). Even with military support Vargas still had to pay homage to the agricultural sector. Many rural policies he had initially supported, such as agrarian reform, were jettisoned to curry favor with the agricultural elite.

Between WWI and WWII Brazil was modernizing. The newly centralized federal government had more responsibilities and more power. The industrial sector was growing. The population was shifting from predominantly rural to a more urban population. Civil society did

not develop as fast as the other sectors. The authoritarian regime did not provide space for the creation of a civil society.

The international political climate after WWII provided the opening for the politicization of marginalized segments of the population. Civic participation surged; social movements started to push for equality and justice. Out of this mobilization the peasant leagues, sprung up in reaction to the modernization of agriculture that was forcing the peasants off the land (Forman, 1971). The leagues initially sought better living conditions for rural workers. When they were met with repression their demands escalated to structural changes (Juliao, 1962).¹¹ Rural trade unions such as the Movement of Landless Workers (MASTER), and the Union of Agricultural Labors and Rural Workers of Sao Paulo, joined the Peasant Leagues, communist groups, and more progressive members of the Catholic Church, in their clamor for agrarian reform (Forman, 1971). These actions scared moderate and conservative Brazilians who feared it would lead to a Communist uprising similar to the one in Cuba.

The rising social unrest coupled with the fear of a communist insurrection spurred the government to take the movements demands under consideration. The Brazilian government under President Goulart issued the SUPRA decree which created the Superintendence of Agrarian Politics (*Superintendencia de Politica Agraria*) and allowed for expropriation of select land. The recognition was short-lived as the SUPRA decree galvanized conservatives to fear the “red menace” from the executive as well as from the countryside.¹² Brazil’s 1964 military *coup*

¹¹ For a more general discussion on the mobilization of peasants please refer to Gurr, T. *Why Men Rebel*. Princeton; Princeton University Press, 1970; Tilly, C. *From Mobilization to Revolution*. Reading, MA: Addison Wesley, 1978; Lichbach, Mark I. “What Makes Rational Peasants Revolutionary? Dilemma, Paradox, and Irony in Peasant Collective Action.” *World Politics* 46.3 (1994): 383-418

¹² It should also be noted that international pressure, especially pressure from the US augmented this fear.

d'état was a reaction to the perceived leftist threat within Brazil.¹³

In an effort to appease the peasants, and at the behest of the American Government-backed Alliance for Progress, the military government passed the Land Statute (Estatuto da Terra). The Land Statute allowed for the expropriation of unproductive land by the state, and created two government organs to do so: the Brazilian Institute for Agrarian Reform (IBRA) and the Brazilian Institute for Agrarian Development (INDA). The first national plan for agrarian reform was rolled out shortly thereafter to great fanfare. In that model, the state expropriated land, distributed it to peasant farmers and reimbursed the landowners with government bonds. According to INCRA's own account, the plan "did not leave the paper" (INCRA).

The political backlash against agrarian reform was very strong, and implementation of the Statute in the 1960s and 1970s was almost non-existent. When land was distributed, it was through frontier colonization not redistribution of productive land. The Land Statute did not distribute much land because the landed elite prevented its implementation. Regardless of its efficacy, the passage of the Land Statute is still a watershed moment because it codified the need for change in the agrarian structure (Grindle, 1986).

After democratization, the government initiated a rural survey to synthesize the condition of the peasantry and have a basis on which to charge a land tax (ITR). The government's diagnostic on the situation of the peasantry highlighted the continued need for reform.

Without possibility of access to land the [rural] worker cannot improve his living condition. He cannot introduce new techniques, or change cropping patterns

¹³ For a more thorough analysis of why the military took over, please refer to, Collier, D Ed. *The New Authoritarianism in Latin America*. Princeton: Princeton University Press, 1979; O'Donnell G. *Modernization and the Bureaucratic-Authoritarianism: Studies in South American Politics*. Berkely: Institute of International Studies Press, 1973; Lamounier, B. "Brazil: Inequality Against Democracy." In Larry Diamond, Juan J. Linz, and Seymour Martin Lipset, eds. *Democracy in Developing Countries: Latin America*. Boulder: Lynne Rienner, 1989: 116-145.

aimed at improving productivity. Without access to land he cannot have access to credit, technical assistance, or improve marketing conditions (Groppo, 1996).

The ambitious second National Plan for Agrarian Reform was created to carry out land reform and improve the situation of the rural worker. The plan's goal was to settle 1.4 million families within four years (INCRA). The plan failed dismally due to the debt crisis, economic stagflation, and subsequent adjustment programs (Groppo, 1996). However, the issue of land reform was once again on the agenda.

The waning days of the dictatorship saw the emergence of a group later called the *Movimento Sem Terra* (MST), which would trigger the next wave of land reform. According to Joao Pedro Stedile, one of the leaders of the MST, there were three structural factors that allowed for the creation of the MST: the economic crisis of the late seventies which left the young without jobs in the cities, work done by the Roman Catholic Church, and the growing struggle against the dictatorship (Stedile, 1999). The MST was not a premeditated organization. It did not start as a cohesive movement; rather it was the coming together of individuals and groups who were simultaneously working for land reform. These groups were brought together through the Pastoral Land Commission (*Comissão Pastoral da Terra*) and began working together developing common responses and strategies.¹⁴ The creation and evolution of the MST profoundly influenced not only how the government looked at land reform but also how the rest of the population saw them.

The MST holds the state accountable to fulfill the Land Statute. The Land Statute states that land not serving its social purpose was eligible for redistribution. There are many parameters

¹⁴ The Comissão Pastoral da Terra was an extension of the more progressive arm of the Roman Catholic Church.

within the statute governing which land can be expropriated, such as the acreage, the percentage used for agriculture, and what is considered productive. Since the government is not taking the initiative, the MST occupies land that fulfills the established criteria. The MST occupies and then petitions INCRA (and, occasionally, the courts) to create a settlement in that spot. Brazilian society initially viewed social movement-based occupations as illegal occupations by transients. . However, after a particularly bloody protest at Eldorado dos Carajás, where the police killed nineteen members of the MST, public perception reversed.

The media started portraying the MST in a favorable light. They focused on the issues that led people to occupy and ceased treating them as occupying vagabonds. My research does not include MST settlements but it is important to see how the MST has influenced the way the state carries out land reform. After all, the MST variant is a type of state-based land reform.

While redistributive land reform is still ongoing in Brazil, another land reform model has also risen to prominence. The government under Fernando Henrique Cardoso pursued the privatization of state industries and an opening of the economy to foreign finance. Fitting the government's new stance, agrarian reform was also transformed with a plan called The New Rural World. This plan made agrarian reform an antipoverty initiative rather than a development plan, passed the initiative of reform to state and municipal governments and finally commoditized reform (Sauer 2009: 179). Under Cardoso, Brazil also started implementing the World Bank's Land Reform and Poverty Alleviation Project, in Brazil known as the *Cedula da Terra*. The first MBLR pilot programs started in five Brazilian states: Ceara, Maranhao, Pernambuco, Bahia, and Minas Gerais. It has since spread to fifteen other states. Ceara is exceptional: prior to the *Cedula* pilot project, the governor of Ceara Tasso Jereissati had already

implemented an MBLR pilot project directly with the World Bank, the *Projeto Sao Jose*.

The MBLR type of reform has also received many scholarly critiques. Ironically many of the same critiques as state led land reform. Some of these critiques include bad land quality, beneficiaries do not have input, technical support and aid not reaching the settlements, and a lack of organization (Deere & de Medeiros, 2007).

Empirical studies on these two types of reform have been mixed. In the field, there are successful and failed examples of each. Why do some settlements fail while others succeed? Trying to reduce the answer to the type of reform gives a distorted picture that is often driven by ideology rather than reality. So what is missing?

Rather than agglomerating all the settlements of each reform type, it is more productive to get beyond the ideological divide and examine the internal workings of the settlements to see what the successful settlements are doing that the ones that are failing are not. I contend that what is missing in both of the models is an understanding of the micro and meso-level settlement dynamics. The research focuses on the factors that contribute to community development. While there are many factors that play a part in settlement development, this research specifically focuses on the ways the interaction of different types of social capital influence settlement outcome.

My study's hypothesis was that social capital can overcome some of the deficiencies in the land reform models. I envisioned social capital enabling beneficiaries to overcome inefficiencies, lack of control over the direction of development, lack of technical assistance, weak managerial capacity, and landlord bullying. In the next chapter, I situate the argument within the social capital debate and discuss the specific causal mechanisms that I expected to see.

Chapter 2: Social Capital

Each current model of agrarian reform, when applied, is deficient. There are bottlenecks, political games, lack of resources, and bureaucratic red tape to overcome. Some of the settlements are able to overcome, while others languish, slowly fading back into the *caatinga*. Through prior work in the area, I noticed that the successful settlements were much more unified than those that were not doing as well. I started to question whether the unity they had with one another was the reason they were successful or whether they were united because they were successful. In other words I wanted to know how the successful settlements achieved what they did. Through casual observation I started to develop a theory that the bonds that tied the settlement together, or solidarity, contributed to settlement success. Did solidarity matter to settlement success? To answer that question I turned to social capital.

Theories of Social capital

A single definition for social capital has been elusive. Social capital at its most basic is built on the premise that the people one knows and the networks one builds have value. This deceptively simple concept has many nuances. Some define social capital as a resource (Bourdieu, 1985); some emphasize its functionality (Coleman, 1990); others define it through what it does (Putnam, 1993). Here I will present the different ways of approaching social capital, review the research tying social capital to development and the state, and show its relevance to my research.

While many scholars have seen the usefulness of using a concept like social capital, it is still largely ill defined. There are three so-called fathers of social capital: Bourdieu, Coleman, and Putnam. All of the current work on social capital stems from their work. I will briefly

describe their visions before presenting specific definitions and implications of the different views of social capital.

Social capital, for Bourdieu, is one of the ways those in power entrench their social status. Coming from the Marxist perspective, social capital is rooted in class relations and therefore in power struggles (Harriss, 2002, p. 4). Bourdieu does not analyze social capital in isolation, but rather as one subset of several types of capital including symbolic, cultural, and economic capital. These capitals are not abstract entities that exist as ideal forms; they are “socially and historically limited to the circumstances that create them... they are contextual and constructed” (Harriss 2002, p. 20). It is through this creation and reconstruction that power relations are replicated, and access to resources is limited for those outside of the dominant classes.

Social capital is not created spontaneously: it must be cultivated (Warner 1999, p. 376). Resources must be put into it with the expectation that they will be repaid in some manner. Bourdieu is explicit, “the profits which accrue from membership in a group are the basis of the solidarity which makes them possible” (Bourdieu, 1985, p. 249). Modifying Bourdieu slightly, the group exists because of the profits that members *expect* to get from it. Group cohesion is then an economic transaction and needs an investment to pay off in the future.

The existence of a network does not automatically mean a positive gain for society. The dominant class uses their considerable social capital to perpetuate the structure that keeps them on top. By doing so, they are by necessity shutting out people without those connections or network. Harris (2002) points out that for Bourdieu, “it is not enough to establish the existence of a network; it is also essential to examine its cultural/ideological content and context” (p.20).

Ideology plays a large part in the types of networks that are created and whether those networks will help bridge the gap between the classes or further entrench them.

Given this background, Bourdieu's definition of social capital, "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" does not seem too radical (Bourdieu, 1985, p. 248). However, it must be remembered that, "Bourdieu's primary concern is to develop a theory of social stratification on the basis of distinction by volume and composition of different types of capital, taking into account as well the conversions from one type of capital to another" of which social capital is just one part (Adam & Roncevic, 2003, p. 159).

To summarize, the Bourdieuan version of social capital is rooted in mechanisms of power, dependent on context and content, created as a response to structure, and is a way for members to access resources otherwise unavailable to them.

Instead of focusing on the possession of social capital as a resource as Bourdieu does, Coleman stresses its functionality. Coleman arrives at social capital through what it can do for the individual who possesses it. Given that he believes people's actions are driven from rational interests, he also believes it is logical that social capital serves to aid the achievement of those aims. In his study of high school students and their families, Coleman (1990) argues that social capital is "a variety of entities with two elements in common: They all consist of some aspect of social structures, and they facilitate certain action of actors—whether persons or corporate actors—within the structure" (p. 302). Whereas for Bourdieu social capital is something you have through your relationships with others, for Coleman social capital is something that you use for a specific end. Coleman (2000) explicitly states, "the function identified by the concept of

social capital is the value of these aspects of social structure to actors as resources that they can use to achieve their interests” (p.19). These concepts are not contradictory: One can use the social capital you have and, likewise, one cannot use social capital one does not have. The difference is more than semantics. The focus on function or resource affects each scholar’s view of social capital.

Coleman and Bourdieu have further differences. Coleman considers the creation of social capital to be incidental and unintentional whereas Bourdieu claims one must invest in the creation of social capital, the same as for any other capital (Coleman 2000, p. 26).

Both theorists look at social capital as structural. However, Coleman also includes social aspects. He argues that social capital exists in the structure of social relations. This structure “is important not only for the existence of effective norms but also from another form of social capital: the trustworthiness of social structure that allows for the proliferation of obligations and expectations.” For Coleman, obligations, reciprocity, and norms are a part of the structure that creates social capital. In order for social structure to create social capital, the social structure must have closure (Coleman, 2000, p. 24). Individuals must have intersecting ties so that one individual is tied to other individuals who are also tied to one another. These multiple ties facilitate sanctions, as the onus of enforcement is not borne by one person.

Coleman’s study is the first evidence of a shift away from individual-based social capital and toward a more society-based view advocated by Putnam (Adam & Roncevic, 2003, p. 159). Coleman points out “social capital inheres in the structure of relations between actors and among actors... relations among corporate actors can constitute social capital for them as well”

(Coleman, 2000, p. 16). Coleman extends social capital from the realm of the individual to the level of the corporate actors.

Where While Coleman stretches social capital into corporate actors, Putnam stretches it to include all of society. Putnam's (1993) oft-quoted definition describes social capital as the "features of social organization, such as networks, norms, and trust, that facilitate action and cooperation for mutual benefit" (Putnam et al, 1993 p. 167). Putman looks at the benefits of social capital accruing to the community as a whole rather than to specific people within the community.

The assumption that social capital will improve the lives of the community fails to take into account that most communities are heterogeneous and that social capital can exclude minority members from taking part. Portes and Landolt (2000) have shown that social capital can in fact be detrimental to those excluded from it. The ties that bind also serve to exclude those already marginalized, especially women (Molyneux, 2002) and minority ethnic groups (Fox, 1996). This definition is therefore not appropriate because it only looks at the beneficial aspects of social capital and ignores detrimental externalities.

Putnam, like Coleman, believes that social capital exists in the features that lead to benefits. However, it stretches past its logical relevance because the cause of social capital is also the effect of social capital (Portes, 1998, p. 19). The cause of social capital creation is cooperation, and the effect of high levels of social capital is also cooperation.

Putnam also deviates from Bourdieu and Coleman in neglecting structure all together and focuses solely on the cultural aspects such as norms and trust. Culture is the main determinant of social capital, not the structure in which it is embedded.

Scholars, over the past twenty years, building on Bourdieu, Coleman, and Putnam, have taken the broad concept of social capital and isolated its different elements. Painting the differences with broad strokes gives the general picture, but to truly understand how differences affect approaches to social capital, it is important to look at the specifics. The following paragraphs identify these conceptual differences.

The first division of social capital comes from the distinction between structural and cognitive social capital. Structural social capital is “associated with various forms of social organization, particularly *roles, rules, precedents* and *procedures*, as well as a wide variety of *networks* that contribute to cooperation” (Uphoff, 2000, p. 218). Cognitive social capital “derives from mental processes and resulting ideas, reinforced by culture and ideology, specifically norms, values, attitudes, and beliefs that contribute cooperative behavior” (Uphoff, 2000, p. 218). Choosing one over the other is a false dichotomy. If one stresses solely the structural elements of social capital, then social capital becomes a byproduct of a specific form of community organization. Yet if one focuses solely on the cognitive connection without incorporating the venues through which those connections are made, then one’s analysis will be limited.

The literature further divides social capital based on type of relationship: bonding, bridging, and linking social capital. Titeca and Vervisch (2008) define strong or bonding ties as “people like us” (p. 2205). Bonding social ties refer to one’s closest ties: family bonds or bonds with neighbors. Bonding ties are therefore the most basic type of tie, and are very important as they serve as building blocks for other types of social capital (Titeca & Vervisch, 2008).

By virtue of being so close, the ties are among a homogenous population. Defining who is a part of a group also defines who is not. Bonding social capital is what allows groups to define an “other”.

One must also examine the negative effects of too much bonding social capital. Of all of the types of social capital, the literature suggests bonding social capital has the most negative consequences (Knorringa & van Staveren, 2008, p. 4). This type of tie is exclusionary (Schuller, 2008, p. 17). If the bonds are only to a specific homogenous population, then anyone who does not belong to that group cannot be a part of it. And, as Szreter (2002) points out, “This relatively abundant, bonding form of social capital may enrich the lives of the very poor and socially excluded...but...it is of limited use in directly assisting them to break out of their poverty and, arguably, even locks them into it” (p. 577). Bonding social capital has a fine line: it must be sufficient for people to build upon, but not so much of it that it prevents other ties, such as bridging social capital.

Gittell and Vidal (1998) coined the terms, bonding and bridging capital, though Granovetter first used the concept in his work, *The Strength of Weak Ties*. Granovetter (1973) made the distinction between strong and weak ties rather than as bonding or bridging but the concept is the same. He argues that, “the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie” (Granovetter, 1973 p. 1361).

The stronger ties are bonding social capital and the weaker ties are bridging social capital. Ties to members of other groups exemplify bridging social capital. Groups need not have a political or economic purpose to create bridging social capital. For example, instead of only

having ties with people with one's extended family, one has ties to friends in a neighboring village, or to fellow participants in a local club where interactions include a broader swath of people. Granovetter's (1973) work showed that the significant variable in finding a job is the vastness of a person's network, and not the strength of one's ties. Bridging social capital is horizontal and, while it increases mobility, it does not include elements of power and structural change. Linking social capital provides this connection.

The concept of linking social capital, developed by Woolcock (1998), refers to the vertical ties that develop between communities and those that are at higher levels of economic development, whether it be NGOs, funding agencies, or the state. Bridging and linking social capital may seem similar, but their differences are crucial: bridging social capital focuses on horizontal ties and linking social capital deals with vertical ties. Szreter and Woolcock (2004) "define linking social capital as norms of respect, and networks of trusting relationships between people who are interacting across explicit, formal, or institutionalized power, or authority gradients in society" (p. 655). This facet of social capital is the first to explicitly deal with power differentials within society. It is the most useful in terms of development because the poor "link" to those who have resources and assets lacking in poor communities. These links, if used effectively, can provide a way out of poverty.

Economic development requires that all three types of social capital exist in any given society. This does not mean that, once built, they are static assets. They are in constant flux, but there should be some ideal balance among them (Szreter, 2002).

Social Capital and Development

Now that social capital has been defined, it is imperative to look at how social capital can lead to development and, therefore, success in the land reform settlements. Theoretically it should work: Social capital and its ties lower risk and improve cooperation among the groups, which should improve economic development. Cooperation is achieved through reciprocity, access to information, and norms and effective sanctions (Coleman 2000). Putnam goes further and argues, “social capital is a precondition for economic development as well as for effective government” (Putnam 1993:37). However, the empirical studies have reported mixed results.

Some studies have shown that social capital is correlated with economic development. In a cross-country study, Knack and Keefer’s (1997) results indicate that social capital has a positive relationship with economic development. They found that countries with higher levels of trust and civic norms, and therefore social capital, are more egalitarian and have higher average incomes. They argue, without determining causation, that well-developed institutions were correlated with high levels of social capital. Torsvik (2000) delineates the mechanisms through which economic development and social capital are linked. He argues that social capital reduces the transaction costs of interaction. Narayan and Pritchett (2000) show that an “increase in village social capital increases the income of households in the village by 20%” (p. 274). They do not argue for a specific causal mechanism, but offer five possibilities: communities with higher social capital can better police their governments, higher social capital can improve cooperation with common property, higher social capital can increase the diffusion of new ideas, higher social capital can lower transaction costs, and higher social capital can serve as insurance to manage risk.

Social capital studies of Latin America found that social capital was a positive element in the indigenous communities studied. Anthony Bebbington (1997, 1999) examines how social capital or networks encourage economic development in the Andes. The main factors that he finds in successful cases are the “existence of base and federated local organizations, and of external actors who have networks of contacts with non-local institutions” (Bebbington, 1997, p. 189). Bebbington and Perreault (1999) also examine the role social capital plays in widening access to resources and other actors, especially the role of social capital as a link to other forms of capital. This echoes Schuller’s (2008) assessment that “the value of social capital depends in large measure on its linkage to other capitals—assets or advantages, individual or collective” (p.19). Flora and Flora (2004) also examine how social capital was activated within indigenous communities in Peru and Ecuador. Case studies show how the Peruvian community was able to build on the extant bonding social capital and create bridging social capital to prevent the mining interests destroying subsistence. Social capital is, in all of these studies, a positive element in these communities. All these studies tend to focus on the value of linking social capital and the importance of a tie to the state or to more affluent social counterparts.

Other works argue that social capital is not an important determinant of economic prosperity. Cleaver’s (2005) study of Tanzania has shown that, when the bonds between disadvantaged groups are strengthened, one does not see an improvement in overcoming poverty. He argues that “clusters of interlocking disadvantage” will not yield positive results if the social structure, which reproduced the power dynamics, is not changed. Titeca and Vervisch (2008) warn that the creation, or the attempts at creating, linking social capital before establishing bridging social capital can have detrimental effects on associations. They argue that when there

is not sufficient bridging social capital, and linking social capital is imposed from above, local leaders lose their responsiveness to the community members, especially when the organizations to which they are linked provide large amounts of resources. While these studies seem to contradict the idea that social capital can lead to economic development, when one looks closely at the arguments it is the type of social capital that is in question.

Both Cleaver's and Titeca and Vervisch's works were missing ways to democratically advance from bonding social capital to bridging social capital, and then to linking social capital. Trying to skip steps or assume that one particular type of social capital exists is therefore the problem, not that social capital, in itself, cannot lead to economic development.

Social Capital and the State

Can social capital be created? Or, conversely, is it inherent in communities? Putnam, in his study of Italy, argues that social capital has historical origins and evolves over a long period of time (Putnam, et al, 1993). The implication of this work is, therefore, that social capital is a cultural construct. His emphasis on the cognitive aspect of social capital precludes any discernable short-term change. Other authors such as Locke (1995) and initially Fukuyama (1995) support this pessimistic view. Fukuyama has since moderated his view on the creation of social capital. However, his definition is predicated by norms and values, which are harder to change in society than institutions. He argues that, "it is clear that not all norms and values, and hence not all cultures, are created equal with respect to their abilities to foster economic growth" (Fukuyama, 1995, p. 37). Coleman (1990) argues that social capital cannot be generated by the state. In fact he argues that state intervention leads to an atrophy of informal networks thus diminishing social capital (p. 321).

These authors are in the minority as a more synergistic view of social capital has emerged. Evans (1996), a pioneer in the synergistic view, argues that the state and civil society can work together to produce more favorable results than either one working alone. For him, “*synergy* implies that civic engagement strengthens state institutions and effective state institutions create an environment in which civic engagement is more likely to thrive” (Evans, 1996, p. 3). The example of the *Festas Juninas* illustrates this point. In Ceara there are big parties in June to celebrate the rainy season. Some municipalities give money to poor communities to purchase cloth to make their costumes and provide transportation to get these groups together to put on a show to which they otherwise would not have access. The small sums give the community incentives to build bonding social capital, as they spend months choreographing their dances, as well as bridging social capital, when it brings these groups together to perform for each other. The state is not creating the social capital—that task is done within the communities. But the state is providing the incentive and means for the communities to do so.

More recent empirical work on social capital looks at the role of the state and state agents in social capital creation (Krishna, 2000; Uphoff & Wijayaratra, 2000; Krishna, 2002). Krishna (2000) argues that building up extant relationships can develop social capital. He argues that, “the task of building up social capital lies, therefore, in extending previously narrow expectations of mutual trust to produce more positive-sum outcomes for all” (p. 75). In his study of watershed development in Rajasthan, India he points out that the process through which agents interacted with the community created social capital. Through the creation of user committees, which built upon local traditions, the agents were able to impart a new way of thinking to the villagers. The

agents built the institutions needed for interaction leading to social capital, and concurrently worked to change the villagers' values and norms. Social capital was built at both the cognitive and structural level. The creation of the committees helped structural social capital, and working within the communities helped foster cognitive social capital. Krishna points out that "the critical intervention was the introduction of this discourse among villagers. Though the presence of staff and the prospect of funds was the trigger and the incentive for the discourse—which probably would not have been initiated otherwise, at least not so systematically—it was as discourse generators more than as resources that staff played the major role" (Krishna, 2000 p. 88). It was only after the cooperative discourse became internalized that the villagers developed institutions to entrench the new norms and values (Krishna, 2000, p. 88). The role for the state, according to Krishna, then is threefold: show participants that coordination can help, help devise structures and norms, and institutionalize structures and norms (Krishna, 2000, p. 89). The role of the state must be predicated on participatory methods rather than a top down imposition.

The underlying message is that the role of the state cannot be heavy handed, but must help nurture the participation of the community. Uphoff (2000) repeats this message. The introduction of structural institutions that provide for the creation of social capital, while the first step, cannot be the only step. The community must incorporate these structures as part of their norms and beliefs. This is a process that cannot be imposed, but rather must be built from the ground up (Uphoff, 2004, p. 127). In this case several agents worked closely with the families in the Gal Oya irrigation system to show them how working cooperatively could help them. Once the organization was formed, it decided who should receive water, how much should be received, and when. In a drought year, the villagers were told that there was not enough water for

them to plant rice and that only the top part of the system would get water that year. Instead of kowtowing to the authorities, the group worked not only to ensure that water got to everyone efficiently, but also enabled them to plant rice (Uphoff & Wijayaratna, 2000).

In Durston's (2004) analysis of Latin America, he argues three tasks need to be accomplished for poverty relief: creating social capital, transforming the relationship between the state agent and the community, and intervening in the local power structure. Durston makes the tie between the tasks of social capital formation and development explicitly part of the role of the state. "Ultimately the active involvement of the central state in a decentralizing democratization, woven from the three strands described in the preceding section, is the best foundation for building social capital among the poor and making possible a permanent escape from exclusion and poverty" (Durston, 2004, p. 182)

In Tandler's (1998) case study of Ceara, the federal government serves an important purpose in circumventing the municipal governments power structure. This relates directly with Durston's assertion that the state must intervene in local political systems. In the case of Ceara, the state government took power away from local governments and worked with local communities to improve health care provision. The resulting model resembles Keck and Sikkink's (1998) boomerang model but on a domestic level. The grassroots organizations can put pressure on the local government organizations from below and the state can pressure them from above. Tandler's analysis is a perfect example of synergy: the different government levels working in tandem to achieve the desired result.

Overall the studies mentioned have shown that the state can play a necessary, helpful role in facilitating development of social capital. However, its role must be participatory and not an

agenda imposed from above. The value of the community's knowledge should not be underestimated or subsumed to technical solutions. The state on a more pro-active level has a role in creating the institutions that will undergird social capital. The state should concurrently promote social capital and challenge the local power structures that prevent people from acting collectively.

Social Capital and the Settlements

This dissertation draws on the aforementioned studies in order to construct a possible theoretical pathway through which social capital can challenge the existing power structure and provide access to other forms of capital.

Social capital for this research is defined as all the institutions, values, and relationships that individuals maintain which provide tangible goods otherwise not available to an individual or to his/her community. There are several elements to this definition. First, social capital is not created incidentally; it is intentionally created and maintained. There is an investment in these relationships. Whether the investment is time or trust, the relationships must be cultivated and maintained. Without attention these ties would dissolve. Even family ties are created. A family member who always takes advantage of the others without putting anything into the relationship will lose the privileges of the ties, such as trust and reciprocity.

Social capital, in this definition, is also firmly rooted in the individual. The networks and ties that define social capital are created between individual people. It is a collection of these individual relationships that make the network. Bonding social capital, for example, exists in the settlements because of the ties the beneficiaries have with one another.

Even the broader bridging or linking social capital is comprised of individual connections. In a community where high bridging social capital is present, one person might play on a soccer team in a settlement down the road, while another belongs to a prayer group, and yet another works in other communities. This example community does not have bridging social capital. The bridging social capital resides in the relationships of the individuals that go and create it. The soccer player has social capital invested in his relationships with his teammates. If the individual moved away then the connection to the community would cease to exist. Likewise, if the individual stopped playing soccer and stopped interacting with his teammates, they would gradually lose the social capital initially created.

A community can benefit from the bridging ties an individual has created through his/her internal bonding ties. The individual can bring different types of information to share with the community. They can bring outside friends to their community and by introducing them to other members of the community; help create bridging ties between other individuals.

Similarly, linking social capital is also comprised of individual ties. Using as an example, a hypothetical organization that specializes in work with communities of rural poor. It is hired to work in a community and contracted to provide ten hours of service per month to the community. If the organization works ten hours in the community then leaves, that is not a form of linking social capital. Because it was hired to do the job by someone outside the community, no internal connection to the settlement was required. This can get confusing because social capital can influence which technical support staff will be hired. However, it does not involve the beneficiaries' social capital. The definition of social capital refers to resources otherwise not available to the community. Therefore, if all communities receive ten hours of technical support,

then the technical support is not a product of linking social capital. If the community was able to receive information quickly or have first pick of projects because of a personal relationship between one of the community members and that outside organization then that would be linking social capital.

The conjunction of individuals' external social capital, bridging or linking, can multiply the benefits at the community level. Another example: one soccer player tells his teammate about how much money he makes by selling honey. At the next associação meeting, the teammate tells the other beneficiaries about his friend's experience. Other beneficiaries might know someone who elaborates these projects. The conjunction of the bridging and linking social capital of two separate beneficiaries come together to produce something that is much bigger than its parts. The beneficiaries can quickly begin beekeeping. If the soccer player talks about beekeeping, but no one knows how to get started, the idea dies. If the person with the linking connection does not see the benefit of the connection, the connection is useless. Likewise if the two beneficiaries with external social capital were not connected through bonding social capital, the conversation that brings the two capitals together would not have happened. Benefits acquired because of social capital are multiplicative. The multiplicative factor resides in individuals' collective capital. Social capital--bridging, bonding or otherwise--is not multiplicative.

The last part of the social capital definition is the inclusion of institutions. This is necessary because social capital can be structured or mediated by different institutions. I chose institution because of it has two complementary meanings: (a) an organization and (b) established customs or practices. My definition of social capital uses both.

The organizational aspect to institution is necessary because social capital has a structural component. If an employee from the aforementioned NGO works in the community, (s)he is not working there because of social capital. However, because (s)he is working there, (s)he can establish ties with people in the community and thereby create social capital. The same is true for the soccer player, as his interactions are structured by the team's schedule. He is expected to interact with his teammates--they have to train together, play together. He is in constant interaction with the other players because they want to win, not necessarily because he wants to see them every week. In this manner, social capital can be created through other institutions. However that does not mean that they are incidental to the institution. The simple act of belonging does not create social capital but it can facilitate the interaction that can lead to social capital.

Institutions, in the sense of customs and practices, can also help the development of social capital. For example, if people in one settlement have a custom of sitting outside on their porch every evening then they are facilitating the increase of bonding social capital. Certain practices can help or hinder the development of social capital.

Causal Pathways

Now that social capital has been defined and its component parts explained, the next step is to operationalize the causal pathway by which theory contends social capital can lead to economic development. If social capital is driving economic growth, I expect to see the presence of all three types of social capital (bonding, bridging, and linking) in both their structural and emotional manifestations. The following paragraphs will examine the mechanisms at each level.

Bonding Social Capital

Bonding social capital refers to the dense, often homogenous ties characterized by kin, class, or ethnicity. At its core, and by definition, bonding social capital arises from a feeling of “people like us” (Titeca & Vervish, 2008). Granovetter originally made a distinction based on the strength of these elements: “combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie” (Granovetter, 1973, p. 1361). Granovetter’s definition has three components: emotional, temporal, and reciprocal. In the emotional component I will explore the concept of collective identity. I will explore the temporal component via examination of place and the role physical structure of the settlements play in the formation of tighter bonds. I will explore the reciprocal component as it relates to trust. Each of these components must have a substantial presence to achieve high levels of bonding social capital.

The emotional component is comprised of two elements that establish a common identity: kinship and common characteristics. Identity arises from the identification of one’s self within one’s circumstances. A more formal way of expressing “people like us” is the concept of collective identity. When people recognize themselves and are recognized by others as part of a group they share a collective identity. “In sharing a culture, a set of institutionalized roles, and a language, we share albeit variable and imperfectly, a set of preliminary understandings, proclivities, and repugnancies that infiltrate the structure of perception, judgment, and decision” (Connolly, 1991, p. 199).

A common identity provides informal insurance in the form of risk sharing. The feelings of altruism that come with sharing a common identity positively influence the creation of risk

sharing arrangements (Kimball, 1988 p. 231). People can take more risks because they know that if they fail, they will have a support system.

A common identity leads to a tendency to trust. Trust is based on the expectations one has about the actions of others. If the other is of the same group, then one knows more about what to expect from him/her. Trust, however, is not a proxy for social capital. Trust is only a mechanism through which social capital is expressed. Trust leads to economic development by lowering transaction costs. If one's neighbor asks for a loan, and one trusts that (s)he will return it, then one saves the transaction costs of monitoring and enforcement.

The structural component of bonding social capital is comprised of the spatial and community organization. Repeated interactions are one of the mechanisms through which people regulate their own behaviors in the expectation that those with whom they are interacting will do the same, hence they will have continued interaction (Williamson, 1995). In restricting their actions, they trust that the other person will as well. Repeated, daily interactions suggest that trust levels would be high.

Repeated interactions limit opportunistic behavior. Collective action is hard to achieve especially in relation to public goods. Olson's *The Logic of Collective Action* examines why people might choose to expend personal resources on a good that others can enjoy as well (1971). People have the tendency to "free ride" unless they are provided with selective incentives. These incentives vary from person to person and issue to issue. It is very hard to achieve collective action, yet it happens. In some cases the selective incentive can be as straightforward as the status brought by being in the group. Other times the positive incentives may not be enough, and the addition of sanctions may be necessary. In close-knit communities,

beneficiaries police themselves and the cost of sanctioning free riders is very low. In fact just the threat of others knowing about the free riding, and the associated social stigma is enough of a sanction for people to avoid free riding. Ostrom's work with watersheds in India found that there are three mechanisms that foster cooperation: clear rules as to who can use a resource, maintained internal monitoring, and the power to sanction (Ostrom, 1990). Proximity can help with internal development because individuals will monitor themselves to avoid the social stigma that comes with free riding.

Two other elements through which the community can develop social capital are collective efficacy and community competence (Lochner et al., 1999). Einwohner (2002) looks at animal rights activists and the strategies they use to frame defeats as victories. In the end the actual outcome was irrelevant. The perception that the organization is efficacious is more important than its actual efficacy. The members must feel their involvement in the movement makes a difference. There must be either visible gains or forward momentum to keep people interested (Einwohner 2002).

Community competence is also related to the internal structure of the community. It speaks to how people see the movement's leadership, whether people believe that the leadership has their best interest in mind, and whether they are the best people for the job. Both community efficacy and community competence are structural aspects of social capital that can be developed. An organized community is better able to deal with community challenges and take care of internal problems all of which lead to economic development.

The following figure summarizes the potential causal pathways to economic development. The emotional element contains kinship and common characteristics, which assist

in the creation of a common identity. Common identity provides informal insurance. If people feel like they have a safety net, they are more open to take risks, and those risks could pay off leading to greater economic development. The other way in which a common identity can improve the economic welfare of a community is through trust. Trust means lower transaction costs, which mean greater profits and improved economic development.

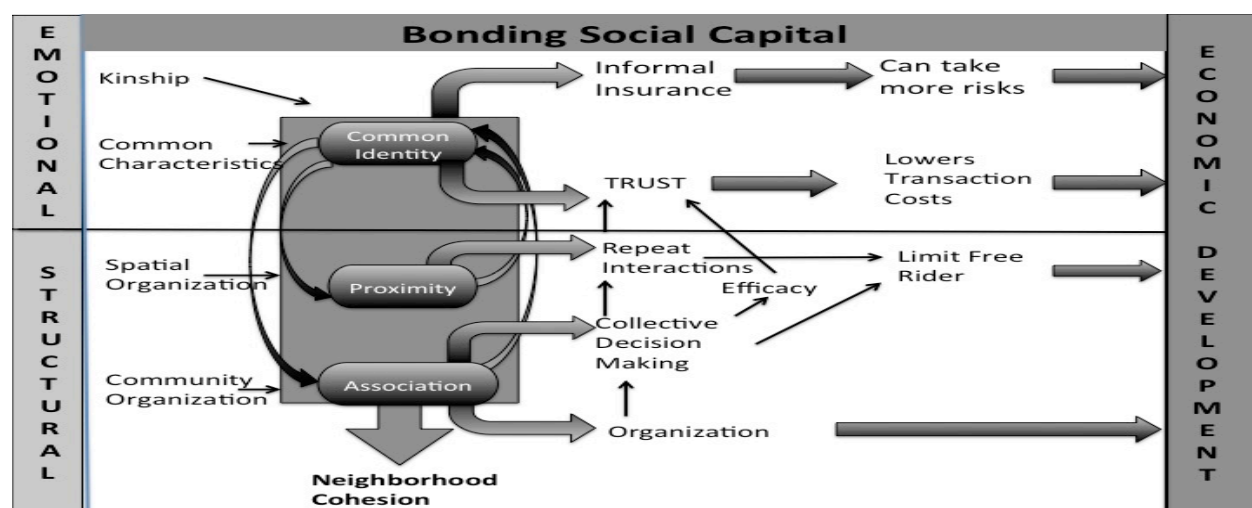


Figure 1: Bonding Social Capital Pathway

Structure is an important part of the diagram. The first structural element is the spatial organization of the settlement. Proximity leads to repeated interactions, which can help economic development in two ways. First, it fosters trust. The more one interacts with another the better one can predict the way that person will act in the future. Trust lowers transaction costs as detailed above. Second, proximity can help economic development by limiting free riding. The second structural element is community organization. An organized community makes decisions together. To do so they must meet frequently to increase their interactions, which again leads to trust and limits free riding. Collective decision-making is crucial because of decision-making, they see the results of those decisions, and are building community efficacy. Community

efficacy feeds back into trust because people trust themselves and their neighbors to make smart decisions. Collective decision making also limits free riding because community members establish the norms through a collective decision making process, they are invested in the decision. They were a part of the decision and they will therefore feel less of a need to shirk.

The three main elements—common identity, proximity, and organization—also have positive feedback loops as organization and proximity reaffirm the common identity and vice versa.

Referring back to the problems with land reform models, we can see how bonding social capital has the potential to overcome some of them. Investing in bonding social capital strengthens the capacity for self-determination. A strong organization could provide beneficiaries with the means to control what development strategies they will follow and which not. It also provides a way to avoid opportunism and rent seeking. If they form a strong cohesive unit they will also be better able to withstand external pressures.

Bridging social capital

Whereas bonding social capital is comprised of a few, very strong bonds, bridging social capital is comprised of many weak bonds: one's acquaintances and their connections. For example, horizontal ties within land reform settlements are ties to beneficiaries in other settlements, other small farmers in their region, and urban dwellers with the same economic status.

Bridging social capital is supposed to help with community development by providing access to information. The weak bonds allow for a larger quantity of connections and people therefore have more access to information (Granoveter, 1973). For instance, if someone developed a new,

more efficient harvesting method, the knowledge would be spread to his/her acquaintances, then they would spread it to their friends and so on. The spread of information across the horizontal connections makes new activities seem more commonplace, and therefore loses the stigma of being risky.

Bridging social capital extends an individual's trust to those closest to them to trust of people not like them. The extension of trust to even those weaker ties in bridging social capital should be the first step in the construction of a more generalized trust of people in general (Collier, 1998).

Bridging social capital, like bonding social capital, has two components: emotional and structural. Emotional bridging social capital consists of one's friends outside the settlement. Some of those connections are more valuable than others depending the type and quantity of connections that your connections have (Bourdieu, 1986, p. 250). The value of bridging social capital is in providing better information about opportunities, so someone with more connections would be better able to pass along relevant information. If one's colleagues only knows one other person, (s)he may still have valuable information; however another person with three hundred links will probably have at least as much information, if not much more.

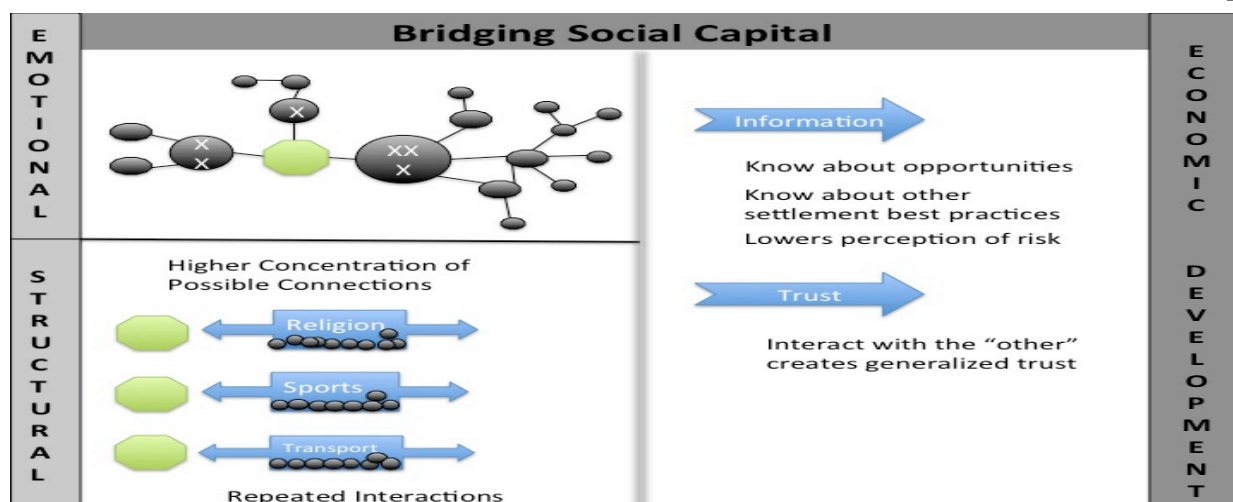


Figure 2: Bridging Social Capital Pathway

Bridging social capital also has a structural element in which the bridges are created within another organization. For example sports teams and religious organizations have a specific gathering frequency that provides structure and consistency to interactions.

Bridging social capital is necessary for limiting the isolating effects of bonding social capital and exposing communities to new opportunities and new ideas. But, on its own, or in conjunction with bonding social capital, bridging social capital is insufficient to drive economic growth.

Bridging social capital can help overcome some of the problems of land reform. By having access to multiple streams of information, people can make informed decisions about their development strategies. Bridging social capital can also help to offset the lack of technical support by providing information about best practices. By interacting with other communities, the beneficiaries can also build their managerial capacity by seeing how other communities manage their resources and interact with other players.

Linking Social capital

The keystone to social capital and development is linking social capital. Linking social capital connects people within the community with organizations or the state. These vertical links provide opportunities that would otherwise be inaccessible, which is not to say that these more powerful actors are the cause of economic growth. The more powerful actors are resources to be tapped.

The resources for community development can come from many sources. It is impossible to predict all of the linking possibilities within a community, but some of the most salient ones include powerful individuals, unions, non-governmental organizations, and social movements. In the synergistic view employed by Evans (1996), Narayan and Pritchett (2000) and others, the state plays a key role in using linking social capital for community development. The state has many points of interaction with the community, both officially and through friendships, which can be leveraged, as detailed in a previous section.

Linking social capital, like bonding and bridging social capital, can be divided into its emotional and structural components. The emotional elements arise from the community members who cultivate personal relationships with people outside the community: the connections that come from friendships.

The structural component is comprised of community members' relationships with agents who work in the settlement in an official capacity. I deviate from the synergistic view and do not include the work that agents do in their official capacity as social capital. I consider the resources that the agents provide in function of their relationship with individual community members, the above and beyond resources, to be linking social capital.

In both cases the relationship is an individual relationship between the person with access to resources and a community member. It is not a connection with the community as a whole.

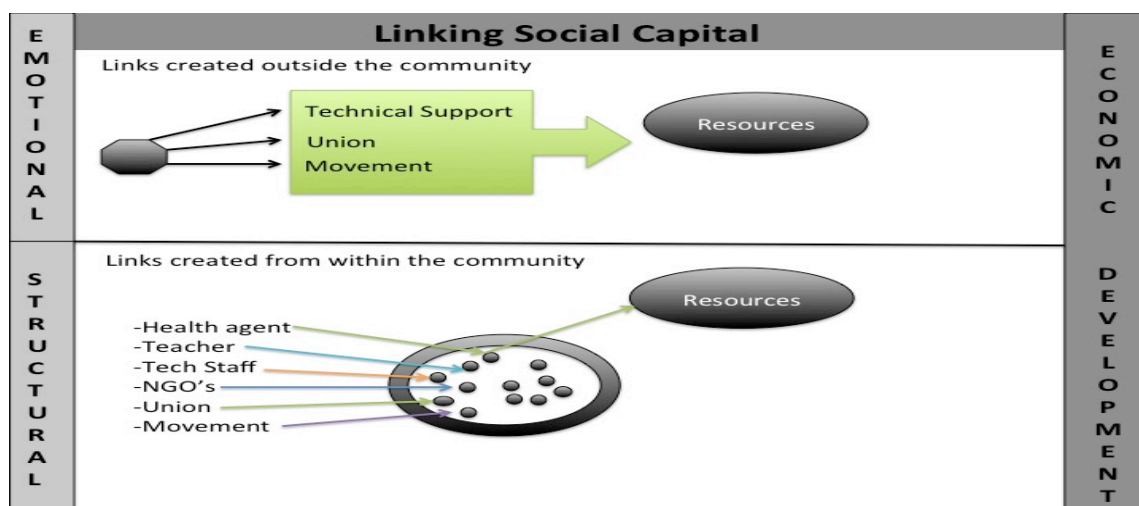


Figure 3: Linking Social Capital Pathway

Linking social capital on its own is insufficient to explain economic growth. Without the other types of social capital to anchor the links, corruption and other types of abuses can thrive.

Linking social capital is relevant to the settlements because it can help them avoid the inefficiencies of the state bureaucracy by tapping into the right resources. If the state at the municipal level is the bottleneck, then communities can access resources at the state level to bypass the problem. Linking social capital can also provide the beneficiaries resources that would otherwise have been provided by technical support. Linking social capital can also help build internal capacity through education, which should have been the purview of the technical support team. Finally, linking social capital can also work to reduce landowner hostility. Having powerful allies makes landowners think twice before exerting pressure.

I argue that all three types of social capital are necessary for economic development.

Just one or two of them are insufficient. It is the combination of all three that makes them powerful. The combination of the three allows the beneficiaries to overcome some of the problems with the way land reform is presently carried out. Bonding social capital can create the strong ties needed for a cohesive group. Group cohesion means that the beneficiaries will be able to work collectively towards a common good and develop managerial capacity. Beneficiaries will be able to take back some of the control over the direction of the settlement by being able to speak in a unified voice. This same cohesion can help them withstand the pressures from the powerful landed elite. They cannot withstand this on their own, however. Bridging social capital supplements bonding social capital. The knowledge-spreading aspect of bridging social capital gives the beneficiaries more options to consider. Through bridging contacts the beneficiaries can make better-informed decisions. Bridging social capital can provide some of the information sharing that is supposed to come from technical assistance, and linking social capital can help divert limited resources in their direction.

Chapter 3: RESEARCH METHODOLOGY AND METHODS

The theoretical work on social capital points to a causal pathway between social capital and economic development as outlined in the previous section. The literature argues all three types of social capital—bonding, bridging, and linking—work together towards economic development. Bonding social capital through collective identity, proximity, and organization lead to economic development because it generates trust, informal insurance, and limits free riders. Bridging social capital influences economic development through the spread of information, establishing generalized trust and overcoming risk aversion. Linking social capital is the lynchpin of social capital theory and economic development. Linking social capital provides an access point for beneficiaries to connect with government or other organizations with resources. One of the often-cited examples given to discredit social capital is that a group of farmers in poverty, even if close-knit, is still poor and does not have access to other resources such as a plow that might help them make their lives better. In social capital theory, linking social capital provides access to the plow. My research suggested that community organization was a better indicator of settlement success than bridging or linking social capital.

My research tested the mechanisms advanced by the social capital theory outlined in four land reform settlements in the municipality of Caninde in Ceara, Brazil. Ceara state is located in the Northeast of Brazil. The northeast was home to one of Brazil's economic booms and its coastal region was covered with sugar plantations. As with all primary exports, the price eventually dropped. After sugar prices fell, the Northeast lost its political clout and economic power. It is now one of the poorest regions in Brazil. According to the 2011 PNAD (*Pesquisa Nacional por Amostra de Domicilios*) survey, 67% of children under 14 live in housing that does

not have a sewage system, and 23.7% do not have access to water in their homes (PNAD, 2011).

There are several large cities on the coast such as Salvador da Bahia, Recife, and Fortaleza. In these cities, and nearby resort towns, tourism is booming and has taken center stage as the engine of growth. Its climate--sunny, warm, and rain-free--and beautiful beaches draw Brazilians and foreigners alike.

The countryside, especially north of Bahia, is inhospitable and not suitable for much farming.¹⁵ There are limited commercial enterprises, though in the past decade more industry is starting to develop as companies from the south move their manufacturing to the cheaper northeastern states. Some companies have gone back to a cottage system type of economy, distributing raw goods so people can work on them at home and bring them back.

Moving away from the coast, the climate changes and as one approaches the sertão, a semi-arid region where limited development centers near smaller towns or destinations for religious pilgrimage. Ceara has two of these religious centers, Juazeiro do Norte and Caninde.

Caninde was originally an indigenous community. Portuguese explorers displaced the community in the late 1800s and established large ranches. In homage of their good fortune, the landowners built a small chapel. During construction one of the workers fell from the steeple and, while plummeting to an almost-certain death, invoked St. Francis of Assisi and was saved. The event was considered a miracle and the location became a pilgrimage site around which the town later grew.

The pull of Caninde has grown stronger as religious orders, especially the Franciscans,

¹⁵ There are isolated regions around the Rio Sao Francisco or in the few pockets of rainforest left that are good for farming.

maintain large seminaries there. A large 30-meter statue of St. Francis was completed in 2005.

The statue is slightly taller than the Cristo Redentor do Corcovado (without the pedestal). Every September and October over two million people from all over Brazil come to pay homage during the feast of St. Francis. The religious tourism provides a yearly monetary injection into the economy. During the other ten months, Caninde is a quiet city.

Justification for case location:

Ceara is a perfect place to study social capital because of the multiplicity and concentration of land reform settlements. The Northeast plays host to 45% of the land settled in Brazil (Cuame, 2006). In Ceara alone there are over 400 settlements making it one of the most settled states in the country. Ceara state government has implemented traditional redistributive land reform projects and was also chosen by the World Bank to implement its land reform pilot project. For this reason, it has the oldest market-based land reform settlements in the country. Of the many municipalities in Ceara, the most active settlement is Caninde, a small municipality in the sertão.

Ceara saw its first settlement in Caninde, and in the years since, Caninde has been marked by many land reform experiments. Within its 3,218.481 square kilometer area there are a variety of *Instituto Nacional de Colonizacao e Reforma Agraria* (INCRA—National Institute of Colonization and Agrarian Reform) settlements—parcel INCRA settlements, settlements that became INCRA only after they began as a different type of settlement, INCRA communal settlements, occupied land—as well as MBLR settlements—*Projecto Sao Jose* and *Cedula da Terra* settlements (precursors to the present *Credito Fundiario* settlements), and *Credito Fundiario* settlements. In 2008 Caninde was host to 34 federal settlements. Its nearest municipality, Santa Quiteria, also has a large number of settlements, 22. But after that, the

numbers drop off significantly to one or two settlements per municipality. A handful has five or six, nothing close to 34. This is also only the federal settlements and does not take into account the state settlements or the MBLR settlements. There are also a multitude of MBLR settlements. I took my decision to focus my research in Caninde based largely on its immense number of settlements.

Caninde is by any definition a poor municipality. The median rural income according to the *Instituto Brasileiro de Geographia e Estatistica* (IBGE—Brazilian Institute of Geography and Statistics) is R\$114 (Brazilian Reais) per month (IBGE, 2010a). The equivalent in US dollars is about \$50 per month. The poverty rate in Caninde is 64%, poverty defined by living on less than two dollars per day, and 44% of the rural population lives on less than one dollar per day. Poverty is not just income and looking at indices like basic sanitation, where 80% of the population has inadequate services, the picture is even bleaker (IBGE, 2010b). Adequate sanitation was defined by the IBGE as being connected to a sewer or septic tank, access to water and trash collection.

My research sought to answer the question, “How does social capital impact economic development in the land reform settlements?” The question seeks the causal pathway through which social capital can have a positive effect on the economic development of these communities. To answer this question I used a mixed methods comparative case study to analyze causation and determine the reasons for the disparity of results in land reform settlements. Social capital as a theory has been cited as the solution for a myriad of problems from health care through economic development. Many studies take social capital as a given and are reduced to tautological absurdities: the community is healthier because it has social capital and it has social

capital because it is healthier. The theory lacks a causal pathway from the seeds of social capital creation through its effect. My research sought to find that pathway based loosely on Burawoy's extended case method (2009). As my research matured, this quotation became more meaningful,

“Here lies the secret of the extended case method—theory is not discovered but revised, not induced but improved, not deconstructed but reconstructed. The aim of theory is not to be boringly right but brilliantly wrong. In short theory exists to be extended in the face of external anomalies and internal contradictions.”

(Burawoy, 2009, p. 13)

In the four cases I researched, I found the theory lacked explanatory power. The rest of this chapter will show how I conceptualized my research, how I chose the methodology, and why these methods were appropriate for the type of study.

Methodology:

The methodology chosen for the research was a multiple case study. Yin (2008) describes the case study as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (p. 13). These criteria are well suited to understand the internal dynamics of each of the settlements that either succeeded or failed. Social capital is such an elusive concept that it needs to be rooted in a specific context, the settlements, for it to have any meaning. At the same time it must be, to a certain degree, disarticulated from the context to show how it, and not other variables, causes economic development.

The case study is the perfect vehicle through which to study causal mechanisms because

it allows for a consideration of many variables, including ones that you may not have thought of at the beginning of the research. George and Bennett (2005) point out that with case studies it is possible to “look at a large number of intervening variables and inductively observe any unexpected aspects of the operation of a particular causal mechanism or help identify what conditions present in a case activate the causal mechanism” (p. 21). Stoecker (1991) also notes, “the case study can more effectively analyze causation” (p. 93). Previous empirical works seeking to study the interaction of social capital and development, such as Krishna’s (2000) study of villages in India and Uphoff’s (2000) analysis of villages in Sri Lanka, have shown that case studies provide the detail needed to test the causal mechanism. The case studies heterogeneity in regards to methods allows for a more nuanced view of the communities in question and provides a richer picture of the causal pathways.

Case studies as a methodology have been critiqued because of problems with validity and replication but using multiple case studies resolves the problem. Multiple case designs are generally considered more robust than the single case study design as there is replication of the evidence (Yin, 2008, p. 53). Instead of focusing exclusively on the very best examples and thereby assuming that social capital was present solely in the settlements that have succeeded, I needed to look at the failed examples to see if they had high levels of social capital as well. If they had high levels, and still were not able to succeed, then my argument would be undermined, and I would need to look at other variables that lead to economic development. If however there were a dearth of social capital in these under-developed settlements then it strengthens the argument. Looking at the failed settlements helps determine if other (control) variables might have more explanatory power. Across the best and the worst settlements, there should be literal

replication, whereas between the best and the worst there should be theoretical replication (Yin, 2008, p. 54). Literal replication refers to getting the same mechanisms and causes, or explanations in each of the like cases. Theoretical replication means the worst cases should not possess the same mechanisms as the best cases, thus supporting the argument that what matters is the missing variable or mechanism. Pattern matching ensures internal validity and replication ensures external validity, thus avoiding some of the more egregious problems with case studies. The study is strengthened by containing case studies at both extremes of each type of settlement (Stinchcombe, 2005).

I selected a case study design because it makes use of multiple methodologies. Multiple methods give a deeper, more nuanced understanding of the cases. Quantitative information can be used to answer broad factual questions about the settlements. While at the same time qualitative methods produce more detailed observations about settlement life. The settlements are so recent that it was possible to talk to founding members and get a sense of settlement origin and evolution. Taking advantage of the beneficiaries' memories and stories of settlement development just makes sense (Yin, 2008, p. 11). The conjunction of both types of methods strengthens the arguments and lead towards determining causation.

The Methods:

Land reform settlements are a good place to analyze the correlation between economic development and social capital because members of the community, by rule, do not have access to other forms of capital such as financial or political capital.¹⁶ The beneficiaries are all poor,

¹⁶ Beneficiaries have limits on the amount of economic capital they have and membership is restricted by rules established by INCRA and SDA.

landless farmers. They do not have economic capital to invest in settlement improvement.

They also are either illiterate or barely literate. They therefore have limited amounts of human capital, as human capital is generally considered to be education and individual skills. The only type of capital they can potentially have is social capital. Having limited access to non-social capital also limits the ambiguity about the causes of economic growth.

Definition of sample

Before getting into the details of the research design a few definitions are in order. The first step is to define to what “settlement” refers. Spatially, I defined the settlements by the geographic boundaries established by the government agencies. Temporally, I defined the settlement from its initial organization to the present. I have chosen settlements five years or older to give ample time for infrastructure to be established. Furthermore, MBLR settlements must start repayment on the loan they collectively took out for the land after two years. If I chose a date before repayment, then the success rate could be skewed on the side of the MBLR settlements because they would have had the initial influx of resources from the grant and had not yet had to pay for the loan. The INCRA beneficiaries also have to start payment on any loans they took out for livestock or settlement improvements depending on the project between 2 or 3 years.

The settlements were all chosen from within the same region to control for microclimatic differences. Ceara has many microclimates. There are pockets of tropical forests where crops grow easily, surrounded by the semi-arid *sertão*, and then the more temperate costal region. Each region faces its own problems, though the *sertão* is the least fertile and hardest to work. It is, however, the most densely settled and provides the most choices.

Within the settlements, I only included current and official beneficiaries because they are eligible for credit or grants for improvement. While ideally the case study would include all of the beneficiaries that were a part of the settlement, logistically it would be impossible to track down previous beneficiaries as migrants generally move to *favelas* on the outskirts of big cities or to work in the Sao Paulo countryside. If someone who was instrumental in the development of the settlement had migrated, I would piece together their role through the oral histories of the beneficiaries who stayed. I also did not include non-official beneficiaries because they were ineligible to receive government aid or to participate in the *associação*. I did get their stories through interviews with official beneficiaries.

The second step was to define success and select the cases. The outcome of the causal pathway should have been economic development. Before I could determine success or failure, I needed to develop a working definition of what I meant by economic development.

Economic development is broader than economic growth. Economic growth can be measured at the macro level by an increase in GDP and at the micro level by personal income. These measures do not capture the totality of economic development. Sen (1983) argues that “when it comes to health, or education, or social equality, or self respect, or freedom from social harassment, income is miles off the target”(p. 756). I agree with Sen and use the more expansive view of economic development. Economic development should include economic growth but it should also include access to housing, health, and education.

Broadly the lives of the beneficiaries within a successful settlement should have improved and they should be out of absolute poverty. Successful settlements should have built and maintained basic infrastructure (access to brick houses, water, electricity, and roads),

diversified crops and animals, and diversified means of income (crafts, honey, cheese, other backyards products). The beneficiaries should have access to services, such as education and healthcare. These measures include income considerations and also “involves expansion of people’s capabilities” (Sen, 1983, p. 760).

The settlement, and its individual beneficiaries, should also be current on payments. Both the MBLR and redistributive land reform settlements have to pay for certain projects. These projects are part of a government program, the *Programa Nacional de Fortalecimento da Agricultura Familiar* (PRONAF—National Program for the Strengthening of Family Agriculture). Beneficiaries are eligible for a program called PRONAF-A. The stated objective of the program is to “finance individual or collective programs that generate income to family agriculture and to beneficiaries of agrarian reform”(MDA). PRONAF-A is distributed through INCRA in the redistributive settlements and through the SDA in the MBLR settlements.

To select settlements which best fit the typology, both of successful and failed settlements, I relied on primary documents collected from the *Instituto de Nacionalização, Colonização e Reforma Agraria* (INCRA) and *Secretariado do Desenvolvimento Agrario* (SDA), interviews with government agents, and finally interviews with the technical support agencies. The documents were not very well maintained at either the SDA or INCRA. There were documents from the establishing of the settlement such as the dimensions of the land, descriptions of the types of land on the property, if the land had any improvements, how much they were going to pay the landowner, and beneficiary information but there were limited updates about the current state of the settlements. The files contain what projects were designed and how much they expected to spend but they do not register whether the projects were

successful or not, or even if they were implemented. To better understand the current state of the settlements I asked the agencies in charge. At SDA I asked about individual settlements and the people I spoke with only knew about one or two pet projects and recommended I speak with the agency in charge of the settlement development the *Empresa de Assistencia Tecnica e Extensao Rural do Governo do Ceara* (EMATER-CE). I spoke with agents at both the EMATER-CE headquarters in Fortaleza and the staff at the EMATER-CE Caninde office. For the redistributive settlements I spoke with several people at INCRA, and was told to speak with the technical staff because they would have more knowledge about the settlements. They suggested I contact Cactus, another agency of technical advisors, in Caninde. I selected the four cases in this study based on primary documents and on conversations with the staff. I chose two INCRA settlements, one successful and one not, and two MBLR settlements, one successful and one not. The MBLR settlements will be referred to as Case 1 & 2 and the INCRA settlements Case 3 & 4 to protect the identities of the beneficiaries. Naming the settlements would be in effect naming the beneficiaries as the settlements are small and someone who knows the settlements would be able to identify the participants.

Operationalization of Concepts and Variables

To answer the broader research question—how does social capital impact economic development?—it must be broken down to its component parts. Are the settlements successful? What levels of social capital do they have? How does social capital influence economic development? The first two questions lay the groundwork for the third. To answer these questions I used primary documents, key informant and beneficiary interviews, and surveys. The

thorough analysis will provide the substance, rich detail and history to help understand the causal mechanisms in each of the four cases.

Measuring Success:

Measuring settlement success required a multifaceted approach at both the individual and settlement levels. Successful settlements should have basic infrastructure, diversified crops, animals, income, and access to services, and be current on loan payments. The settlement evaluations focused on the condition and existence of key elements of infrastructure through observation, primary documents, and interviews with the agents directly in charge of the settlements. I measured settlement success from interviews with settlement leadership, which focused on debts, infrastructure, which projects they considered successful, and infrastructure maintenance methods.

This research sought to isolate variables that can improve rural livelihoods, as such poverty levels determined beneficiary success or failure. Traditional poverty measures rely on income reporting to determine the poverty line. The inherent problem with traditional measures in an agrarian society is its widespread non-traditional incomes. In these societies income varies by harvest cycle, and people have a tendency to forget what they received for their goods. If the harvest was six months ago, people do not accurately remember what they received in cash. It is also difficult to use income as a measure when a beneficiary's "income" is held in animals. Furthermore if people have second jobs or other income streams, they have a tendency to underreport income because they fear the government will take away assistance (Ravallion, 2011).

An added complication in all the settlements is that a major, and, in some cases, only, source of monthly income is a cash transfer in the form of *Bolsa Familia*. *Bolsa Familia* is a welfare program meant to help the poorest members of Brazilian society. One element of the program is a direct cash transfer to benefit families in absolute poverty (less than one dollar per day). The other is a conditional cash transfer dependent on children attending school. The amount varies depending on the number of children and on the level of schooling. The amounts increase when children enter high school, as families might have more of an incentive to put the child to work. All of the beneficiaries, who are not receiving a retirement pension, receive the *Bolsa Familia* so income is not useful as a measure.

Poverty can be defined more holistically as including social disadvantage, vulnerability, and powerlessness (Ravallion, 2011). Using a multidimensional aggregation of poverty, and including different types of deprivation, such as house poor, food poor, health poor, services poor and education poor, among others, gives a better description of the level of poverty experienced by beneficiaries.

Keeping in mind the many types of poverty, I designed a 136-part questionnaire to apply to participants to determine household well-being.¹⁷ There were a total of sixty families in the four settlements, of which 38 agreed to participate. The participation rate among settlements varied widely. The participation rate is artificially low because the field includes beneficiaries who had abandoned the settlements, and whom I therefore could not interview. I also counted data from each family once, aggregating interview data from its several family members. For

¹⁷ The survey is included as Appendix A.

example in most households I interviewed both the husband and wife and in some cases other family members that lived with them. In one case I interviewed seven members of one household. However, the quantitative data were only entered once because they were the same across the household members.

The questionnaire was used to gauge household well-being. The first part of the questionnaire asked for socio-demographic variables such as the names, ages and number of people in the household. The second measured household infrastructure and upkeep, durable goods, farm livery, crop production, and livestock. The third measured monthly food consumption and prices. Settlement success was partially determined by each of these elements. For example, a household with a well-maintained house, increased crop production or livestock, as well as diversified crops was considered successful. Likewise, if the house was not well maintained but they had increased their crops, had several sources of income and maintained a planted back yard they could also be considered successful. If the house was lacking basic infrastructure such as a working toilet, or if they did not plant any crops or own any livestock then the household was considered a failure, even if they had a motorcycle. I considered the settlement successful if over 70% of the beneficiaries were successful.

Household infrastructure was determined by participant observation and primary documents. The type of house, whether brick or mud, as well as whether they were built to the minimum requirements of either the SDA or INCRA. Household upkeep was determined by my own observations on the state of the house as well as the backyard area. I considered houses that were structurally sound and only had a little paint chipping to be well kept. I considered a house that had some problems with concrete coming off the walls or minor cracks in the concrete floor

average. Finally, I considered as poorly maintained houses where the concrete that lined the walls over the brick was crumbling, or if the cement floors had large cracks.

The survey asked questions about the presence of durable consumption goods such as televisions, sound systems, satellite dish, refrigerators, and gas stoves. It also asked about bicycles and motorcycles. The survey further questioned when the items were purchased. If the beneficiaries arrived at the settlement with the items, their presence would not indicate improvement.

Consumption is a better poverty measure because people are more likely to remember what they buy because they have a physical reminder. It is also easier to verify: if I am sitting in front of their television, it is difficult to believe them if they tell me they do not have one. To estimate beneficiary improvement, I also asked for the first and second measures over time, from when they first joined the settlement and the present. For example if five years ago a beneficiary was living in a wood and mud hut, cooking on a wood burning stove, and did not have a bathroom, and now that same person lives in a brick house, has a stove and an indoor bathroom, then that person, even if (s)he is consuming the same amount or does not have any more income, is still better off and the exercise should be considered successful in terms of the quality of life of the beneficiary. Admittedly, asking about events five, ten, or fifteen years in the past may not, probably will not, give me a precise representation of past well-being. It will, however, show how the beneficiaries perceive changes in their livelihoods due to participation in the settlement.

The survey also measured changes in livestock and crops. The settlement asked about the most common animals bred in the sertão including: cattle, sheep, goat, pigs, donkeys, horses,

bees and chickens. The survey asked about the quantity of livestock the beneficiaries had when they arrived at the settlement as well as their current herds. In regards to crops, I asked about the change from the first year they planted in the settlement to 2011, the year prior to my field research. I asked about cash crops (corn, beans, castor beans) as well as consumption crops (manioc, vegetables, fruits). I asked about amounts produced, whether it had changed since the first year and also if they sold any of it. I determined success based on the average settlement production and individual increases over time. Outliers are discussed within the case studies.

The last part of this section asked about sources of income. I asked if they sold crafts, or commercialized honey or cheese. I also asked for the amounts they sold and how much they received for them. In anticipation that the beneficiaries would have other types of income I also included a general question that asked if they had any other type of income. I asked them twice if they received something from the government, once at the beginning of the section and again at the end. The beneficiaries were considered successful in this element if they had income other than traditional crops or government assistance.

The third section looks at monthly consumption including the quantities, and price paid for the items. The list of twenty-eight items is available as appendix A and includes sertão staples. Where the question asked about large categories such as meat, vegetables, and fruits, I asked the beneficiaries to clarify.

Together these questions depict the beneficiaries' individual economic development. The questions were asked over time to determine if the change was due to the settlement or if the beneficiaries whom were better off in the present were also better off when they arrived.

To determine settlement success, I checked for individual successes in each of these areas. If over fifty-percent of the beneficiaries were successful, the settlement was considered successful in that specific area. If the settlement was successful in over half of the variables measured then the settlement was considered successful overall.

What kind of social capital does the settlement possess?

The next step of the process established levels of extant social capital in the settlements. To that end, I constructed thirty-two interview questions around the themes of trust, cooperation, and networks. These questions were based on the World Banks Social Capital Assessment Tool (SOCAT) but reformulated for relevance in the settlements. I interviewed the same 38 households who participated in the survey for the first round of interviews. Because open-ended, in-depth interviews are about understanding a person's experiences rather than just collecting closed ended data (Hubbell, 2003 p. 197), I used these interviews to draw out origin stories and firsthand accounts of settlement evolution. The stories provided a much better understanding of how each settlement works. Instead of focusing on questions such as, does irrigation exist, the interviews focused on who, how, when, and where questions. Who decided irrigation was important? How was it achieved? Was it achieved by a one-person crusade? Did the community come together? Did an outside group impose it? Who opposed it? The details helped build the layers that tell the settlements story. As Berry notes (1999), in-depth interviewing "is a type of interview which researchers use to elicit information in order to achieve a holistic understanding of the interviewee's point of view or situation". I hoped to get beneficiaries' pre-settlement background information, information about the organization and day-to-day lives in the early days of the settlement, and how it changed over time to its present state. I focused on how

decisions were made within the community and how changes were sought. I also asked about how beneficiaries within the settlement interacted with neighboring settlements and towns. Finally, I asked questions about beneficiary ties to the local, state, and federal government or government agencies as well as non-governmental organizations.

The interview questions were designed to measure the presence of the variables described in the theoretical pathway.¹⁸ For example, for bonding social capital the variables measured were: kinship, common identity, informal insurance, trust, efficacy, proximity, collective decision-making, and organization.

The beneficiaries shared common characteristics as a requirement of the land reform programs. The beneficiaries had to be poor. They could not own other land. They had to have a background in agriculture. They were also all drawn from the same area, which would make it more likely that they are homogenous. I did not specifically test for the common characteristics because the beneficiaries were screened by either the SDA or INCRA.

Kinship was ascertained through the direct question “where does most of your family live”. Some beneficiaries also answered the question when they responded to why they joined the settlement. The strength of the kinship ties were determined by the number of family clusters in the settlement. If over half of the settlement was related, I considered kinship to be strong.

The number of affirmative responses in the settlement determined the strength of the ties. For example if the question asked about friendship, if a majority of the participants answered

¹⁸ The interview script is available in Appendix B.

they were friends with others in the settlement, I considered it a strong response. If only a few people responded in the affirmative then I considered it a weak tie.

The presence of a common identity was measured through questions such as if they were friends with the other beneficiaries and if they think the other beneficiaries care about the settlement. The question about friendship was not valuable in the analysis because almost everyone said they were friends with everyone else across the four settlements. A more valuable question asked about whether they think the other beneficiaries care about the settlement. If you identify with something, you care about its well-being. A common identity was considered to be weak if only two or three beneficiaries answered affirmatively, or if their answers were not congruent with their answers to other questions or observations.

Trust, at the level of bonding social capital, was determined through questions such as if they lost their wallet in the settlement would the others return it. The answers were coded as yes, no, and also depends on the person. The answers reflect whether they trust the settlement as a whole, trust no one, or only trust particular people in the settlement. If the majority of answers were it depends on the person, trust was considered weak.

Informal insurance was asked through four interrelated questions: a) If your crops failed could you count on someone to help you, b) what kind of help would be offered, c) has something similar happened in the last couple of years, and d) how did you make it through? If the majority of the beneficiaries mentioned spontaneously that the other beneficiaries would help them or did help them, the settlement was considered to have an informal insurance network.

Again if they answered it depends, or if only a two or three answered that the other beneficiaries would help, the network, while present, was considered weak.

Proximity was determined by whether the settlement was concentrated or diffuse. The interview question tested for whether proximity increased interaction or not by asking about the frequency of beneficiary interaction. Daily or every other day was considered to be strong interaction.

Associations in the social capital literature are supposed to be the groups the beneficiaries belong to such as youth or craft groups. The question directly asked what groups the beneficiaries participated in. Other than the community associação, a discussion of which follows, these internal groups only existed in one of the settlements. The presence of multiple internal groups signified a strong associational character.

The community organizational group in the language of the land reform models is called the associação. For clarity I will use associação (the name in Portuguese) when I am referring to this particular organizational group not associations in general. The function of the associação should have been to organize the beneficiaries and the settlement. To gauge settlement organization I asked the beneficiaries about their participation and how often they attended the meetings. Many people answered, whenever there was a meeting and proceeded to tell me about the absence or frequency of meetings. I was surprised because the settlements must, as part of their bylaws meet monthly. The associação was considered weak if they met infrequently or fewer than 75% of the settlement went to the meetings. I considered a strong associação to meet at least monthly and have at least 75% beneficiary attendance.

To determine collective decision-making and settlement efficacy I asked the beneficiaries about the function of the associação. If more than half of the beneficiaries answered that it was to make decisions about the settlement I considered that element to be strong. I considered efficacy to be strong if over half of the beneficiaries responded with a story about something they worked together to achieve, or in some way expressed that working with the other beneficiaries through the associação presented a benefit for them.

I applied similar criteria to external bridging or linking ties. I considered ties to be strong if more than one third of the participants had strong external ties. To determine emotional bridging ties I asked about where their friends lived, the frequency of interactions, and where those interactions occurred. To check for structural bridging social capital I asked if they participated in any outside groups.

Generalized trust was gauged using the hypothetical lost wallet situation. The beneficiaries were asked “If they lost their wallet in a nearby community would it be returned?”. They were also asked the same question about losing their wallet in nearby cities. Again the answers were coded as yes, no, and depends on the person. If over half answered yes then it was registered as strong. If the majority of answers were it depends on the person, trust was considered weak. I also asked specifically if they trusted people in other settlements or nearby communities. I coded the responses in the same manner as above.

Linking social capital was determined through multiple questions. The first question asked about government interaction in the settlement or in facilitating any of their other interactions. No one answered that the government was involved with the settlement. The other

question was an open-ended question that asked about whom else visited the settlement. If the beneficiaries answered anyone that might be considered linking social capital I asked them to elaborate on their relationship. If the relationship was a personal relationship or provided a good beyond that persons job description then they were coded as strong ties. Again if over a third of the beneficiaries had strong ties I considered the settlement to have strong linking social capital.

From these thirty-eight households I identified the key players to interview for a second round of questions.¹⁹ The second, shorter, round of interviews was conducted with beneficiaries who either identified themselves or were identified as important to understanding the settlement. I interviewed a total of eleven key players across the four settlements. These fourteen questions focused on settlement organization and internal governance. These questions were neither used to determine the success or failure of the settlement nor to measure its social capital. Instead these interviews were used to provide background and a descriptive narrative to the cases.

I also conducted in-depth interviews with the technical staff.²⁰ The interview guide had just over fifty questions. I wanted to corroborate data collected in the settlements and get the technical perspective of settlement problems. In cases where there is no clear answer as to which agency is working within a settlement, I interviewed staff in both. Heads of the Caninde offices of both EMATER-CE and Cactus indicated the staff members I interviewed as having the most knowledge about the settlement in question. My questions asked about a general settlement overview, about services provided, about infrastructure and livelihoods as well as beneficiaries

¹⁹ For the key informant interview guide please refer to Appendix C.

²⁰ The technical support interview guide is attached as Appendix D.

connections to outside groups etc. I asked questions about settlement organization and effectiveness of the associação. I also asked for opinions about the settlements.

Participant observation was a key element of my research methods. Anyone can claim to be friends with one's neighbor, and one may even be able to pretend to be for a day, however as the days go by, people lose the mask and behave normally instead of trying to "pose for the camera". For example if someone says (s)he would loan his/her neighbor anything, and the next day, when asked for a cup of milk, (s)he refuses, even though I saw they had that morning drawn a large pail, their actions are more powerful than words.

The study's question—How does social capital influence economic development?—is answered by analyzing the data collected on the first two questions. The rest of this dissertation will use this data to analyze whether or not social capital influences economic development in the settlements, and, if so, how?

Chapter 4: Market-Based Land Reform Settlements

As explained in the methodology, this research studies two types of land reform settlements: market based settlements (MBLR) and redistributive (traditional) settlements. This chapter will quickly summarize the MBLR model, discuss two MBLR cases, and compare and contrast those two cases.

Market-based land reform (MBLR) settlements are recent settlements. The Brazilian pilot projects started in 1996, expanded in 1998 and exponentially gained ground in the 2000s via the *Cedula da Terra* and *Banco da Terra* programs. The current MBLR program in Brazil is called *Credito Fundiario*.

MBLR is comprised of loans for purchasing land and grants for constructing infrastructure—houses, cisterns, and fences—to make settlements habitable. Loans have a three-year grace period, after which beneficiaries enter repayment. If they pay on time, forty percent of that statement is forgiven. Initially, the loan and title are in the *associação*'s name. After the total value of the land is paid, the beneficiaries receive individual titles to the land. If one person leaves, having made payments on the land, (s)he forfeits those payments to the *associação*. However, if someone chooses to leave the settlement, the remaining beneficiaries must pay the remaining amount due on the loan. The remaining beneficiaries would therefore have a larger individual percentage to pay.

Market-based settlement projects are smaller than redistribution projects. MBLR beneficiaries must be impoverished and have a background in agriculture. Beneficiaries must form a community *associação* before they can start the settlement formation process. After establishing the *associação*, the beneficiaries must contact the *Secretaria do Desenvolvimento*

Agrario do Ceara (SDA), the governmental body responsible for rural development in Ceara.

The beneficiaries are required to be from the vicinity of the proposed property. Priority is given to those already living on the property. In the most recent version, MBLR only allows settlements on land that is too small for expropriation. This is a recent change, and the settlements in this study did not necessarily have to meet that criterion.

Based on the parameters of success laid out in the study's research methods, the two MLBR cases here are one of the worst and one of the best in Caninde. The successful settlements should have a habitable infrastructure, secondary production, and access to services. Beneficiaries should also be up to date on their loan payments. This chapter will describe the MBLR cases and how they fit or deviate from the theoretical causal pathways. I expect theoretical replication across both of these cases. My argument would be supported if the successful case follows the pathway while the failing one does not.

Case 1

The first case is well located. It is close to Caninde (less than 40 km) and along one of the city's main arterial roads. Due to the Caninde economy's reliance on tourism from religious pilgrimage, the roads are well maintained. The highway carries moderate traffic, with several local transports making the run between Caninde and smaller cities in the vicinity. Many of the larger bus companies from Fortaleza also travel through here to access other parts of the state. During the day there is a means of transportation every fifteen to thirty minutes. The side of the road is desolate: a couple of brick factories, a restaurant, and a couple bars. One of the staff members at the technical support agency offered me a ride. Even though the settlement is close, and directly off the highway, we became lost. The settlement is difficult to see because the main villa is not visible from the road. There are a couple of settlement houses on the highway: one house is at the intersection that leads to the settlement; the other two houses are a short distance from the rest of the community. The employee had worked with this settlement before, however it had been a long time. He did not know which team currently provided assistance.

It was mid-morning when we pulled into the settlement. The main villa was about 100 meters from the highway, up a small hill on a dirt road. There were ten houses in a row, along the left hand side of the road, fairly close together. On the right hand side was a medium size barrage. The official documents described it as medium size rather than a specific volume or size measurement; the size depends on the amount of rainfall. To make it easier to visualize, imagine a pond or a small lake. Based on the watermarks and vegetation, we determined that the barrage was about halfway full. The villa was compact, less than a kilometer long. The settlement seemed empty with the exception of one house, from which *forro*, a regional type of music, was

loudly emanated. *Forro* is unique to the Northeast of Brazil. It features an accordion and triangle, as well as a type of drum as the backbone of the songs.

To understand the present state of the settlement it is important to look at its origins. The settlement was founded when the landowner told his *moradores* (sharecroppers) that he intended to sell the land. They had to either buy it or leave. The landowner coerced the beneficiaries into purchasing the land under threat of expulsion. The landowner, aside from his economic power base in the land, was also politically powerful. He was an elected official in municipal politics and used the beneficiaries and the remaining *moradores* as a political base. Clientelism, or *coronelismo*, is still a defining feature of local governments in Ceara and in the Northeast in general. Tendler (1998), in her analysis of Ceara, found that reform in any sector was most opposed by local government officials who did not want to lose their ability to dole out plum appointments (p. 7). Barry Ames (1987) took the analysis further and argued that Northeastern governors, in order to prevent clientelism in economic sectors, diverted patronage exclusively to the social sectors. In this specific settlement, the landlord was the law, and refusing an offer to buy the land was impossible due to the power differential.

One of the main tenets, and indeed Market Based Land Reform's slogan, is "willing seller, willing buyer." The beneficiary descriptions of their reasons for joining the settlement show, that in this case, the slogan does not hold. The landowner threatened them and used his economic and political power to coerce the beneficiaries to buy the land. One of the problems Akram-Lodhi (2007) saw in market-based land reform was its lack of consideration for the socially embedded character of land. MBLR assumes negotiations between equals. However, by their very nature the negotiations have an inherent power imbalance. In this case, the landowner

foisted the settlement upon the beneficiaries. There is no indication that, despite the landowner's suggestion, the individuals themselves would have sought creation of a settlement. Unlike beneficiaries in other settlements, they did not mention joining the settlement to improve their lives, nor to have a piece of land to call their own.

I asked all of the interviewees why they joined the settlement. The original beneficiaries all stated that they joined the settlement because the landowner asked them to. Some beneficiaries went further and said, "*porque o patrão mandou,*" because the landowner made us. Or "because the landowner said we had to leave for other people to live here. So we either had to buy the land or leave...I have been on the land for 20 years." Another states, "I had lived on the land with my *patrão*, and then when he wanted to sell he told me to buy. I lived with my *patrão*. In the first month he said he was selling, he put my name on land within the settlement, so I came." Another beneficiary started to talk about the benefits the land provided, when his wife cut him off and said, "It was your *patrão* who convinced you and brought you here". The beneficiaries to this day call the ex-landowner *patrão* or boss in any reference to him. There is no indication that, despite the landowner's suggestion, the individuals themselves would have sought creation of a settlement.

Economic State

Based on the criteria previously laid out, once in the settlement, the beneficiaries were successful. A successful settlement should have basic infrastructure, diversified crops, animals, income, and access to services, and be current on payments. I evaluated the settlement through

observation, primary documents, and interviews with the agents directly in charge of the settlements and its beneficiaries.²¹

Turning first to a description and evaluation of the infrastructure, the settlement was well kept. *Secretaria do Desenvolvimento Agrario* (SDA) requires the houses have specific dimensions, room divisions, and be built out of noble materials such as brick, cement, and clay shingles. While it could be a function of the settlement's relatively newness—the settlement was created in 2005—the beneficiary houses met the criteria and, furthermore, appeared to have been renovated recently with freshly painted walls. Most of the houses, all of them in the main village, had a cistern on the side or behind them. They have indoor bathrooms and, even though they do not have indoor plumbing, a toilet and sewage pit. There are big tanks of water in the bathrooms and to flush the toilet, one fills smaller buckets and pours water into the toilet until it flushes. They also take showers by bucket. Regarding other utilities, all homes have electricity, even though the street does not.

The survey also gauged success based on beneficiary consumption, livestock and crops. The beneficiaries' homes are equipped with modern commodities. Each of the houses has a television and sound system. Some have a DVD player. All but one has a parabolic antenna and refrigerator. Each has a gas stove, though most still use the traditional wood burning stove as well. Many houses have a motorcycle parked beside them, and, if not, they at least have a bicycle. Almost all of these items were purchased in the last two to three years. While just one beneficiary outright said he sold one of the cows from the infrastructure grant to buy a television. The cluster of most of the beneficiary purchases around one specific point in time suggests the

²¹ The survey and interview questions are located in Appendix A-D.

consumption goods were purchased by selling livestock received from the initial development package. When the beneficiaries joined the settlement, they received grants and loans with which to set up their infrastructure, including livestock.

The beneficiaries' crops and diet also reflect diversity in consumption, a rarity in the sertão. Their diet's base is rice and beans supplemented with small amounts of meat and fish. Three of the nine beneficiaries include varied vegetables in their monthly consumption. Of the other six, four initially responded that they eat vegetables: cilantro and scallions. Cilantro and green scallions are used to add flavor to meals. The herb and vegetable are so commonly used together that they normally go by the unified name *cheiro verde*. While scallions are indeed a vegetable, its consumption sprinkled on top of food or just to give a little flavor does not fulfill the intent of the question. All of the beneficiaries consume *cheiro verde*. Five of the nine beneficiaries consume fruits in their diet. Of those five, four grow their own fruits in their backyard.

The beneficiaries, aside from their main cropland, which is outside of the village, also have an acre of land adjoining the back of their houses. The backyard can be used to plant vegetables, fruits, or for animal corrals. All of the beneficiaries, at the very least, plant *cheiro verde*. Each of the three who eat vegetables regularly also has a vegetable garden. The year I was there, two of the beneficiaries planted corn and beans in their backyard, instead of in their designated cropland. One of them argued that he had to do it, even though it was only a fifth of the area, because his piece of land was worn out. He said, "[SDA] doesn't want us to clear the trees. Ok it is wrong to clear the land, but we also can't put in a tractor to work old land. The tendency is for them to make us work the same land for three years in only one location before

we can change [it]. How can we work with these conditions?” Because he cannot use other land, he used his backyard. The duality between feeling the need to slash and burn new land while at the same time acknowledging it was wrong was present in all of the settlements.

All but three of the beneficiaries are farming the same amount of land. The average amount of beneficiary cropland is two hectares, or about five acres. This is consistent with the model for this part of the country. In other areas with different weather, the plot sizes are different. Two of the beneficiaries have increased their land use from their first year in the settlement. One of them increased it from one hectare to two hectares. The other increased from two to three hectares using part of a neighbor’s land they weren’t using. The last beneficiary decreased his usage from the two hectares to half a hectare.

Over the past seven years, the beneficiaries’ production of traditional crops—corn and beans—has decreased. The average bean yield the first year was about 245kg. In 2011 it was down to 230kg. The average settlement production does not reflect the individual beneficiaries experience. There is one outlier who reported the second highest bean yield in all of the settlements. Taking out the outlier, there is a marked decrease from 263kg to 139kg, about half their initial production. While crop fluctuations are to be expected, the beneficiaries complained that the decrease was because the land had worn out. The average settlement production of corn over time also decreased from 966kg to 792kg when including the outlier, and from 1013 to 668kg when excluding him. The outlier did not plant much the first year so the first year average is higher without him. There are two possible reasons for the discrepancy. The outlier joined the settlement later so his piece of land may not be as worn out as the others. Or he may have given inflated numbers. His production across the board in both traditional crops and, as we will see

shortly, cash crops is amongst the highest in all of the settlements. I cannot prove he inflated numbers. However, in all of the other cases of higher than average output, multiple family members worked in the fields. He does not have the manpower in his family to suggest those numbers. Removing this family from the equation, there is a marked decrease in the production of traditional crops.

Aside from traditional crops, the cultivation of castor beans, a key component in biodiesel, had become a part of small farmer agriculture. The implementation of the National Program for the Production and Use of Biodeisel (*Programa Nacional de Producao e Uso do Biodiesel*) in 2004 spurred a large increase in farmers planting castor beans. According to the Brazilian Agricultural Research Corporation, EMBRAPA (*Empresa Brasileira de Pesquisa Agropecuaria*), the number of small farmers producing castor beans increased from 5,000 to over 40,000 (EMBRAPA). The majority of that increase was in the Northwest and semiarid regions (Ministerio do Desenvolvimento Agrario (MDA), 2013, p. 16). The beneficiaries were eligible as a part of the *Selo Combustivel Social* program to receive technical support, lower loan rates, and guaranteed sale of their yield at a set price. The sale was guaranteed, and depending on the year and region, the price ranged from one to one and a half Reais per kilogram.

The beneficiaries in this settlement, like many others, have joined the program. Initially, five of the nine beneficiaries participated, and had average yields of 360.6kg. Those same five beneficiaries in 2011 averaged 314kg. Over the past couple of years all of the beneficiaries started planting castor beans. The settlement average, including the new participants and excluding the outlier is 343kg. I feel justified excluding the outlier because he claimed to have harvested 1226kg—close to four times the settlement average—without the extra resources to do

so. Taking into account that some years are better than others, average castor bean production seems to be consistent.

In addition to crops, beneficiaries also raise livestock. The original plan for SIC and PRONAF-A directed investment for the raising of sheep, however, the beneficiaries have opted for cattle. Four beneficiaries brought cattle with them to the settlement. One of the beneficiaries brought six head of cattle with him. The other three beneficiaries had either one or two. At the time of this study, all nine beneficiaries had cattle, averaging of eight head per person. The largest herd is comprised of eighteen head and the smallest of three. All the beneficiaries have greatly increased their herds, at minimum tripling their size. Sheep, which were to be the cornerstone of the livestock program, have largely decreased. The three remaining families breeding sheep average six sheep. Only one family has goats and the amount from when he entered the settlement until now has remained constant.

All of the beneficiaries have livestock, food crops (corn and beans), exclusive cash crops (castor beans), and at least one other source of income. Diversified income is beneficial in regards to providing insurance and consumption smoothing. Two beneficiaries make kabob sticks for sale in Caninde and Fortaleza. A middleman picks up the sticks, there is no specific frequency but both families receive on average 200 Reais per month, or about US\$130. One of the beneficiaries supplements his income by working as a day laborer on other people's land. Another is a mason and occasionally does odd jobs. Another group of beneficiaries joined a project to cultivate bees. Many of the beneficiaries were previously affiliated with this project, and some of them have quit because their bees have flown away, but five households are still deriving an income from the honeycombs. One of the beneficiaries started with ten boxes. The

bees abandoned five of the boxes but he still has the other half. Even though he lost half of his investment, he is still optimistic about the project. He says, “There are people who think it is unpleasant to get honey. It could be unpleasant. But all you do is put the box in the field, in a place that does not get too much sun and check every eight days. Just to see if there is something killing the bees, or taking over the bees’ house. Then when it is full, just take a look, take out the honey, and sell it. I do not think that is unpleasant”. Indeed honey provides a good influx of cash to the settlement. Each liter is sold for five Reais and the beneficiaries collect individually between 100 and 280 liters per year. These avenues provide a stream of income in case the crop harvest is not sufficient.

In addition to the income the beneficiaries earn, they also receive government benefits. The beneficiaries all either receive *Bolsa Familia* or a retirement pension. There is no fixed value for *Bolsa Familia*: it is dependent on the number of school-age children. Teenagers qualify for certain additional bonuses. The *Bolsa Familia* is for those not receiving retirement pension. One of the beneficiaries stated, “Without the *Bolsa Familia* many people in the settlement would not eat”. He continued by saying that those receiving pensions are the only ones who live well. The families who receive a retirement pension are by far the most prosperous in the settlements, especially when both spouses receive the benefit. The pension is based upon the minimum monthly wage. In 2012 the minimum monthly wage was 622 Reais, a large amount of money in the settlements.

The community also has communal infrastructure. They have a corral and stables as well as a foraging machine and perimeter fence. They also plant community crops for their animals to eat. The possession of community assets is a rarity among these settlements.

The last marker of success was debt repayment, and in that regard there was some confusion. The beneficiaries told me that they were current on their payments, but the technical team said otherwise. The SDA documents showed that they were not current on all of their loans, and that they were eligible for debt renegotiation. There were two levels of debt: communal debt for the land and community infrastructure, and individual debt for the livestock and improvements on their houses. The settlement must repay the loan for the land and a communal Pronaf-A loan (a government loan to help small farmers) for community herds and improvements. Each individual also had a Pronaf-A loan for personal livestock or other development projects.²² Some beneficiaries joined multiple projects and therefore had several Pronaf-A loans in their name. It was not surprising that the individuals did not know what they actually owed. About one kind of loan the beneficiaries were correct: the land payments were current.

At the beginning of the settlement they had a communal plot that they worked together, and the profits from that endeavor had gone toward making land payments. The community plot was abandoned; instead they rented some of their land to a local rancher for his cattle. This year they could not do the same because the beneficiaries needed the land for their own cattle. They decided that each person was going to find his own way to pay his share. The less prosperous beneficiaries had to scramble to pay their shares of the debt. Compared to other market based settlements, many of which never made a single payment, this settlement was doing well.

The following table summarizes the survey data by household. I interviewed nine households in the settlement. Therefore, at least five out of the nine households (5/9) had to be

successful for the settlement to be considered successful.

Indicator	Beneficiaries	Successful
Housing Infrastructure	9/9	Y
Upkeep	8/9	Y
Access to Water	9/9	Y
Consumption Goods	8/9	Y
Crops	9/9	Y
Income	5/9	Y
Individual Debt	0/9	N
Communal Debt-Land		Y
Communal Infrastructure		Y

Table 1: Is the settlement successful? Case 1

Based on observations and self-reported consumption, crops, and income, the settlement can be considered successful. However, that is only one part of the equation. The next section answers the second part of the research question: Does the settlement have social capital?

Social Capital

Based on the theoretical pathway outlined in the theory chapter, the settlement should have bonding, bridging, and linking social capital to be successful. This is a successful settlement, so I expected to see all three types of social capital. Bonding social capital should have brought the settlement together and provided the cohesion needed for working together and consumption smoothing, via informal insurance. Bridging social capital should have provided

access to information thereby putting the settlement in a better decision-making. Linking social capital should provide access to resources. This section will trace how the settlement follows the pathway.

Bonding

At the very least, the beneficiaries should have emotional bonding social capital. The beneficiaries grew up together, and in some cases, they were family; therefore, they should have strong emotional bonds. Coleman suggests that bonding social capital is incidentally created by virtue of being family (Coleman, 1988). If I were to base my findings solely on their questionnaire responses then the answer would be a resounding yes, this settlement is united. Every one of the nine households interviewed responded that they were friends with everyone in the settlement. In their own words they are “like one big family”. All but one responded that they talk to their neighbors every day. The one who did not said, “I talk to some of them everyday, not all of them because I go from here to the fields and from the fields back home. When I pass them I talk to them. But everyone is my friend. I speak to them every week.”

Cracks started to appear in the big family narrative when I asked people to elaborate on their answers. One person answered, “they are friends with everyone but that doesn’t mean everyone is friends with them”. Which is a strange response as friendship is mutually corresponded or it is not friendship. Another started by saying that, “they really value some [beneficiaries], but the other half...” and then trailed off before amending their statement to say they valued them all. (S)he caught him/herself telling me something (s)he should not have been telling me, and quickly changed his/her answer. When I asked about why (s)he changed his/her answer (s)he started talking and his/her spouse quickly chimed in, repeating, “all of the people”

and so (s)he responded, “fine then, put that everyone is united. I don’t want to start a fight or intrigue with the other families”.

The conversation left me wondering how many other families were also trying to avoid intrigue and were therefore telling me what they thought I wanted to hear or what the technical advisors were telling them was the correct way to move forward. This was especially striking because of the number of times I heard the exact sentence, we are like a big family, when asked about the relationship with the beneficiaries. I could expect to hear variations of the same theme but not the exact sentence: “We are one big family”.

Personal stories about why people joined and stay in the settlement also belie the happy family narrative. Two stories made themselves prominent. When the associação needed more members, Marco²³, a known heavy drinker, was recruited to join. He joined and the settlement was approved. Shortly thereafter the other beneficiaries tied him up, beat him, and threatened him with expulsion because of his drinking.

Josue another beneficiary in his forties was, to a degree, held hostage in the settlement. Were he to leave, the other beneficiaries would expel his elderly father. His father was not an official beneficiary because of his age. The father’s mud house did not effect the settlement. He did not live within the agro-villa. He did not farm, therefore, he did not use any of the potential farmland. He did not receive any of the improvements such as electricity or a brick house. Yet, if the son leaves, the father will have to go as well. The “one big family” response did not fit their narrative.

I asked a closely related question of each beneficiary, whether (s)he thought the other

²³ All of the names have been changed to protect the beneficiaries.

beneficiaries cared about the settlement, or only about themselves. The results suggested that the settlement had not developed a collective identity that extends throughout the entire settlement. Had they identified with the settlement, they would have cared about its well-being. Only three people responded that his/her neighbors cared about the settlement. One of the beneficiaries answered, “No, we care about the settlement; everyone cares about the settlement. We care about the things we have here, and we worried a lot in the last couple of days because the day we had to pay for the land was upon us and we were worried about how we were going to get the money to pay, but we paid”. Another responded, “Man, at least the president cares about the settlement, but the others only worry about themselves.” The rest responded that their neighbors only care about themselves. One person spoke of caring only about himself, but as he spoke, he widened his perspective. He said, “Man, I think everyone here is the same and only care about themselves. We care about our house, and money for the house. And another thing we have a bill there that we need to pay. So I think people care about just their friends.” The statement shows that the settlement has not built a common identity, and instead of having settlement unity, has isolated pockets of unity. The sentiment “one can count only on one’s friends” appears several times in responses to other questions, but it is worth highlighting here. The division undermines the creation of a common identity and settlement bonding social capital.

My theoretical pathway predicts that trust should come out of a common identity. Trust is one of the most written elements of social capital. Scholars such as Fukuyama (1995) and Putnam (1993) have emphasized the importance of trust in social capital. Others such as Knack and Keefer (1997) have extended the importance of trust to economic development. However

trust is insufficiently defined. Some speak of the decision to trust attributing a rational decision making model to trust (Coleman, 1988; Herreros, 2004). Others believe that in making a rational decision based on expectations of behavior is contrary to the meaning of trust (Putnam, 1993). Following Uslaner (1999) and Uslaner & Conley (2003) these two types of trust will be termed generalized trust and particularized trust. Particularized trust refers to trust of people you know. It is a trust based on expectations about their behavior. Generalized trust on the other hand refers to a pre-disposition to trust.

Returning to the theoretical pathway, the emotional level of trust relates to particularized trust. The beneficiaries know what to expect based upon previous beneficiary actions and reactions. Due to the size I expected that the beneficiaries would trust all of the members of the settlement. In fact, beneficiaries felt low levels of trust toward the settlement as a whole. One question asked the beneficiaries, “If you lost your wallet would you get it back?” Four out of the nine beneficiaries responded that they would not get their wallet back. “If they are a friend they will return it, but in the settlement like in all places, there aren’t only friends. Sometimes there are people from outside the settlement. They could take the money that is inside of it and return just the wallet.” Another told a story about how he personally returned someone’s wallet filled with money, but he thinks if the same happened to him, he would only get the wallet back empty. Two of the beneficiaries responded that they trusted some but not all people in the settlement. “Half of the people here would return it, the other half would light it on fire”. Another trusts the other beneficiaries but not their kids. “Kids are kids and they could take the money and throw the wallet into the brush”. Only three were sure the other beneficiaries would return their wallet. One was sure because their wallet has their documents so they would know who the owner is.

Another had their wallet returned after losing it during a drinking binge so they know it would happen again. Again, I saw pockets of trust, trust among a smaller circle of friends. In a small settlement such as this, thirteen households is a very small number, I expected to see high levels of particularized trust. This type of trust, after all, is based on knowing one another, and it is impossible not to know the other thirteen families living clustered together. They had also grown up together and had lived together prior to establishing the settlement. While there should have been high levels of trust, I did not see it. This would make sense as trust, based on the theoretical pathway, should grow out of a common identity. As the beneficiaries did not have a strong common identity, they also did not implicitly trust each other.

Informal insurance, like trust, should grow from a common identity. One of the questions created to measure informal insurance asked the beneficiaries, “if they had the resources, would they lend their neighbor money?” One beneficiary responded that (s)he would not lend money, but that (s)he would give a neighbor food. Another responded, “When there is need, if we have something we give it. We are together one with the other and when one needs us, we are there”. The answers suggest a high level of emotional investment and trust in the other beneficiaries. Every one of the beneficiaries answered that *if* (s)he had the resources (s)he would lend it. In their responses there is an emphasis on the “if,” suggesting they do not currently have those resources. Nonetheless the responses suggest there should be high levels of informal insurance. If this were the case, then a common identity would not be a necessary precursor, and the theoretical framework would not work.

Further questions revealed the lack of a common identity and negatively affected levels of informal insurance. Much like trust levels, insurance is only evident in smaller groups within

the community. A follow-up question reversed the situation and asked, were the beneficiary in need, would his/her neighbors give him/her a loan. Half responded that their neighbors would give a loan if they needed it. The other half responded that it depended on the neighbor. Research shows that, in questions regarding altruism, people are more likely to attribute altruistic actions to themselves than what they really have (Bekkers, 2007). The follow-up question asking about what their neighbors would do, is more likely to get an accurate response of what respondents would do in that situation. Four of the nine beneficiaries gave positive answers such as, “[my neighbors] would give me a loan because here everyone is like brothers, almost all of us grew up together, we were raised on this land and we all worked together before [becoming a settlement]”. Another four gave qualified positive answers such as, “A good part of the people would not, a good part would not [help] but there are some that would help.” Or, “some of them would help some of them can”. And one person answered laughing that he could not count on anyone in the settlement. “No one would help me. I would [help] because I have friends that don’t even need to ask and I loan them with a good heart. If they don’t pay me then God will repay me”. He is saying that he loans friends money even if he does not think that they will pay him back. In other words, he will give out loans even without trust. The responses I found most telling were from people who, when faced with difficulties, either did or did not get help. One stated that when he needed the settlement, “he did not go hungry” another saying that “except for the president, people will see you dying and help finish you off”. These are two disparate experiences of how the coping mechanisms work in the settlement. Trust and insurance is qualified depending on who the other beneficiary is.

Informal insurance was further gauged based on who would help in case of crop failure.

In this case as well the coping mechanisms were limited. Of the nine families interviewed only five answered that they would receive some kind of assistance. The others think that in the case of a catastrophe they would be alone and have to “dar meus pulinhos” (loosely translated as “figure it out myself”) if something went wrong. Another common expression I heard was, “you cannot trust in someone else’s pot”. Someone answered that if anyone were sick, someone would work his land for him, but then he would owe him a day’s work.

Who each thought would help was also revealing. Two of the five answered that they could count on their friends in the settlement. Another said he could count on only others if the reason his crops failed was because of illness. This phenomenon was also revealed in the literature. People are more altruistic when the source of the problem is out of the hands of the person affected such as illness (Ravallion & Dearden, 1988). Two thought they could count on only the government for assistance in the form of the welfare checks. The question was designed to test how informal insurance the beneficiaries have and instead of informal insurance they responded with government assistance. If we take these out of the equation then we are left with three out of the nine beneficiaries who believe they would find help within the settlement. The other six may have reason to doubt they would receive a helping hand.

In the sertão, access to clean drinking water is highly valued. The beneficiaries should be able to count on at least a glass of water from their neighbors, but this is not the case. A new beneficiary joined the settlement; they were one of the beneficiaries’ children. When (s)he joined, (s)he moved into the house of one of the beneficiaries who had left. The cistern that the original owner left needed repairs, which he was unable to complete before the rainy season. He was able to collect some water, but not enough to last the whole year. They borrowed from their

parents for a while, but the parents' cistern too became low. No one else in the settlement would spare a bucket of water for them.

“It rained that year and filled all of the cisterns, from this house here, and that one over there. People had water. It is not like they did not. But help like they should, no one helped. Cisterns are to help, if one is dry and the other has water no one should be without water. I do not have a problem giving anything to anyone because what is good for one is good for all. I am saying that because I heard it from [the SDA representative].”

This family could not get a bucket of water from their neighbors.

Based on observations, I have reasons to doubt their professed mutual assistance. When in the settlement, I saw a young boy, glass in hand, go to the door of another beneficiary and ask for milk. I had just seen the beneficiary go inside with a steaming bucket of milk. The household only had three people in it, and the bucket must have held at least two gallons of milk. Yet, when the boy asked, they refused him. The boy was about to turn around empty handed when the beneficiary, whom I had interviewed the day before, saw me sitting across the street, diagonal to his house, watching everything unfold. He quickly called the boy back and said he would check if he could spare any. I have no doubt that if I had not been there, he would not have shared a glass of milk. There could have been a back-story that I was not privy to. Regardless the beneficiary's actions changed due to my presence.

At the level of emotional bonding social capital, there is one main theme that I isolated: the settlement is not as united as they say it is. Even though they have kinship and common characteristics, they have not developed a common identity and therefore their levels of internal trust and informal insurance are low. There are smaller groups within the settlement that have much tighter ties with each other than with the settlement at large. For those within these smaller groups, this is positive. Murgai et al found that insurance is better provided in smaller groups

within villages rather than at the level of the village as a whole (Murgai, 2002). For those outside of these groups, their reality means they either do not have, or at the very least do not feel like they can count on, anyone in the settlement. On the other hand one of the people answered that friends would help, because that is what happened when he recently needed help. He didn't have food and the other beneficiaries came together so he and his family didn't starve. These disparate truths and experience show that the settlement is not as unified as they claim that it is. While for some it may be unified, and maybe it isn't just "da boca pra fora" (something you say not something you do) for some the experience of living in the settlement is exclusionary. While there was no evidence of specific factions within the settlement there were individuals that fell outside of the unified group.

The negative effects of social capital occur most frequently with bonding social capital as the tightly knit bonds between some of the beneficiaries are not extended to all the beneficiaries. Unfortunately as Molyneu (2002) and Fox (1996) have shown the ties that bind can also exclude. Some members of the community have stronger ties than others and that is reflected in their answers. The negative effects of bonding social capital are bubbling just under the surface, but its existence is swept under the rug, to present a facade of unity and cohesion.

Moving from the emotional side of social capital, we look at the structural dimension, namely the spatial and community organization. The main villa, which includes the houses of the nine beneficiaries interviewed, is clustered together. There are four other houses off the main highway. The first two are at the base of the hill leading to the settlement and the other two are a short distance away. For a myriad of reasons, I could not interview the four households that are outside of the cluster. In one of the two houses that were a little further out, the man had gone to

get his motorcycle license in Caninde and would not be back for a couple of days while he took the classes and the test. She refused to meet without him and even though I tried multiple times at different hours of the day, I could never find him at home. The other household that was a little further out also refused to participate. In one of the houses that were outside the cluster but still nearby, I had just started the interview when the man received a phone call. He stopped the interview because he literally had to see a man about a horse. The other household was a retired couple who had gone to Fortaleza to see their grandkids, they were not there to interview. In any case, because I could not interview those who lived outside the cluster, I cannot say whether proximity made a difference in their interactions with the other beneficiaries.

The other element of structural bonding social capital is community organization. The settlement *associação* should organize the community. Broadly speaking, the role of the *associação*, as outlined in the MBLR model, differs greatly from the reality. Every settlement is required to have an *associação* to make decisions for and regulate settlement life. In some settlements this *associação* only exists on paper. In others it meets so infrequently that it only serves the basic function of registering beneficiaries. This settlement has an active *associação*, which meets regularly and which the beneficiaries see as legitimate. The role of a civic organization leading to or being social capital is not new. It is a fundamental part of Putnam's (1993) analysis of Italy and also that of the U.S.

The beneficiaries know they are a part of the *associação* and that they meet, even though they do not all agree on the frequency of their meetings. Some people told me they met monthly, others every couple of months, and one person said they met weekly. The majority agreed on monthly meetings. The purpose of the *associação* is not to hold meetings for meetings' sake, but

to be a forum for people to meet and seek resolutions to issues, craft a vision for the settlement, and establish the steps to get there. The *associação* should be a means to organize the beneficiaries, and a venue for them to make collective decisions. The role of the *associação* in this case is still undetermined. It has seen a lot of upheaval over its short history. And while it has arguably solidified into an organizational unit, its basis and potential for continuity is questionable.

In the early days of the settlement, cisterns were a community priority; a necessity in the harsh Caninde climate. It only rains three months out of twelve so all the water to be consumed during the year must be collected during that short time. The original president of the *associação* tried to organize the beneficiaries and request cisterns for the homes of all 13 beneficiaries. Everyone from the technical advisors to the beneficiaries agree they did not receive enough. The way that the *credito fundiario* settlement works is that the *associação* takes out a loan for the land (SAT), and receives a grant (SIC) for the infrastructure to establish the settlement. The documents at the *Secretaria do Desenvolvimento Agrario* (SDA) state that ten cisterns were approved under the semi-arid provision of the SIC. One of the beneficiaries told me six were approved, another told me eight; in any case, it was fewer than the number of beneficiaries within the settlement. Ironically, the beneficiaries were, in conjunction with the technical team, supposed to select the best way to use the grant. The cistern fight shows they did not have input into the settlement design. The president of the *associação* wanted to hold out and petition for all of the houses to get the improvement. A slim majority of the beneficiaries, seven of the thirteen, decided to wait to get the cisterns together. The ex-landowner, who had already sold them the land, told the beneficiaries that if they did not take what was offered, it would not be offered

again. He acted as if this was not part of the contract the beneficiaries signed and as if it were a handout he was giving them. He convinced six of the beneficiaries. They went against the associação and accepted the project as it was and left the associação without any bargaining power.

The associação failed to organize the beneficiaries. They did not engage in collective decision -making and the result was the associação was proven irrelevant as individuals formed groups outside of the associação and went after what they individually wanted even though it was against the collective best interest. The associação was supposed to provide the stage for beneficiary interaction through which they made decisions about the settlement and established the rules of the game. Settlement norms were to be discussed within the confines of the associação. In the case of the cisterns, people ignored the associação and the rules of the game. Instead of interactions within the associação creating trust through these repeated interactions, the interactions showed that decisions made through the associação were not binding. The people who chose to go against the associação, violated the trust the group placed on decisions made within the associação. The associação was not a vehicle for organization and it did not bring the community together. In fact, because the beneficiaries could not work out their problems within the confines of the associação tore the settlement in two and creating such a deep rift that people felt they had to leave. Four of the original members, including the associação's president who organized the creation of the settlement, left.

The beneficiaries were divided about what role they think the associação played in the settlement. When asked about the function of the associação I got different answers that can be grouped into three clusters. The first and largest cluster conflated the associação with the

community workday. For them, the *associação* is an organizational tool used to decide what work they are going to do around the settlement, or at least that was its original function. “There should be a meeting, there should be a meeting one or two days [a month] so we can work as a community. We should have it and we did have it at the beginning but then we stopped and no longer have it. The first time we did it, we found a piece of land, we did not make too much but with what we sold we were able to buy three calves, that way, when the time came to pay for the land, having something like that helps. Man we have to do that every year. Everyone should work together to be able to pay for the land. Then we stopped no one knows why.”

The next cluster refers to the *associação* in its administrative function. Either for something proactive like a new project, “Sometimes we need to register, the president is going to do something and needs everyone’s signature such as a record they make to see if they can get a project or something”. Or for receiving government benefits, “The *associação* is good because through them we get our retirement, a maternity salary, sick pay, the *associação* is important. The *associação* means unity and sometimes we need things and we go to the *associação*. If it were not for the *associação* we would not get anything. We get things because of the *associação*.”

The third cluster—the smallest group, comprised of only two of the nine beneficiaries—is the only one that mentions a deliberative function for the *associação*. In one case, “The *associação* meetings are to debate doing something”. In the other, they are more for information sharing than for debating, “When [the president] goes to Fortaleza or to Caninde he schedules a meeting to explain what is happening. He schedules [the meetings] to explain so we can participate. He does a lot of things there”.

Regardless of how the beneficiaries perceive the function of the *associação*, the president played a prominent role. The president scheduled meetings and decided their agendas. The president also had the responsibility to make sure there is quorum. The president was a larger than life figure in the settlement, a position he clearly enjoyed; even though, by having all of the responsibility, he also received all the blame. One household claims the settlement is in decline because of him. “Honestly since I got here I only went to one meeting. It is rare for the president to have meetings. We are supposed to have meetings every month, but the president has to schedule, the president has to tell us about the meeting, but he does not do it. It is rare for him to do it. It is his fault.” As described in the beginning of this section, the majority of the beneficiaries confirm there are monthly meetings. This household for some reason did not know about them, or chose not to participate. Their response for this is to blame the president. The focus on the president as the sole repository of the settlement knowledge is risky. We will return to the role of the president as the community leader later in the chapter.

The degree to which the community engaged in collective decision-making is questionable, even though they valued it. Several of the beneficiaries proudly stated that in the settlement no one had a stronger voice than the others. When I asked the president about decision-making he proudly stated, that he makes all of the decisions, “ If the president says “yes” then the others will have to accept it.” Based on observations at the meeting and of people’s responses about the role of the *associação*, it seemed that the president does indeed make the important decisions.

This does not mean that the rest of the pathway crumbles. Because the *associação* met, it created repeated interactions. The *associação* must also have created internal norms and have

meted out sanctions because the beneficiaries do not shirk from the community day of work nor do they free ride on others land payments.

Where the pathway broke down was in creating community efficacy. When people talk about how they overcame obstacles, or about how they received projects, it is something external to them. Either the president brought them the project, or the technical advisors initiated it. They did not talk about community or associação- successes—that was individualized.

Overall, the behavior of structural social capital in this settlement differed than the theoretical model. The elements stayed the same but the interaction was different.

Bridging Social Capital.

If bonding capital is the glue that binds a community, bridging social capital provides links to a more heterogeneous demographic (Granovetter, 1973). The beneficiaries are an insulated group; especially considering their proximity to both the highway and Caninde. I expected to see more bridging social capital than was present. Most of the beneficiaries' relationships are contained within the settlement itself. The only interactions people mentioned were sporadic encounters in line at the bank or on New Year's Eve. When pressed, six of the nine beneficiaries mentioned infrequent, less than once a month, interactions with other communities. Of the six, all six mentioned visiting family, one interacted with other settlement leaders and one of the six participated in an outside sporting group. Of these connections only two qualify as bridging social capital. Most of the ties are with family members residing outside of the settlement. The ties to family members, even family members who live outside the settlement, are still bonding social capital because they are ties to the same homogenous group. While they may serve the purpose of providing information, they do not help with generalized

trust.

One of the other benefits of bridging social capital is creating a generalized trust. If one only has strong bonding connections one learns to trust only those within that circle. However, if one has interactions with more people and starts to trust them, the way one looks at trust changes. Trust, as a more generalized trust, in the other and not just trust in those that are like you (Uslaner, 1999). Two questions asked about trust in people from other settlements and trust in people from the nearby city Caninde. Six people say they trust at least some people outside of the settlement. Interestingly, they are not the six people who have outside contacts. The answers to questions about trust were almost always qualified as, “The ones I know [I trust]. It is not everyone, but the ones I know [I trust].” Or, “Man, I trust. Have to give them one side of the face to hit, if they hit hard then I do not trust them anymore. I used to trust a lot but I do not anymore.” Or creatively saying they do not distrust anyone rather than the affirmative, I trust. The other three, including two who have outside contacts, do not trust anyone outside the settlement. One of them was defensive about his lack of trust, “I do not [trust]. I’m not going to say I trust anyone when I do not”. This reveals that the beneficiaries were unable to translate particularized trust to generalized trust. This makes sense, for there is limited bridging social capital.

Trust can be built through sporting or religious events. One of the beneficiaries takes part in cattle roping events. He and a group of friends from nearby communities get together once per month. One of them brings a calf. They put a symbolic amount in the till. They let the calf loose in the caatinga, a type of sertão brush, and chase after it. Whoever corrals the calf gets the till. This type of regular directed bridging social capital, especially one where there is money

involved, should generate a higher level of trust. However this was not the case. His level of trust was no more generalized than the others in the settlement. The same is true for the other beneficiary who had bridging social capital. “My trust is in knowing the person—when you know the person, you know how they are and what they are” In terms of building trust, the settlement did not follow the pathway.

In terms of access to information, bridging social capital helped the settlement become what it is today. The president of the associação had the most sustained interaction with members of other communities. The president frequently went to Caninde on behalf of the settlement. He went to the bank and the rural trade union, and he resolved settlement problems. He attributed settlement success in securing infrastructure to information he received from another settlement president. The other president impressed on him the need to build to the SDA dimensions. The other settlement had not, and was therefore having a difficult time because they were ineligible for loans or development projects. Based on the story, he made sure that the houses were all built to the minimum requirements. Due to this conversation, the settlement has been granted other projects, which have improved the settlement. This is a classic manifestation of bridging social capital. It shows how the timely receipt of information can improve the economic development of the settlement. The sharing of information between people trying to resolve the same problems should help all involved find the best and most efficient method to get results. Unfortunately, only two people possessed this type of bridging social capital, the only one that actively sought out these interactions. However because the social capital lies in their relationships, if they were to leave, the connections to the others would leave too.

The settlement did not possess excess bridging social capital. What little it had, has not

created a generalized trust. The only aspect that fit the model was that the settlement was able to profit from the diffusion of knowledge along the network of one of the beneficiaries.

Linking Social Capital

Linking social capital is supposed to provide the beneficiaries with access to resources they would not otherwise have. Some of the players involved include the local rural workers union, social movements, the government (municipal, state and federal), non-governmental organizations, technical advisors, and landowners. In this case the settlement's two salient linking ties were with the landlord and with the technical advisors. The settlement showed how negative linking social capital could affect settlement development. It also showed how receiving timely technical support was dependent on creating external ties rather than depending on the beneficiaries to fulfill their job descriptions.

The settlement showed some of the negative effects of linking social capital; those with power and resources could influence those without to perpetuate the social structure (Bourdieu, 1986, p. 250). The settlement was created at the behest of the *patrão*; even though the beneficiaries did not want necessarily want it. They did not have the option to say no. There is no doubt the landowner strong-armed the *moradores* to buy the land under the threat of expulsion. As Szreter & Woolcock (2004) pointed out, "In circumstances with high economic inequality...the onus is on those with power and resources to think very carefully about how to create the shared sense of fairness, including mutual respect between all concerned, which is the necessary pre-condition for shared understanding and group norms" (p. 656). The ex-landlord did exactly the opposite, and, instead of creating ties to help the people that used to live on his land, he used his considerable control over them to force them to accept a situation that could be

detrimental to their well-being. As *moradores*, they were given certain guarantees. If there were a bad crop year, the landlord had a responsibility to help those on his land. He was responsible for their general well-being. These were semi-feudal relationships where the people farmed the owner's land, not just for use of a plot, but also for broader protections. Now that they are beneficiaries, they no longer have those protections.

The ties to the landowner also interfered with the distribution of resources and settlement organization. Returning to the story of the cisterns, the landowner influenced some people in the settlement to go against their best interests, again by playing on their lack of information, and making the conditions seem dire had they not do what he wanted them to. The linking social capital that should have helped them towards economic development, in practice worked against them. It coerced them to create a settlement that perhaps they were not ready for, and then worked against them by undermining the collective action that the *associação* and the president were working toward.

Szreter and Woolcock (2004) maintain that positive linking social capital builds “extensive transitive networks of respect” and have to pay “attention to the quality of the relationships between those without differential access to power” (p. 656) the landlord most certainly did not do this. I would argue that the beneficiaries other external links, the advisors did not either.

The settlement has changed technical teams so many times no one, at least not the tech support in Caninde, nor the agents at the head office in Fortaleza, knew who was in supposed to be providing service at that point in time. The two technical support teams that were supposed to orient the beneficiaries abandoned them.

Both teams gave me different information. The first team said they had never officially worked in the settlement. Official documents filed with the SDA show that, at the outset, the first team was in charge of the tech operations. At some point, and this is not clear in the documents nor in the minds of the beneficiaries, the first advisor's contract ended and another group took over. In the interim there was a substantial amount of time during which they did not have technical assistance. It seems that after the switch, they were eventually switched back to the first company, but each time there is a several year gap. The second team said they were hired for a short time—after the government did not pay their salaries, they quit. The government does not pay the technical advisors, the beneficiaries do. The government serves as the intermediary. When the beneficiaries join a project, its elaboration and needed technical support are rolled into the price of the project. The beneficiaries take out federal loans to pay for the projects. The government is supposed to administer the loans, but due to bottlenecks and internal politics, the funds sometimes do not get to where they are supposed to go. The settlement had only been in existence for seven years and they had already switched tech support three times.

The many switches and gaps in support mean that projects got started, abandoned, and new projects started. When the techs created the PRONAF-A's they were supposed to provide at least three years of tech support to the beneficiaries for each particular project. A feat, the technical support staff says was impossible when their contracts ran only six months at a time. "We start the process of building something together with the beneficiaries and then (when they have 6 month contracts) it becomes fragile and we are just one more group who came through the settlement." He implies that switches eroded the confidence the beneficiaries had in the

technical advisors.

In lieu of hired technical assistance, which would not be linking social capital, they had to find other ways to get resources and information. The role of the president in this case was crucial to settlement success. After the president joined the settlement and became its president he maintained contacts with all of the support teams. He was constantly in Caninde in the advisors' offices. He had become the continuity that was missing. When they had a problem, he brought it to the attention of the technical advisors. He did not go to the office of only the official support team; he visited them all. The relationships that he created with the different teams gave him access to many fonts of information and advice. Furthermore, because he was constantly in their offices, he was the first to hear about new projects. One of the advisors, while going out to a settlement, told me, "It may not be fair but the settlements that we see are doing well get more of our attention. Why should we waste resources on a settlement where it will not grow?" The interest level of the president ensured that the technical team advising this settlement would try harder to help them because they saw that the resources would not be wasted.

Even though the settlement's first experience of linking social capital was a negative one, the settlement was able to turn it around. The leader was crucial for this settlement. This settlement had a leader that advocated for them, kept abreast of any developments, and used his personal connections to hound the technical assistance to visit the settlement more than others.

Does it follow the pathway?

I determined that the first case was successful. Having established settlement success, the question moved to determining whether their experiences match the theoretical pathway. The first step was to establish whether the variables were present in the settlement. The following

chart summarizes this case where the A stands for absent, the W for present but weak, and the S for present and strong. The cases were considered strong if over fifty percent of the beneficiaries answered the questions in the affirmative in terms of bonding social capital.

Settlement organization was an exception and required at least 75% beneficiary participation to be considered strong. Linking and bridging social capital ties were considered strong if over one-third of the beneficiaries had these ties.

Variables					
Bonding Social Capital		Bridging Social Capital		Linking Social Capital	
Kinship	W	Generalized Trust	W	Generalized Trust	A
Common Characteristics	S	Access to Information	W	Access to Resources	W
Common Identity	A	Friends outside the Community	W		
Trust	W	Outside Groups	W		
Informal Insurance	W				
Proximity	S				
Collective Decision Making	W				
Efficacy	W				

Norms/Sanctions	S				
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Table 2: Did the settlement follow the pathway? Case 1

The settlement is built upon family groups that share common characteristics but they have not built a common identity. The levels of trust and insurance are based on ties to particular people within the community. Even within such a small settlement the bonding ties do not encompass the settlement as a whole. Without the creation of a common identity the positive coping mechanism associated with bonding social capital are weak.

The elements of structural bonding social capital—spatial design and community organization—were present. There was some question as to the degree with which the community engages in collective decision-making. The beneficiaries met regularly, which generated trust in the president. They must trust the information he brought to the associação because most of them planted a non-traditional cash crop, which, for a risk-averse population, was of great importance. Perhaps instead of community efficacy, the beneficiaries saw the efficacy of the leader as the conduit of information and resources for the community.

Even though the strength of the associação was not clear, all of the beneficiaries paid their part of the communal land debt. This suggests enforcement and internal sanctions existed within the settlement. There is therefore a mechanism to limit free riding.

Bonding social capital in this settlement was a mixed bag and does not follow the pathway delineated. Community organization played a central role in the economic development of this community. The emotional ties that should have created trust and informal insurance were present, but only to a select group. It was through the associação that a broader community trust was created. Some of the other variables, such as proximity, were only tangentially related.

The settlement did not have high levels of bridging or linking social capital. In fact there were only two people who possess bridging social capital. Only one person had linking social capital. This suggested that the settlement should have failed. The theory would predict that this settlement would be too insulated to be able to engage in sustained economic development. According to the pathway, settlement should not have had access to information or resources, and should not have had the necessary generalized trust to engage in broader commerce. This is not the case. The beneficiaries have seen an improvement in their daily lives and the settlement, by the parameters I established, is successful.

Case 2

The second settlement was a study of what could have been. The settlement was close to Caninde, less than 20 kilometers. The first ten kilometers were an easy stretch down a well-kept highway. The turn off onto a gravel road was well-marked by a roadside shop. The road narrows and there was a large barrage on the left hand side. The gravel path is only wide enough for one vehicle at a time, so cars and motorcycles had to pay attention to oncoming traffic. When there was excess rainfall, the barrage floods and blocks access to this area. The water was pretty low even though it was the middle of the rainy season. The municipality of Caninde was divided into eleven districts. One of the district hubs was the closest village to the settlement. Getting to the village closest to the settlement was like negotiating a labyrinth, as unmarked gravel paths splinter off the road. If one did not know where to turn, it would have been very easy to get lost. The hardest part of reaching the settlement was the last 2 kilometers between the village and the settlement. The road was badly maintained, if at all. It was difficult to avoid the large craters and rocks in the road on a motorcycle; in a car it would have been impossible.

Once one arrives at the settlement, at first glance it would be easy to forget that this settlement was doing poorly. Settlement potential was clearly visible. It was nested in a valley between hills. The settlement itself was up a slight hill from a small creek that meanders through the property. There were two tracts of well-planted land, including banana trees, palm trees, and many others, as well as the traditional corn and beans. Those first impressions were not representative of the rest of the settlement. A bit further into the center of the settlement, the houses were clearly abandoned. There was trash in the front yards. The houses were missing doors, windows, and, in one case, part of a roof's shingles. The community house was abandoned. Some of the other infrastructure they built was reduced to a pile of rubble. After seeing this part of the settlement, I had no doubt it was doing poorly. The soil was fertile. There was access to water. Beneficiaries who planted have clearly succeeded. Why then were there only two planted tracts and four beneficiaries? The settlement raises the question, why did it not realize its potential?

Settlement Origins

This settlement, like the first, was also started because the landowner wanted to sell a part of land. However, there was more to it than that. The settlement's formation stemmed from a father's desire for his children to have land. The father was a beneficiary of another nearby land reform settlement. He helped form the associação for his six children. They also invited two other households, who had also lived on the land, to join. Two of the beneficiaries had grown up on the land but had moved to Fortaleza and Caninde. When their father arranged the purchase of the land, they returned. The settlement at the onset was made up of eight beneficiaries, six of which were siblings. By 2009, five years after the establishment of the settlement, half of the

settlement had moved away. There was a family feud, and animosity ran so strong that people had to leave. I could not find out why, or what started the fight. When I asked the technical support team, they could not answer the specifics. They just knew that by the time they started working with the settlement, the schism had already occurred. There is a little debate about how many people lived on the land at the time of this study. When I visited the settlement, there were four families. The technical team told me there were two people living there. Where did the discrepancy come from? The technical team mentioned that this settlement was unique because during the rainy season, people who had abandoned the settlement returned to plant crops. They plant, harvest, and leave. “They do not want to live there, in my opinion. When the rainy season ends they go back to the cities, but every rainy season they come back to plant. They got access to land, to housing, their own autonomy, which they did not have, and today when they got it they simply abandoned the settlement. They just go there to get the best of the rainy season and leave.” I did go during the rainy season, so this could be a plausible explanation. The settlement had also been without technical assistance since November of 2010. The lack of technical assistance will be covered in a later section.

Only half of the beneficiaries remained. Of the four remaining beneficiaries, three agreed to be interviewed. The three reasons they gave for being a part of the settlement were each a little different. One said that the reason he joined the settlement was because “he had nowhere else to live”. Another said that he joined because “I already lived and worked on the land”. And lastly “because where I lived before I did not have a piece of land to work”. Of the three only one was, prior to the settlement, actively working on the land.

Economic State

Under any definition of success, this settlement can be considered only an economic failure. The evaluation used to determine success or failure--basic infrastructure, consumption goods, diversified crops and animals, other forms of income and current on payments—were missing in the settlement. I evaluated the settlement in the same manner as the others, using direct observation, primary documents, and interviews with the technical assistance teams and with the beneficiaries themselves. Of the four beneficiaries remaining in the settlement, three agreed to participate. The fourth wanted his son to answer the questions instead but because he was under eighteen I did not have approval to include him in the study.

Of the eight houses only two were well maintained. They were not recently renovated, contrasting against the first settlement, but they were habitable. The other six houses in the settlement were in disarray. Some were missing doors and windows, the pieces scavenged and sold. Some were even missing a floor. Instead of pouring concrete for the floor, they had packed the dirt. The houses varied in size and shape and none were originally built to the standards the *Secretaria de Desenvolvimento Agrario (SDA)* set. These standards set specific minimum dimensions, minimum number of rooms, and minimum hygiene standards. Aside from the incorrect dimensions and divisions, the houses also lacked essentials like cesspits and toilets. The documents at the SDA show that the beneficiaries received funding to build seven houses and to reform an existing house. The SDA process looked like this: beneficiaries built the houses, SDA inspected them, and then the beneficiaries submitted a simple document itemizing how the SIC money was used. Because the beneficiaries built the houses outside of the parameters, they failed the inspection. They could not submit the expense documentation until they passed the

inspection, and, without expense documentation, they were blacklisted from using any credit.

While there were a lot of things going wrong, at least one of the households had made improvements on the structure of the house. They made it larger and added the requisite toilet.

The settlement beneficiaries also received cisterns as part of the development grant. Therefore they all had access to clean drinking water. The beneficiaries also had electricity in their homes. There were no streetlights.

The data revealed the picture is not as bleak as a causal observation would suggest. The three beneficiaries I interviewed had some individual consumer goods. They all had a television and sound system. One of them also had a DVD player. They all had a refrigerator and both gas and wooden stoves. There was a motorcycle parked in front of the house of one of the beneficiaries. He first claimed it was not his and then that it did not work.

Two of the three families I interviewed were clearly not able to sustain themselves or pay their debt with what they grow. In 2011 one of them did not plant anything and the other planted 0.5 hectares. Though that was not such a big change as the household that planted 0.5 hectares has consistently planted the same amount since the beginning of the settlement. From the small amount he plants he still manages to get a good yield. The first year he got 300kg of beans and 660kg of corn. Last year he changed the percentage of land dedicated to each crop and got 180kg of beans and 1920kg of corn. An acre of corn, about 0.5 hectares, yielded 3680kg in the US that same year (USDA). The household that did not plant anything last year and claimed to have planted an hectare the first year got a very low yield of 60kg of beans and 120kg of corn. He claimed he also did not plant anything for 2012 because he was sick. These families had limited livestock. One had a cow and the other has a donkey: the same donkey with which he entered the

settlement. They did not have stables nor did they have a fenced-in backyard. The fact that they did not have any animals is striking because SDA documents showed that everyone in the settlement received a cow, sheep, and chickens. These two beneficiaries came into the settlement with one animal between the two of them, had a herd of animals, and then seven years later all of the animals were gone. What happened to the investment?

One family was much better more prosperous the other two, and the bounty of his crops, highlighted the land's potential. In 2011 the more prosperous household planted 2.5 hectares, up slightly from the average of 2 hectares. The initial bean yield in 2005 gave 90kg; in 2011 the yield increased to 300kg. Likewise the first year he did not plant corn, but last year he harvested 960kg of corn. He also diversified what he plants for consumption. He planted manioc root which they used both fresh and ground into flour. Last year he produced enough for the entire year. They had other vegetables such as squash and tomatoes as well as cilantro and green onions. They also had fruit trees such as banana, papaya, and caju fruit, as well as pineapple bushes.

Aside from the traditional crops, he had also planted cash crops. He invested in planting castor beans and produced 110kg. As mentioned in the other case that included castor beans, the beneficiary crop rotation is an easy way to get a guaranteed income at harvest time. He is the only one in the settlement that has started cultivating castor beans.

The prosperous beneficiary increased his livestock in both size and diversity. When he and his wife came to the settlement they had just four chickens. During my visit, they had four head of cattle, three sheep, five adult pigs, a many piglets, between thirty and forty chickens, and five ducklings. He sold pork to the other beneficiaries. The back yard was verdant and the

animals well fed. This was one of the best houses I saw in either of the two market based settlements. The variety of crops for food, sale, and livestock is impressive. However, it is an island amid a struggling settlement.

The beneficiaries had no other forms of income, except government aid. One of the beneficiaries was on permanent disability and received a pension. In another household two members receive retirement pensions. These pensions were at least what the minimum salary for a full time worker would be. In 2012 it was 622 Reais, about US\$400. Keeping in mind that the monthly income for people in the Caninde countryside was less than half of that, those receiving those checks were in a privileged position. All three households also received the conditional cash transfer program *Bolsa Familia*. One of the technical support team members told me, “before, they used to survive without (*Bolsa Familia*), but now they are used to it. They see it as an income. They would not survive without it”.

The community’s infrastructure had not been maintained, and was no longer viable. The community silo was in ruins. The irrigation system and its motor were stolen. The large chicken coop was not being used. There was no sign of the stable mentioned in the SDA documents. Trash littered the side of the path and the front of some of the houses. The village was overgrown with weeds and native brush. It looked exactly like what it was: an abandoned project, a ghost town.

The two other elements of settlement success, services and debt repayment, were absent. The settlement did not have a school, a clinic, or even a public phone. Each of those services was provided in the nearby district. None of the beneficiaries, at least through May 2012, had made a single payment on the land. The settlement failed on all of the tests measuring success.

The following table summarizes the survey data by household. I interviewed three households in the settlement. Therefore, at least two out of the three households (2/3) had to be successful for the settlement to be considered successful. I was initially concerned because the small sample size meant the over 50% mark was set high at 66%. The survey reflects what I observed. It is not ideal but I feel it is representative.

Indicator	Beneficiaries	Successful
Housing Infrastructure	1/3	N
Upkeep	1/3	N
Access to Water	3/3	Y
Consumption Goods	3/3	Y
Crops	1/3	N
Income	1/3	N
Individual Debt	0/3	N
Communal Debt-Land	0/0	N
Communal Infrastructure		N

Table 3: Is the settlement successful? Case 2

Social Capital

The settlement served as a counterpoint to the first settlement; therefore, I expected it to deviate from the pathway. I expected to see limited, if any, bonding, bridging and linking social

capital. I did not expect it to deviate as much as it did.

Emotional Social Capital

The settlement, according to its particular demographics, should have had strong emotional bonding social capital. Of the eight families, six were immediate family members, and the other two were neighbors who worked the same land. By all accounts, there should have been very high levels of bonding social capital. Coleman (1988) suggested that bonding social capital is produced incidentally within families. In this settlement, that was not the case. After a family fight turned into a feud, half the beneficiaries left.

Of the four remaining beneficiaries, I interviewed three. After completing the first interview, the beneficiary offered to show me around the settlement and tell me which houses were inhabited and which abandoned. I politely declined his invitation but he still followed me to the other homes. The interaction I could have had with the other beneficiaries was limited because of this and I decided to treat the veracity of their responses with skepticism. The other two beneficiaries answered monosyllabically: yes, no, maybe. Unlike the beneficiaries in the other settlement, they did not delve into stories or justifications for their answers as I had expected of them. The other two beneficiaries looked to the first for answers, and sometimes the first would answer for them. I do not know whether this answering style was due to the presence of the other beneficiary, or to their lack of interest in talking to me. By the time I got to the third interview, two beneficiaries listened in. Because of the insistence of the first beneficiary to go with me, and the snowballing audience; I think the level of emotional bonding social capital was over-reported.

The only one who answered without the pressure of others was the first beneficiary, and

his answers showed ambivalence towards the other beneficiaries. When asked if he considered their neighbors friends, he answered that he considers everyone friends but does not know whether they do. When I asked why, he said, “One doesn’t know what goes on in the heads of others”. This may explain his insistence on coming to the other interviews. Perhaps the very fact that he was worried enough, or did not know his neighbors well enough to know what they would say, revealed their level of cohesion. The two other beneficiaries answered that they consider the other beneficiaries friends. One by half grunting an “mm hmm” and the other answered that he has “much satisfaction (to consider the other beneficiaries friends)”. With only four neighbors, one would expect that they would know each other well and be friends.

One of the questions to test one’s identification with the settlement asked whether the beneficiaries believed that their neighbors cared about the settlement. The consensus in the settlement was that everyone was looking out for his/her own best interest and not invested in the settlement as a whole. The question was open-ended so that people could respond either about people caring about the settlement or about the people that comprise the settlement. The beneficiaries answered the question not just about those that remained in the settlement; they included the beneficiaries who left in 2009. One of the beneficiaries blamed the deplorable state of the settlement on the beneficiaries’ lack of interest and care, “I think there are some people who do not care about the settlement. If they cared about the settlement they would work within the settlement, they leave, they do not plant, [and] they do not even plant the minimum to get the insurance.”²⁴ We haven’t been able to do anything within the settlement yet.” He directed his

²⁴ The government provides a type of farmers insurance for the years the crops fail. The federal and municipal government give them, at the time it was, R\$600 (\$300 US) spread out over six months. The beneficiaries through their association pay a small sum like R\$20 to the insurance and the municipal government is supposed to match the

anger at both the beneficiaries who left and the beneficiaries who remained but do not work within the settlement. Another beneficiary blamed the people who left, “with four people we don’t have the means to live.” People see the cause of what has happened to the settlement as results that are exterior to them. They have not developed the cohesion needed for a common identity.

If they have not developed a collective identity; therefore, according to the pathway, they should also not trust each other. This settlement is comprised of four households within a very compact area, but the trust levels, including particularized trust levels that I expected to see among relatives and close friends, are low. I asked “If you lost your wallet in the settlement, would it be returned?” Of the three beneficiaries, one of them definitively answered that no one would return anything. Another answered that some would return it and some would not. By the time we got to the third beneficiary’s house, the rest of the beneficiaries, including the person who did not want to be interviewed, was listening to the conversation. He was the only beneficiary who answered that the wallet would be returned. It was evident that the level of trust amongst the beneficiaries was very low.

Another element that should also come out of collective identity is called informal insurance. Bonding social capital should help economic development by providing a form of informal insurance so that beneficiaries can take more risks, or at least feel less vulnerable against starvation. All of the beneficiaries answered that they would loan money to a neighbor in need. Questions about whether, if they needed it, they could count on a loan from a neighbor, were all answered in the affirmative in the last two cases, but not in the first case, where the

insurance fund. In order to qualify for the insurance you must plant at least 2 hectares.

beneficiary did not have an audience. In the first instance the beneficiary responded that he could not expect that if his neighbors had the means they would lend him anything or even help him if he lost all his crops one year. Was this individual jaded with the settlement and the others giving a better representation of the settlement? Were the interviewees reacting to the presence of other beneficiaries? I cannot be certain because of the limited number of beneficiaries.

I also asked the beneficiaries, “If your crops fail, would anyone help you? All of them responded that they would not get any help. One of the beneficiaries responded, “Man, here it is difficult for anyone to help, difficult. No one ever came here to help anyone”. One of the beneficiaries mentioned that he had been sick the year before and he could only count on friends and family in another settlement. Each of the beneficiaries interviewed though he was alone and could not count on the others for support.

Even though the settlement should have high levels of bonding social capital, they had very limited to no bonding social capital. They had kinship ties, but those ties did not lead to a collective identity. They shared similar broad characteristics, but those too did not result in a collective identity. Because they did not have a common identity they also had problems with trust and mutual insurance. Overall the settlement had a dearth of emotional bonding social capital.

The lack of emotional bonding social capital was reflected in the lack of structural social capital as well. The four beneficiaries residing in the settlement happened to live in one section of an already compact settlement. They lived within a half a kilometer of each other. However they did not speak to each other frequently. Two of the beneficiaries said they talked to the others once per week or so. The third said he talks to the neighbors daily, an impossibility if they

did not talk to him but once per week. Proximity in this case did not drive an increase in interactions.

In addition to proximity, the second part of structural social capital is settlement organization. Even though within the *Credito Fundiario* bylaws, each MBLR settlement must have an *associação*, this settlement's *associação* had disbanded. After the other beneficiaries left, the *associação* ceased to exist. They gave me two reasons for this: procedural reasons, such as not enough beneficiaries to staff the ruling board or; they cannot make official decisions without establishing quorum. However, it would be too simple to blame the flight of the other beneficiaries for the disintegration of the *associação*.

The evidence also suggests that, prior to disbanding, the *associação* was ineffective. A functioning *associação* was of utter importance during the initial stages. The beneficiaries, as the *associação*, and with help from the development agencies, had to make initial decisions that determined the course the settlement would take. This settlement had problems from their first important decision: housing. Their failure to comply with the housing requirements made them ineligible for future projects until the issues were resolved. Without access to credit through the PRONAF-A, life became difficult in the settlement.

While the remaining beneficiaries could not make official decisions, they could still meet to discuss tasks for settlement maintenance. Concurrent with the funding for the houses, the beneficiaries also received funding for other infrastructure projects such as an irrigation system with a motor and pump to draw water for the crops along the hill, a silo to store grain until it was time to sell at higher price, and cisterns. Through a lack of care these projects had disintegrated. The motor to the irrigation system had been stolen. The silo had fallen over. The chicken coop

was empty, and doors and windows from the empty houses had been stolen. The settlement is in complete disarray. The infrastructure funding they received had been abandoned so they lost that investment.

Without an *associação*, the causal pathway structural social capital was supposed to follow was cut off before it started. Without an organization, the beneficiaries did not meet to discuss settlement problems. They therefore could not decide on solutions for the collective. They therefore did not establish a sense of common efficacy. They also had not established norms, and therefore had no available sanctions. The settlement was completely unorganized and functioned as four separate individuals rather than as a unified settlement.

The second case had limited bonding social capital. Structural social capital in terms of the *associação* was absent and, even though the village was designed to foster interaction between beneficiaries, it had not had an impact on their daily lives.

Bridging Social Capital

The settlement had limited bridging social capital. The beneficiaries did not participate in any outside groups. None of the beneficiaries participated in any sporting or religious events that would take them out of the settlement. They also had limited interactions with others outside the settlement. When asked about where their friends live, all three answered that they have friends everywhere. Yet when asked how frequently they visited other communities, they answered that it was too hard to “walk in the world”—they do not visit friends often. In other settlements, people mentioned meeting friends in Caninde when they go to pick up their government check. In this settlement, even though they all receive money from the government, only one of them mentioned interactions with people in the long lines to cash their checks. One of the beneficiaries

stated that he only saw friends if he found them on the way to Canine or in Caninde when he was running other errands.

In all three cases, bridging beneficiary interaction outside of the settlement was limited to family members. These ties were not bridging in the truest sense. Bridging social capital should provide the beneficiaries with access to information. These pseudo-bridging bonds might fulfill that function. The family of one beneficiary's wife was from Caninde. The couple had a tempestuous relationship. He drank heavily and tore the house apart. She left him and returned to Caninde. A week or two later he went to Caninde to win her back and she returned. This was a constant cycle. The back-and-forth provided the household with constant potential bridging interactions. However, these bridging ties may not have increased the useful information that they could use in the settlement. It should be noted that in response to another question the beneficiary answered that if things did not improve in the settlement that the family was moving to Caninde. He was not the only beneficiary with ties to Caninde. There was another household that received monthly visits from family living in Caninde in the settlement. The last beneficiary only had ties to his father's settlement nearby—again, mostly ties with family members. The amount of different information he could receive from family members who live nearby depended on the amount of bridging or linking social capital those family members had.

While family-based pseudo bridging social capital could aid information gathering, they did not help in the second aspect of bridging social capital, generalized social capital. It did not stretch trust to a larger group of people unlike themselves. The lack of interaction with others outside of the familial circle was reflected in the beneficiaries' lack of generalized trust.

The first beneficiary interviewed was apprehensive to speak to me. He relaxed only when

his wife mentioned who had brought me to the settlement. The others were apprehensive throughout the entire interviews. I am not sure whether it was because of distrust of the first beneficiary, or whether it was a distrust of me.

Their distrust was also revealed in their answers to questions about losing their wallets in nearby communities and in questions about the level of trust they have with other communities or nearby cities. “We trust, we trust in parts, we can not trust everyone”. The parts they trust are other family members. “If they are family, it is impossible they would not return [my wallet]”.

There was a village a short walk down the hill from them, but no one mentioned any connections or friends in that community. They even purchased supplies and foodstuffs in Caninde. This actually was not much of a surprise considering the local stores were more expensive, however even for small things forgotten in their monthly trips to Caninde, they did not turn to the little market. People who lived in the village near the turnoff to the settlement did not know it existed.

Their interaction with a more diverse demographic of horizontal ties is limited. Without bridging social capital the beneficiaries had limited access to information. Without the opportunity to interact with others, they had no reason to have developed generalized trust.

Linking Social Capital

Linking social capital was missing at the level of the community. One beneficiary, the prosperous beneficiary, cultivated his relationships with the agencies and, through these connections, knew about new projects and was able to take advantage of them. Due to the lack of unity within the settlement, this information benefitted only him; it did not extend to the rest of the settlement.

When Joao joined the settlement he brought only a couple of hens with him. In the settlement's seven years, he purchased four head of cattle, three sheep, five pigs, six ducks, and quintupled his poultry (or times ten if you count all the chicks). He had also slightly increased the amount of land he worked from 2 to 2.5 hectares, but most important, he had more than tripled his yield of beans, and added two more crops to the rotation: corn and castor beans. In his backyard he planted manioc root and last year was able to harvest enough to grind 4 burlap bags of flour. He also planted cilantro and green onions for consumption. Cilantro and green onions are the staple flavorings in many Brazilian meals. He also has fruits including bananas, papaya, and *caju* fruit. In addition to foodstuffs, he also planted a hectare of food for his animals: *capim elephante* and *palma*. What made him so different that he achieved what the others had not?

Even before I went to the settlement, both tech agencies mentioned his name. Everyone said I needed to talk to him, but that I, most likely, would not find him at home. He was always in Caninde at either of the tech support buildings. He was there asking about what projects he could do, how he could make things better. He has cultivated relationships with the people who distribute projects, with the people who give out tree saplings, and with the techs in charge of the castor bean operation. Through his connections, he made his life better. His lack of connection to the other beneficiaries meant that his connections help only him. I could also argue that even if the others had this knowledge, they would still not use it because they had not planted the crops they know. However, at least in theory, the linking social capital that Joao cultivates could benefit the settlement, but it does not. Joao has a high level of linking social capital but it is not rooted in anything to make the settlement better. His connections are undoubtedly helping him, but they are not used to help the settlement. Without an *associação*, a powerful means to

distribute his information to the beneficiaries was absent.

Another question was whether he felt sufficiently attached to the settlement to want to help. At the end of the interview, he talked about what improvements he would like to see.

“If someone from the SDA came and said we are going to divide the settlement. each one of you has your own piece of land with your title, your own debt. That way I do not have to wait for the others to be able to pay. Even if I can pay my part of the debt, I cannot pay. Everyone has to pay. Now if the community was divided and everyone paid their own part that would be much better. Everyone would take care of their own land and find a way to pay for themselves. It is not easy but every year when the time comes to pay the debt I buy a calf or baby goat, even if we cannot pay now, when the time comes to pay I will be able to pay [my part].”

For him, success meant getting out of the settlement, being able to work on his own, and on his own terms. A couple of months after my visit and chat with him, he petitioned for a renegotiation and individualization of the PRONAF-A part of the debt.

In this case bonding social capital could provide the structure---through the *associação*—through which he could bring his linking social capital to involve the others in these exciting projects. Bonding social capital should also give the others a reason to trust him each time he deemed a project worthwhile. It did not matter if he shared prosperity secrets if no one would listen and apply them.

Other than through personal connections, the beneficiaries should have been able to develop structural linking social capital by cultivating ties to people who work in the community. However, the presence of a technical support team has been sporadic. From the *Secretaria do Desenvolvimento Agrarios* (SDA) documents they have had minimal technical support. The records indicate the settlement received technical support for the initial paperwork and for the initial round of establishing the settlement. One team helped them with this process but in

November of that year, they were replaced by another team, who had a three month mandate to organize the beneficiaries to decide what they wanted to purchase with the investment grants, get quotes on the primary materials, discuss taking on projects through the PRONAF-A, establish an irrigation system, and assist with implementation. How was the team supposed to do all of that in three months? They were able to accomplish their goals through, not building capacity in the beneficiaries to make their own decisions, but by using cookie cutter projects that the beneficiaries could either accept or not. There was no other record of technical assistance in the official documentation. One of the techs at CACTUS told me they were responsible for six months in 2010. EMATER-CE said they had not been responsible for the settlement since its first year.

The lack of technical support in the settlement produced a huge problem in the settlement. The settlement registered the land sale at a notary's office in Caninde. In 2006 they went to change one of the beneficiaries on the title and found that they had been victims of fraud. Instead of registering the title, the company took their money, along with that of several other settlements, and disappeared. They therefore do not have a legal title to the land even though they paid 2,200 Reais to register the land. They had been told that they needed to pay the fee again to someone else. The case was working its way through the judicial system. They should have had competent assistance to register the land. They did not. In the documentation and through my interviews with the tech support and beneficiaries, the settlement had only had fifteen months worth of technical support in its seven years in existence.

Linking social capital was weak in the settlement. There was only one person with emotional ties to linking social capital. The settlement had not seen much technical assistance

and therefore there had limited structural social capital.

Does it follow the pathway?

The settlement, as expected, does not follow the theoretical pathway. The following chart shows which aspects the community had and which they did not. An element was strong, in most cases, if over fifty percent of the beneficiaries reported the variable. The threshold for strong bridging and linking ties was thirty percent.

Bonding Social Capital		Bridging Social Capital		Linking Social Capital	
Kinship	S	Generalized Trust	W	Generalized Trust	A
Common Characteristics	S	Access to Information	W	Access to Resources	W
Common Identity	A	Friends outside the Community	W		
Trust	W	Outside Groups	A		
Informal Insurance	A				
Proximity	S				
Collective Decision Making	A				
Efficacy	A				
Norms/Sanctions	A				

Table 4: Did the settlement follow the pathway? Case 2

The settlement had the initial elements of bonding social capital, but it had not been able to translate that into a common identity. Therefore it was no surprise that two important variables that stem out of a common identity, trust and informal insurance, are absent. Structural bonding social capital in the form of a community organization or associação is also absent. There is no settlement organization so by definition they do not make decisions together. They have also not established any rules for how the settlement should be run and therefore no one is responsible for meting out sanctions.

The only bonding element the community is strong on is proximity the agro-village is compact and the beneficiaries' houses are all within eyesight of each other. Unfortunately, the spatial design does not lead the beneficiaries to interact.

There was very limited emotional bridging social capital and pseudo-bridging social capital. The type of ties the community had could potentially be useful for the exchange of information it is not useful for developing generalized trust. They had no structural bridging social capital.

Only one person had any linking social capital in the settlement. The personal ties that he created have allowed him to have access to resources. It had not translated into settlement improvement because there is no bonding social capital to tie him to the community.

MBLR Conclusion:

After discussing the first two cases I will look at their differences and similarities. These cases were supposed to show theoretical replication: the successful case presenting a different path than the failed case. I will first look at their similarities and then the differences. Neither

case followed the model. The following table is a side-by-side comparison of the two cases.

The differences are shaded.

Bonding Social Capital			Bridging Social Capital			Linking Social Capital		
	1	2		1	2		1	2
Kinship	W	S	Generalized Trust	W	W	Generalized Trust	A	A
Common Characteristics	S	S	Access to Information	W	W	Access to Resources	W	W
Common Identity	A	A	Friends outside the Community	W	W			
Trust	W	W	Outside Groups	W	A			
Informal Insurance	W	A						
Proximity	S	S						
Collective Decision Making	W	A						
Efficacy	W	A						
Norms/Sanctions	S	A						

Table 5: Market Based Land Reform Comparison

In both cases a significant number of beneficiaries left after a large falling out. In one case it was after a fight over services to be received, in the other it was a family disagreement. Both

settlements were founded around the same time. Both were part of the same program and offered the same initial package of loans and grants. In both settlements the level of bonding social capital is over reported. Neither of the settlements have access to multiple streams of bridging or linking social capital. Both of them have one person who has strong linking social capital. Yet they have radically different outcomes.

Where did they differ? They differed in settlement organization. The beneficiaries in the first case—even if the beneficiaries could not say whether they meet weekly or monthly—knew that the *associação* existed and that it was a positive element. When asked about the function of the *associação*, every single beneficiary stated it existed for their communal benefit. Some spoke of the administrative elements such as ensuring that documents are filed for projects, pensions, or other purposes. Others spoke about the need to work one day per week for the community, either within the settlement or on the community plot they are planting to pay the land. Many spoke of the importance of discussing and agreeing on what work they needed to do within the community. The deliberative aspect of the *associação* was the most important as decisions were made and carried out by the will of the beneficiaries. They chose, and are therefore invested in carrying out, those decisions. The degree to which the decisions are democratic decisions is debatable; their legitimacy is not.

In the past couple of years, they, as a group, decided how they were going to pay their loan. They rented part of their land and worked on a collective plot for which they have sought improvements. In 2011 they decided that they were not going to plant a collective plot, and that when the time came to pay the loan, that they would each find a way to pay his part. It was difficult for many of them to save over the course of the year, but they did, and they paid. They

learned from their hardship, and in 2012 decided to go back to planting a collective plot.

Their decision was the most important element. They showed over the years that they were able to achieve goals when they work together. This created a sense of efficacy within the associação and through the associação. Even though they may not have the highest levels of bonding social capital, the associação provides the stage for them to work together.

In the second case, the beneficiaries did not have an associação to bring them together. They were not able to converse or find solutions to their problems. They were individuals and not a settlement.

The organizational difference was highlighted in how individuals translate their bridging or linking social capital within the community. In both cases there was one person who had a high degree of bridging and linking social capital. They frequently visited the techs in Caninde and the rural workers union. They cultivate relationships with the leaders of other settlements. In short, they both had strong personalities and go out to seek improvements. In the first case those improvements were brought to the community. The president found out information and passed it along at the monthly meetings. There are discussions about potential opportunities. Several people in the first case mentioned that the reason for the associação was “so the president can, when he returns from Fortaleza or Caninde, explain what is going on. [Explain] what is what to us so we can participate. [The president] does a lot there”. The president brought the information back so they could discuss and digest the information together. In the second case the improvements helped only the individual. Without the associação, opportunities and information stayed within one person, and the community did not share the benefits.

The two settlements had their own unique problems. While one settlement overcame them, the other settlement succumbed. The difference in outcome was not the intersection of the three types of social capital--bonding, bridging, and linking as the model suggests. Instead the comparison of these two cases suggests that success was predicated on settlement organization, and the variables that came out of that organization such as collective decision-making, efficacy, and enforcement of norms. In the first case, community organization meant that access to resources, which one person had, was made available to all of them. In the second, one person had the similar access to resources, but it was localized.

Chapter 5: State land reform settlements.

Traditionally, land reform was initiated by the state. Early on, the Brazilian land reform agency, the National Institute for Colonization and Land Reform (INCRA), centered its efforts on colonizing frontier lands. Initially, INCRA plotted state land, divided it into tracts, and the distributed titles to individual settlers. As land became scarcer, and the social pressures increased, INCRA altered its land reform efforts. The land is no longer on the frontier. Instead the state, with pressure from social movements, shifted focus to expropriating land that was not serving its social function. The Brazilian constitution drafted in 1988 required that land meet four requirements: land use must be rational and adequate; land use must make good use of the available natural resources and preserve the environment; land owners must obey labor laws; and land must be used in a way that improves the lives of the owners and the workers. The constitution's Article 185 also stipulated which lands were ineligible for expropriation namely, small or medium productive properties. The law was codified in the 1964 Land Statute and again in the 1993 Agrarian Law, which delineated the characteristic of lands that can be expropriated. The beneficiaries of reform received a land use title and are not allowed to sell or trade the land. The land belonged to the settlement and if a beneficiary were to leave, he cannot sell his plot or house.

State settlements can be much larger than MBLR settlements. MBLR settlements have fewer than twenty families, whereas INCRA settlements can have several hundred beneficiaries. Like MBLR, INCRA beneficiaries must meet certain prerequisites to be considered. Some of these restrictions include previous ties to agriculture and earning less than a predetermined amount.

As with the market based settlements there are exemplary cases and some that serve as an example of what not to do. This chapter will consider the best and the worst redistributive land reform cases in Caninde. These settlements, like the MBLR settlements, should have a habitable infrastructure, consumer goods, crop or livestock increases, alternate forms of income, community infrastructure, and be up to date on their debts to be considered successful. This chapter will examine how the redistributive cases fit or deviate from the theoretical causal pathway. There should be theoretical replication across both of these cases.

Case 3

The technical staff considered the third case to be one of the best settlements in Caninde. The settlement is not far from the city center, less than 40km. What should be a short drive is a four-hour-long ordeal because of the road conditions. Transportation to the settlement was on one of three covered trucks. We sat on boards laid across the truck bed and shared space with foodstuffs, livestock, and barrels of gasoline. The tops of the lively trucks were piled high with goods. Several kids from the settlement came to Caninde daily to study. Beneficiaries and members of the neighboring communities traveled to Caninde to go to the bank, to see a doctor, or to resolve paperwork. All three of the trucks returned to the settlement full.

The highway was well kept and, even though we stopped for passengers along the way, it was quick. Once we turned onto the gravel/dirt road the style of driving changed. The truck engine strained to pull the load over the holes and the well-worn, deep gouges in the road where the trucks passed the previous rainy season. There were certain places where the dirt was loose. When cars passed our truck, dirt spewed in to the air, and breathing without covering one's nose was impossible. We stopped about halfway there to rest and stretch our legs. There was a small store with water, snacks and other drinks. The men went inside the store and the women either stayed on the truck or hovered outside of the store on the shaded porch. The second half of the journey was bumpier as we went up and down hills and traversed tributaries of a local river. The river was reduced to a trickle. When there was a lot of rain, the river could take out the bridges, flood the road, and could block access into or out of the settlements. We passed a handful of communities along the way.

The settlement abuts and is divided by the neighboring community. The settlement

shared multiple boundaries with the community of the same name. The transport dropped us at the old section of the settlement. When I arrived, there was a large stereo blaring to celebrate someone's going-away party. He was going to Sao Paulo. There are six well-maintained houses in this section. Each of the houses had a backyard garden, a corral, or both. The settlement split at the end of the six houses. To the left was a small path that led to three other homes and a small pond. To the right was a path that led through a section of the neighboring community and connected with the other part of the settlement. This larger part of the settlement included the settlements' community house, half of the beneficiaries' houses, and storage sheds. At the end of the row of houses there was a small cemetery.

Settlement Origins:

The settlement was unique in the way the National Institute for Colonization and Agrarian Reform (INCRA) received the land. The land the settlement occupied once belonged to a dysfunctional family. The original owner of the land was a drunk. During one of his binges he imagined that his teenage son was plotting against him, so he killed him. The law being what it was, and he being a wealthy landowner, he was not punished. Time passed and one of his other sons murdered him to avenge the death of his brother. The boy was sent to prison for a couple of years. All of this happened in the late 1960s. Since then the land was passed from one corporation to another. The last corporation sold the land to the INCRA. After the sale, rumors started that the land was going to be turned into a settlement.

The settlement associação grew out of an existing associação. Many of the original beneficiaries were a part of the community associação and through their participation in the associação learned of the sale and subsequent land distribution. The members organized to form

another associação for those who wanted to participate in the settlement. The new associação started meeting before the land was distributed, before they were registered as beneficiaries. In the words of one of the beneficiaries, “We always lived in this community, we were always members of that associação and we always wanted a piece of this land. This land was the largest in the area and we fought for it through the associação”. When he said he fought for it, he meant fought for it in an administrative way by filing paperwork and petitions with INCRA. Another beneficiary also suggested that they received land was because of the associação and the meetings, “Here we got the land through our associação. We met because we wanted land. We did not need to invade anything. There are some settlements where people invade, we did not need to do that”. Twenty-two of the original twenty-three families were in some way related to the original associação. Sixteen of them participated in the study.

Before establishing the settlement, INCRA determined that the land was sufficient for only 13 beneficiaries. When they visited the property on registration day, the members of the associação insisted that they join together. There was another neighbor who, even though he was not a member of the associação, wanted to join the settlement as well. They incorporated him into the demand that all of them receive the land. INCRA registered all 23 families. The first part of this chapter looks at how and why this settlement did so well in spite of the obstacles it faced.

Economic State:

This settlement, compared to the other settlements, is much better established and more successful. I determined success based on individual and settlement infrastructure, consumption goods, crops and livestock, diversified income and up to date on their debt.

The settlement and community were so enmeshed it was hard to distinguish between

them. There was no division between the poorer settlement and the richer community. Socio-economically they looked the same. While the school and church were technically in the community, they bordered the settlement. The beneficiaries also had access to healthcare. The community had a clinic, and a health agent regularly visited the beneficiaries' homes. The houses were painted, the interiors were habitable, and they all had septic tanks and indoor restrooms. The houses were all built according to the minimum INCRA house size. Some homes are much larger, and two beneficiaries had more than one home: one in the settlement and another in the community. The settlement had electricity in all of the houses and there were streetlights in one segment of the settlement.

Consumer goods in this study were also used to measure success. In this settlement the beneficiaries had many domestic appliances. The kitchens were well equipped with a refrigerator, gas stove, and small appliances (e.g. a blender). Most also had a wooden stove, which they seemed to prefer. Of the sixteen beneficiaries, only one did not have a refrigerator and gas stove—(s)he just recently moved to the settlement. Other items that were not on the questionnaire include washing machines (2 families) and sewing machines (at least 4 families). All but one of the houses had at least one television with the companion parabolic antenna. Thirteen of the sixteen families interviewed had a DVD player. One young beneficiary was playing a PlayStation game when I knocked on his door. There were many motorcycles—some houses had more than one and there was at least one motorcycle per household.

In dry climates, such as the *sertão*, access to water has always been an important determinant of settlement success. The beneficiaries all had cisterns and there were two dams, one very close to the settlement, the other a short walk away. There was even a freshwater spring

on one part of the settlement. The spring was used for entertainment rather than for irrigation but in case of a drought, they had drinking water.

Many of the beneficiaries joined the settlement in 1998 with little more than the clothes on their backs. In general, they increased their holdings. The survey asked the beneficiaries to report on how many animals they had when they arrived at the settlement in 1998 and then asked about their holdings in 2012. The sheep population had seen the greatest population increase. The sheep herd exploded tenfold from 9 sheep to 91 sheep. The number of goats, pigs, horses, and donkeys also increased dramatically. Together the sixteen households interviewed have 38 goats, 44 pigs, 22 horses, and 126 chickens. Cattle, not well suited for the *sertão*, increased as well, but at a much slower rate, from 9 to 16. Their cattle, expensive to maintain, brought in small profit margins. There were two beneficiaries, whose herds decreased, but these cases were explained by illness in the family or retirement.

The beneficiaries increased their yield per hectare in all of their crops. There was data missing from four households because I interviewed the wives while the husbands were away, and I could not return to get accurate numbers. The average hectare planted hovered around 2 for both the initial year and 2011. Everyone reported a higher bean yield in 2011 than the year they first planted. In 1999, the settlement average was about 100kg. In 2011 the beneficiaries produced more than four times as much (432kg). Some beneficiaries only saw an increase of two or three times their original yield, however others report a tenfold increase. The corn yield was very impressive. From 228kg beneficiary production increased to an average of 1404kg. Each beneficiary at least doubled or tripled his yield without increasing the area of land planted.

Aside from higher yield in traditional crops, the beneficiaries started planting castor

beans destined for biodiesel. Nine of the sixteen beneficiaries planted castor beans. I did not have data for two households. As discussed in a previous chapter, the government offered a lucrative payment scheme: they gave the beneficiaries seeds, pay a bonus per hectare planted, and at the harvest pay a fair amount for the yield. Beneficiaries chose to plant castor beans because they could plant them among their other crops. The beneficiaries therefore did not have to give up their traditional staple crops. The nine beneficiaries produced an average of 248kg of castor beans. One individual, planting an extra hectare, produced 1200kg of castor beans. His yields were an anomaly. The other eight beneficiaries averaged 175kg.

The beneficiaries also planted within the agro-village. Nine of the sixteen beneficiaries planted vegetables for consumption in their backyard and ten cultivated fruit. These extra crops showed how they were efficiently using the land. The diversity of their crops and livestock were reflected in their diet. The beneficiaries' diet included herbs, fruits, and vegetables. Milk consumption was also much higher than that of the other settlements. As a side note to emphasize the diversity of these backyard projects, one of the beneficiaries had a segment of her garden planted as an herbal pharmacy.

Almost all of the households had diversified in some manner. Fourteen of the sixteen houses have income outside of *Bolsa Familia* (which all but four of them have as well). The types of income varied. Some sold ice cream, meat, milk, jewelry, or honey. Others worked with crafts making tapestries or doing crotchet. Others worked with physical labor—carpentry, washing clothes, or on the transports. This level of diversity was perhaps facilitated by the proximity to other settlements and communities, but that cannot be the sole cause. The second settlement I studied was also close to a community and they had neither secondary production

nor primary production that did not come from the land.

Even though the beneficiaries' livelihoods were improving, some households were much more prosperous than others. This was especially true of the houses receiving retirement benefits. The few households that were not doing as well were both recent additions to the settlement. One the family had thirteen children; whose numbers were a hindrance for economic improvement.

The beneficiaries also worked together on some of the most labor-intensive projects. In one example, they collectively vaccinated livestock for rabies. As one of the beneficiaries put it, "whatever they give us to make the little guys healthy". They did not have a collective herd, so individuals undertook daily animal care. However, collectively they maintained the settlement, such as mending perimeter fences. The fences enclosing the settlement were well maintained. One area of the settlement, the smaller area, was completely fenced; piglets were left to roam there freely.

Two parts of the settlement could have been better maintained: the storage huts and the community house. Prior to receiving the housing credit, the beneficiaries lived in huts, which they later repurposed as storage units. These houses looked precarious, but as they were only used for storage, they were serving their function. The community house is also poorly maintained. On the side veranda there are still signs of blood where the ex-landowner was killed. The beneficiaries did not want to invest time or money remodeling something they did not see as theirs. They were waiting for INCRA to pay for the improvements.

The following table summarizes the settlement survey responses. With the exception of one or two households the settlement had all of the markers of a successful settlement. Even the

households that fell outside of the norm were due to specific temporary reasons rather than systemic problems. At least eight of the sixteen (8/16) beneficiaries had to report success for a settlement success.

Indicator	Beneficiaries	Successful
Housing Infrastructure	16/16	Y
Upkeep	15/16	Y
Access to Water	16/16	Y
Consumption Goods	15/16	Y
Crops	14/16	Y
Income	14/16	Y
Individual Debt	2/16	N
Communal Infrastructure		Y

Table 6: Is the settlement successful? Case 3

Social Capital

Bonding Social Capital:

The settlement had high levels of emotional bonding social capital. The settlement, like many of the others, was comprised of a handful of families. There were two or three main family lines with their children and spouses filling out the rest of the settlement. The family connections were extensive as the children of the initial cluster of families intermarry. There were several beneficiaries where both sets of parents of the couple were also beneficiaries in the settlement. The kinship ties outlined in the model were present and strong through multiple linkages.

They also shared common characteristics, which the model argues could facilitate the creation of a common identity. In this case, as in the others, the beneficiaries were similar. They all lived in the vicinity of the settlement. The original beneficiaries had the same socioeconomic background. Before the settlement, they were all sharecroppers, working on someone else's land, paying the landlord one share of every five they harvested. They had the same motivation to join the settlement: to work the land and be able to raise animals. "I came to the settlement because where we worked, on the landlords land paying shares, no one could have any animals because he would not let us. Things were hard". The landowner did not want them to raise animals because they would compete with his and there was limited food for them to eat.

The confluence of kinship and common characteristics in this settlement worked to create a cohesive community. I used regular interaction as a functional measure of community cohesion. All of the beneficiaries I interviewed said they spoke to their neighbors daily, or every other day. One of the beneficiaries said, "When I go to get anything at the market, I go from one door to the next talking to everyone. That is my entertainment. Going from door to door". Another similarly responded, "Of course. We go to everyone's house because people like us. There are days where we do not leave the house, not even to go to my daughters, but then they come here. Today I already went to my son Edilson's house, then I went to pick *acerola*, a cherry-like fruit, with my sister-in-law Maria, who is Chaga's mom, and then Joao, my brother, came over to watch television." The rest of the beneficiaries' answers followed this same line.

Social capital theory suggested that the more the beneficiaries interacted with one another, the stronger the emotional ties. Without hesitation, each beneficiary responded that the other beneficiaries are his friends. "I like my neighbors very much, I always did, since we started

the settlement I have gotten along well with them. Every one of them are (sic.) good people.”

This sentiment is echoed in many of the stories. Of the sixteen beneficiaries asked whether they were friends with neighbors, thirteen answered with stories indicating the depth of the friendship. Three others answered in the affirmative as well, but did not elaborate. There was no reservation or hesitation in the answers. I did not hear stories of intrigue or of backstabbing.

Through the interviews and also by observing interactions among the beneficiaries, I was able to observe that they have formed a collective identity. They see themselves as a part of the settlement, as a piece of the whole. One of the beneficiaries said, “we are all one”. One of the questions that probed for a common identity asked about whether people cared about the settlement. Only one of the sixteen beneficiaries interviewed said he thought his neighbors only cared about themselves. The other fifteen beneficiaries answered that at least some of their neighbors, if not all, care about the community and not just about themselves. One of the beneficiaries stated that of course everyone cares about the settlement. “There was one meeting that we talked about the need to burn more land to plant. The techs asked me why I cared. I am already retired, but the others are not retired; they need to plant to live. We have to care about the others. We consider each other like a part of a family and one part cares for the other”. While he was unequivocal that all of his neighbors cared about the settlement, others qualified their answers with “people care, but some care more than others.” As a settlement, they are united and have a common identity.

The model suggests that trust is facilitated by the existence of a common identity. One of the questions related to trust asked the beneficiaries, if he lost his wallet in the settlement, would someone return it to them. Remarkably, fourteen out of the sixteen beneficiaries answered that

they would get their wallets back. One answered, “Honestly, I think of the beneficiaries here.

If they found my wallet full of money, they would return it the exact way they found it”. A

couple, after saying that they would get their wallets back, qualified that they would get also get their money back unless it was found by a kid. “Here, within the settlement, they would return the wallet. Unless it’s a kid, if it’s a kid they have no shame, you cannot trust them. But at least they would return the wallet and identification if not the money.” It was clear that beneficiaries trust one another, if not all of their children.

Theorists such as Fukuyama (1995) and Knack & Keefer (1997) argued that trust was correlated with economic development. In this settlement, trust played a large role in their internal commerce. Trust enabled the beneficiaries to run businesses on credit instead of through direct payment, which, in a community with little cash income, was crucial. The beneficiaries could pay at the beginning of the month, after selling an animal, or at harvest time. Credit enabled them to purchase things they otherwise would not have purchased. For example if someone ran out of meat in the middle of the month, and his was extended credit, he could purchase the meat then repay at the beginning of the following month. If, however, they did not have access to credit, they would go without meat. The following month they would not purchase extra meat to make up for the time they did not eat meat. They would purchase an amount sufficient to get them through the month. They would probably also purchase it in Caninde because the prices were lower. The butcher in the settlement would go out of business. On the other hand, if the butcher provided credit, and there is no trust, he would have to expend valuable time and energy trying to collect, which would decrease profits. The extension of credit amongst themselves speaks to their level of internal trust and facilitates internal commerce.

Another variable facilitated by a common identity is informal insurance. Informal insurance and trust could intersect through short-term loans to a neighbor in need. All sixteen beneficiaries answered that they would have no problem lending their neighbor money. I expected this because everyone liked to attribute positive qualities to himself/herself. Two beneficiaries answered that they already had lent money, so they saw no reason to stop lending now, “People will lend. My neighbors have already lent to me in the same way that I have also lent. Whatever is missing here or there we help each other we are family” Eleven of the beneficiaries said they think that, if they needed it, they could count on neighbors to lend them money. Another four answered that their willingness to lend depended on the person asking for the loan, but they were sure they would be able to get help. “I still do not know if I would get help, I have not asked for it. But I think that, because I have lent, I think that surely they would lend me too.” Only one beneficiary said he could not count on a loan in the settlement.

Another way to ask about informal insurance is to ask, “What would happen should your crops fail? Would you receive any help? Who would help you? What kind of help?” All but three people said that if he had difficulties someone would help him through. “One of these years we had someone that was in need and we all helped. Every one of us gave a little bit of food for them, and no one went hungry. When we built this house, everyone helped. We had the materials but we could not build the house alone. One day one person helped, the next day a mason helped. That is the way we built the house. It was the same with the cisterns. One day we built one persons, the next day the next and now everyone has a cistern”. The question itself asked about help in dire consequences, and the answer this person gave included times of distress but also how they count on each other for help on a regular basis. The majority of the answers were more

limited, for instance, they could count on food for themselves and their family. Including, it seems, from those who do not have much. “There are many people here that sometimes do not have anything, but if someone goes to their house and asks for help, they will find a way. They like very much to help”. Illness was also another reasonable time to expect aid. Several people mentioned that one were ill, the settlement would come together to work his land, specifically during growing season. Alternatively, they might pay for one’s fare to the hospital in Caninde or if, serious enough, to Fortaleza.

The settlement’s emotional bonding social capital followed the model. Kinship and common characteristics developed into a common identity. Through that common identity the beneficiaries trust each other and provide mutual insurance.

Bonding: Structure

Ironically, the spatial design of the settlement suggested less interaction among the beneficiaries. Instead of being structured into a compact agro-village, the settlement was comprised of three separate nodes. The sections were close to one another but separated either by water, space, or another community. Theory, based on the design of the agro-village, expected them to have less social capital than the other settlements. The spatial design of the settlement did not influence their emotional bonding social capital as they formed a cohesive community, even though they lived further apart and separate from the others.

While this settlement did not have the first structural variable, it made up for it with organization. The settlement associação was the main mechanism for community interaction. There were six associação meetings each month, and decisions were made with all the beneficiaries. On the first Sunday of the month the settlement board met to discuss any problems

that arose the month before. If there were problems between beneficiaries to be resolved, they would come and talk to the board. The general assembly met the second Sunday of each month, to which all beneficiaries were invited. Monthly meetings focused on larger issues. All of the beneficiaries were expected to attend the monthly settlement associação meeting. The associação organized the community through collective decision-making. The presidency changed every four years and everyone seemed invested in the settlements outcome.

The weekly meetings determined the project for that week. The weekly meetings ensured that all problems were acknowledged and dealt with quickly. The weekly meeting was mandatory for at least one member of each family. Whether it was fixing a fence, or widening the trail behind some houses so kids could play, it was about settlement improvement. Men generally attended those meetings. Two or three male beneficiaries mentioned it would be great if women came to the meeting. However, one of the female beneficiaries with whom I spoke said she was told not to come to the weekly meetings, and to limit her participation to the monthly meetings.

For such a well-established settlement, it surprised me that the current president did not know much about settlement affairs. He was relatively new to the settlement and new to the position. When I asked him about the settlement, he knew less than the other members of the board. Though this board had a president, board members had relatively equal power and worked together. This was different from the type of leadership shown in either the first or second case. In the first case, the president did all the work while the other beneficiaries listened. In the second case there was no leader, and in this case the leadership is more diffuse. This type of leadership was consistent with the leadership structure found in the Floras' entrepreneurial

communities. “By emphasizing flexible, dispersed community leadership, communities avoid becoming dependent on a single broker who has contacts or charisma. In entrepreneurial communities, members rotate through public offices and share informal leadership roles” (Flora & Flora, 2004, p. 69). The Floras argued that this was the best type of leadership structure. Their findings were also congruent to what Titeca and Vervisch (2008) found in Uganda. When communities become dependent on one gatekeeper, it can lead to corruption.

The beneficiaries have different conceptions of what the *associação* is supposed to provide. Some of the beneficiaries highlighted the interaction between the *associação* and the beneficiaries. “...the function of the settlement is that we live in a group. We live in a community and we have to work in the community for it to serve us and for us to serve the *associação*”. It is a synergistic relationship. Another saw the *associação* in a more functional manner, “The duty of the *associação* is to represent the beneficiaries: look for new forms of income, something like that to help the beneficiaries. It is to fight for improvements in the settlement, look for projects or something like that”. Another group focused on the deliberative aspect of the *associação*. “We have the directory and general assembly to talk and discuss matters.” Another group that focuses on the coordination effort of the *associação*. And finally one of the beneficiaries also included sanctions. “When something goes wrong we have the meeting where we can prod the person to go in the right direction”. The beneficiaries saw the *associação* serving several roles; functional, organizational, forum for discussion, and for norms enforcement.

The *associação* garnered improvements in the settlement, which gave it more strength because of its efficacy. Efficacy reinforced the level of trust people place in decisions made by

the associação. Decisions, such as determining which animals are allowed to roam freely and where they may roam, were made within the associação. In this settlement, piglets were allowed to roam in a section fenced off from the community, but in the section of the settlement that was not fenced no animals were allowed to wander freely. All of these decisions affected the outcome of the settlement and of the families. Trusting that, by governing together, they could come to mutually agreeable decisions was important.

One of the most controversial questions with which the settlement has dealt was expulsion. As the organ that enforced agreed-upon norms, such as expelling beneficiaries who have been absent from the settlement longer than 90 days, or those who had full time employment outside the settlement. The settlement endured substantial workforce migration to the Sao Paulo sugar cane fields. Many of the beneficiaries either had children who had gone, or had themselves left and returned. The Sao Paulo connection meant that several people were expelled from the settlement to make room for others who wanted to farm. To be able to do that, the associação had to know the INCRA bylaws and have sufficient clout to expel friends and family. It was not a large settlement—they are family—but the majority of them had in the previous year voted to expel some people. They enforced community norms even though it sanctioned those close to them.

Though the settlement is small, fewer than 25 families, it is still host to multiple groups. A son of one of the beneficiaries tried to start a youth group. It had yet take hold, but he was still working on it. The group planted trees in the middle of the settlement to create a “green island”. He also organized the opening of another trail for children to ride their bicycles. A backyard group, defunct when I visited, left the legacy of fruits and vegetable in most of the backyards. A

new group had recently formed around a mandala project: a project designed to make the most of limited space and water. The design has at its center a pump and a concrete fish tank. The pump brings in clean water, and the nutrient-rich fish water is pumped to the crops planted in a circle outwards. Plants closest to the fish tank needed water the most, and plants farthest away needed the least. One of the women, who participated in all three agricultural production groups, had already started sprouting seedlings. When the project starts, she will be ready. These internal groups crossed individual family ties and integrated all members of the community.

Bridging Social Capital:

The settlement had high levels of bridging social capital. When I asked where their friends lived, only three out of the sixteen answered solely within the settlement. Friendships were spread throughout the region including the countryside and Caninde.

At the structural level, the beneficiaries participated in soccer tournaments with settlements in the surrounding areas. The settlement soccer team existed for over a decade. INCRA (2000) documents show that the beneficiaries and their children organized to practice during the week and also played against neighboring settlements and communities. Coming together with beneficiaries from other settlements and villages in the area provided a free space for people to interact and to build ties with other communities. These different overlapping and crisscrossing relationships were the basis for generalized trust. If one played soccer with a team from another settlement and one played fair, one would start to trust them.

Another way beneficiaries created structural bridging social capital is through religious organizations. On the day I was supposed to visit the settlement, I could not find my contact because he was in the adjacent village practicing for the Stations of the Cross. The village had a

Roman Catholic Church, which provided a place to meet and organize religious events. Some beneficiaries also frequented a neighboring settlement's evangelical church. The two churches provided great opportunities to build bridging social capital because they drew people from the surrounding area. Building these relationships with the "other," with unlike people, creates a broader level of trust.

Connections with people from urban areas broadened trust further. In general, beneficiaries went to Caninde only at the beginning of the month to receive their government checks and to pick up foodstuffs for the month. The banks and the lottery stands acted as *de facto* meeting spots for people receiving something from the government. It was the most-cited place when I asked the beneficiaries where they interacted with other beneficiaries. The lines on payday were long and it gave people substantial time to chat with their neighbors. Beneficiaries also had interactions with people from other settlements on transports. The transports passed through many settlements and villages, and by individual houses on their ways to Caninde. They stop anywhere they see someone standing. In this manner, beneficiaries from one settlement can interact with beneficiaries from other settlements.

Linking social capital:

Multiple beneficiaries had ties to multiple different organizations and groups. I expected this kind of linking social capital to provide the beneficiaries with access to information and resources that would otherwise not be available to them (Woolcock & Narayan, 2000). Linking social capital in this settlement fulfills those roles.

One of the beneficiaries worked at the rural worker syndicate and therefore knows how the system worked, all of its requirements, and how to fill out the paperwork. Many of the

beneficiaries sought his counsel before going to the union, so as not to waste their time. He was a liaison between the union and the settlement. This tie had a dual benefit. Aside from the beneficiaries having access to information about the union, the union worker as part of his job interacted with beneficiaries from other settlements. He visited other settlements and through those visits distilled best practices to pass on to his own community.

He was one point of contact with potential linking social capital, but he was not the only one. A son of one of the beneficiaries was frequently present at the tech's office. He was in the office on the multiple occasions I was there. He cultivated a friendship with the techs. The technical support could only visit the settlements four to six times a year. A lot could happen in the three months between visits. By virtue of his being present in the tech headquarters, he received real time information and knowledge of what went on in other settlements and when projects generally got funded. He was well situated to know about opportunities, and was there to ask for them. For example, he was able to land the youth group's trees project because one of his friends in the tech office called to let him know that the saplings had come in. He got first choice of the saplings because he knew what was going on. Other settlements that had also been approved for the projects, unless they too had personal connections, had to wait until the technical team reached their settlement with only the remaining saplings.

These are just two examples of the many linking ties that existed in the settlement. The beneficiaries with the ties funneled information back to their communities so the community as a whole could benefit. The settlement had frequent meetings, more frequently than the minimum mandated meetings, and therefore had the mechanism through which to share that information. The people who brought information were valued, which reinforced their desire to play that role.

Does it follow the pathway?

This was the most successful of all the cases I studied. It had high levels of bonding, bridging, and linking social capital. Did each point exist because of social capital or because of another variable?

Bonding Social Capital		Bridging Social Capital		Linking Social Capital	
Kinship	S	Generalized Trust	S	Generalized Trust	S
Common Characteristics	S	Access to Information	S	Access to Resources	S
Common Identity	S	Friends outside the Community	S		
Trust	S	Outside Groups	S		
Informal Insurance	S				
Proximity	A				
Collective Decision Making	S				
Efficacy	S				
Norms/Sanctions	S				

Table 7: Did the settlement follow the pathway? Case 3

The settlement had high levels of bonding social capital from the building blocs of kinship, and common characteristics through the creation of a common identity, resulting in high

levels of trust and informal insurance. Structural bonding ties augmented the emotional ties through the settlement associação. The settlement was organized and made decisions together. By working through their problems collectively the community built its collective strength, and the confidence that together they had the ability to make improvements for the community. Because settlement norms were decided collectively, they had legitimacy, therefore the beneficiaries heeded sanctions.

Proximity did not seem to be an impediment to repeated interactions. The lack of proximity did not influence the community. Even though the community was stretched into different areas, the beneficiaries reported high levels of daily interaction with the rest of the beneficiaries. They might not live close to their neighbors but they went out of their way to visit them, interact with them at the frequent meetings, or interact in other social situations. Proximity, though missing, had not been an impediment in the quantity of beneficiary interactions.

The pathway was also followed for bridging social capital. The settlement had emotional bridging social capital as the beneficiaries have personal connections throughout the region. There was also structural bridging social capital in the soccer leagues and the religious organizations in the community and in a nearby community.

There were also multiple linking social capital connections. There were personal connections through friendships with the advisors and with people in the movements and rural workers union. These connections led to resources that the community would not have otherwise had. They also had structural linking social capital because some of those friendships were created when the advisors were working in the settlement.

One of the possible differences in this community's level of unity, organization, and

ability to work together could be because they have been established for a much longer period of time. This settlement was established twice as long as the first two settlements I examined, eight or nine years vs. fifteen years. The first two settlements were founded in 2005 or 2004 and this one was founded in 1998. That extra amount of time could be one of the possibilities not accounted for in the model. While this could be a consideration and a possible factor the organizational presence from the beginning suggest that the settlement was as organized then as it is now. The problems present in the first two cases began almost immediately from the founding of each settlement, and this case did not have those problems.

Had I studied only this case, I would have concluded that social capital does lead to economic development because each point in the theoretical causal pathway exists.

Case 4

The last case was one of the worst INCRA settlements in Caninde. Getting to the settlement could be, depending on the season, precarious. The transportation system consisted of a hobbled bus that made the trip three times a week. The bus's front windshield was broken and covered with a plastic tarp. The back door was missing. Within a half hour after leaving Caninde, we turn onto a dirt road that passes over a large dam. The short distance to the settlement takes a couple of hours because we stopped every hundred yards to drop off either people or supplies. We passed isolated homes, communities, and other settlements. The settlement was at the end of the bus route. If it rained, the closest the bus would have come no closer than three kilometers, in a neighboring settlement. During the rainy season, when people needed to bring their groceries to the settlement, friends would wait for the bus with mules or wheelbarrows.

The settlement is not designed into a compact village. Instead it is stretched out, branched like a root system. The settlement started out relatively compact, with houses on both sides of the road within 50 meters of each other, but then it divided into two roads. One of the roads has houses, the other opened into a large clearing with houses, the school, and the community house. The clearing narrowed again, became a road, and rejoined the other part of the road. The road continued but the houses are spaced farther apart—200m to 300m—until it finally meandered to three houses over a kilometer away. There are a total of seventeen houses plus the school and the community house.

Prior to living in the settlement the beneficiaries lived in the area. A common response to how the settlement started was that they lived nearby and when INCRA announced that the land was to be redistributed, they joined. In this case, there was also no occupation of the land. Two

of the beneficiaries lived on the land, and when the landowner sold the land, they talked to their friends and asked them to join the settlement with them. “The ones that are in this settlement were all friends, there are no outsiders. Everyone that came to this settlement were already friends from the region”. The people who joined were all sharecropping. They grew the cotton and gave one-fourth to the landlord in exchange for a smaller plot to grow food. Even though this settlement had not done as well as expected, the beneficiaries still believed that it is an improvement on their previous status. “When we lived with the landowner, we had no freedom. Here that is the difference, I am not saying it’s a bed of roses, but it is much better.” Another beneficiary complemented the thought saying, “when we lived with the landowner, we were captive. Whoever lives in the settlement is free”.

Economic State:

The settlement was significantly poorer than the other redistributive settlement. Based on the measures of success previously outlined, such as individual and settlement infrastructure, diversified income, diversified agriculture, and being current on credit payments, this settlement did not measure well. The houses are not well maintained. In one of the houses the first room was turned into a goat pen. In another home, the toilet was a hole cut into the side of the house lined with a PVC pipe along the junction between the floor and the wall. The room was where the restroom was supposed to be, and there had been a toilet. Some people poured concrete to cut off the old septic tank, and reverted to isolating a small area in their backyard as the “restroom”. When I asked about what happened with fecal matter, as there was not so much as a hole to bury it, they responded that the pigs come by and eat it. These were the direst cases, but some homes still had the initial latrine. One of the homes in the settlement is still made of mud and thatch.

Overall the general impression the settlement gives is of controlled decay. The houses are maintained just enough so as not to fall over.

The houses were not built to the correct measurements, so they were therefore ineligible to receive further credit. I tried to get more information about the state of the settlement from INCRA and was twice sent information about the wrong case. After many emails and visits over the course of a year and a half, I could not get the official INCRA paperwork on this particular settlement. For all other settlements I had several sources, so I could cross-reference data and check for inconsistencies. For this settlement the data came from the beneficiaries and the technical support team. I did not have the official record of projects received. However, the beneficiaries and the technical advisors agreed that the settlement received the initial housing and infrastructure credits. They had not been eligible for loans or grants for housing upkeep. As a result, the houses are not well kept.

Regarding other infrastructure, the houses had electricity. The streets were not lit and there it presented more of a problem than in other settlements because the houses are spread apart. To walk to neighbor's house at night requires a flashlight. In other settlements, light emanating from inside people's houses was enough to guide one through the dark. There, that was not possible. All of the beneficiaries had a cistern and there were a couple of barrages near the settlement for water for their animals.

The beneficiaries did not fare too badly in regards to consumer products. There are a few households that are more prosperous than the rest, but the settlement is mostly homogenous in terms of socio-economic development. All but one of the beneficiaries had a television set, but only half had a parabolic antenna. Although the settlement was fairly close to Caninde, it is

situated such that most television, radio, and cell phone reception did not easily reach it.

When I was there, the only cell phone company that sometimes had reception in the settlement was out of service because an antenna had blown, so there was no means of outside communication in the settlement. The huge parabolic antenna is one of the only ways to get reception, so the people without it only received one channel, and only on clear days. There were a few households that were a little better advantaged, and, of those, three had a DVD player and one had a video game console.

The beneficiaries also had motorcycles and one of them had a car. There was at least one motorcycle per household, but a couple of the houses had two while some of the households had none.

The settlement was the least advantaged in terms of domestic appliances. Only six of the ten beneficiaries interviewed had a refrigerator. In a climate this hot, they had to purchase any perishables on an as-needed basis. When they slaughter animals, they cure the meat with salt and leave it to dry outside for several days. The *carne de sol* (literally, “meat of the sun”) is how the beneficiaries preserved meat and were therefore able to have meat daily without a refrigerator. Only five of the beneficiaries had a gas stove—those who had a gas stove did most of their cooking on a wood-burning stove.

Similar to the families in the other settlements, they arrived with limited livestock, and, for the most part, their holdings increased over time. There were three families whose only livestock were chickens, but the other six families interviewed have shown an increase. When the families arrived to the settlement, three households had one head of cattle. When I visited, there were thirty-two head in the settlement among six beneficiaries. The spread was pretty even

with a minimum of two and a maximum of seven, but most households had around four head.

Two families invested in sheep. They arrived at the settlement without any, then later had thirty-one and twenty respectively. The only animal that decreased in number was the amount of goats as the families who were raising them stopped altogether. The beneficiaries also saw an increase in the number of horses, where only one person had a horse when they came to the settlement, now there are seven.

The total crop yields barely increased since the year after settlement's founding—many people did not grow anything during the settlement's first year. The amount of land farmed has decreased slightly over time from twenty-four to twenty-one hectares. Three of the beneficiaries did not remember how much they produced the first year and another four said they did not produce anything. The total settlement production of beans the first year was 1020kg, but since only three people produced beans, the average production was 340kg. Total settlement production for 2011 was 3810kg, which included production from nine beneficiaries. When averaged, it is only 420kg. Which is not that much of an increase considering that they sell immediately after harvesting when the price is low. The beneficiaries said they received about twenty dollars for each 60kg bag. Corn production is likewise limited. The first year the three beneficiaries produced 2280kg of corn or about 760kg per person. In 2011 the beneficiaries produced a total of 5520kg, but when divided among the seven beneficiaries who plant it only comes to 790kg per person. In other words, their traditional corn-and-beans crop production has remained more or less the same.

To supplement their traditional crops, many settlements planted backyard gardens. However, these beneficiaries, in general, did not have backyard gardens and this is reflected in

their consumption patterns. Only two out of the ten households interviewed ate any fruits or vegetables over the course of a month. Six included the green onion and cilantro mix *cheiro verde* in their diet. The amount of meat, beans or rice eaten per month also did not vary according to the size of the family.

Several people reported, or were reported, to have jobs outside the settlement. One was a night watchman at a local school. Another went settlement-to-settlement selling housewares from the back of his motorcycle. Yet another prepared other people's land for cultivation through slashing and burning. Finally, another owned a bar outside of the settlement. These full-time jobs should preclude them from being a beneficiary of land reform, but without norm enforcement, they remain as beneficiaries. All of the beneficiaries received *Bolsa Familia* or a retirement pension.

The community infrastructure was completely dilapidated. They once had a community house but it was later abandoned. The community house hosted associação meetings and monthly visits by the healthcare workers. The house was in such disarray that when the healthcare workers (doctors, nurses or dentists) visited they took to seeing their patients in the school. While there were formerly monthly visits, these visits became unpredictable. They only spent half days there when they did come. Three settlements shared the educational infrastructure. This settlement had the primary school; the secondary school is in a nearby settlement. A van shuttles students back and forth.

Though the beneficiaries asserted that their lives have improved, I cannot consider this settlement to be successful. The beneficiaries did not have basic infrastructure like indoor restrooms. While they increased their livestock, their crop yield remained about the same, and

they had not diversified into cultivating either bees or castor beans. The beneficiaries had some consumer goods but it was not across the settlement. They had also let maintenance on their communal infrastructure lapse. The following table summarizes responses and observations to key indicators of household success. At least five out of the ten (5/10) beneficiaries had to be successful for each indicator for the settlement to be successful.

Indicator	Beneficiaries	Successful
Housing Infrastructure	4/10	N
Upkeep	2/10	N
Access to Water	10/10	Y
Consumption Goods	5/10	Y
Diversified Crops	0/10	N
Income	4/10	N
Individual Debt	0/10	N
Communal Infrastructure		N

Table 8: Is the settlement successful? Case 4

The next section looked at whether their failure could be explained by the pathway posited.

Social Capital

Bonding Social Capital.

While the settlement did not have the same level of family bonds as others, it was

nonetheless very close. One family block had several members, but there was more heterogeneity than homogeneity in the settlement. Even without the familial component, of which Coleman suggests bonding social capital is a replication (1988), their emotional ties to the settlement were strong. The beneficiaries were friends prior to the creation of the settlement and continued to be so.

These ties were strong even without frequent interactions. Everyone stated that they were friends with everyone in the settlement. Only one or two stated that they speak to their neighbor daily. Others answered that even though they may not speak to their neighbors daily, they feel like everyone is a friend. While they might not speak to each other often, perhaps a reflection of the spatial diffusion, they spoke highly of each other and of their interactions. Compared to the “one big family” narrative I got at the market based settlements, the beneficiaries gave specific reasons they feel united. In other words while in other settlement people might speak to each other on a more regular basis, the beneficiaries in this settlement were more united. One of the beneficiaries justified his lack of interaction, emphasizing that they were still united. “Here no one wishes anyone bad. I do not visit other people’s houses because I do not leave my own house. I only leave my house to go to church. But thank God I like everyone, I consider them all my friends”. It was also one thing to say claim unity, yet another to be truly united.

I examined settlement unity through the formation of a common identity. Eight of the ten beneficiaries believed that the other beneficiaries care about the settlement as a whole. In the words of one beneficiary, “It is our duty to care about the settlement because we are the settlement. We live in the settlement it is where we get our daily bread so we have to care”. The quote highlighted beneficiary identification with the settlement and with others.

Given that there is a common identity, the pathway suggests that there should also be high levels of trust within the settlement. However, this was not the case. When asked if someone would return their wallet if they found it only four out of the ten answered that it would find its way back to them intact. Some even joked that the wallet might come back but the money would have been spent before they returned it. One of the beneficiaries even made it seem like an obvious answer that the people would keep their money, “My documents might be returned but of course they would keep the money. If I found someone’s documents, I would bring them back and then they could give me something for bringing it back. Not many people would do that”. Beneficiary lack of trust does not seem to fit this settlement’s pattern, especially as they are so united and strong in everything else.

Another question that measures trust questions whether the beneficiaries would provide a short-term loan for their neighbors. All of the beneficiaries said they would have no problem lending money to a neighbor. This contrasts with the answers given in the lost wallet scenario. Furthermore, and perhaps more telling, nine out of the ten beneficiaries believed that if they needed it, their neighbors would give them a loan. These answers suggested that there is a high level of trust and also a certain level of insurance as well. One of the beneficiaries explained “I think that good people, when they see something bad, get together. If I am your friend, when you are in need I have to stand together with you. If you suffer I have to help you. That is it. That is what I think”. These answers fit the settlement pattern better than the lost wallet question.

This case excels in mutual insurance. All of the beneficiaries stated that if something went wrong, they could count on the other beneficiaries. They showed what the theory shows: bonding could help them to get by. At the basic level of survival all the beneficiaries knew,

either through personal experience or by having helped others, that they could count on their neighbors to get them through a difficult period. The mutual reciprocity bound them into a community. The settlement, however, is not developed. During a drought, other than government assistance, they would not have alternate means of support. They, more than the other settlements, had to lean on their neighbors. Some of them had fallen several times and been buoyed by the rest of the community.

The settlement for the most part followed the theoretical pathway for emotional bonding social capital. The beneficiaries had common characteristics and even though the familial ties were not as strong as in other settlements, they had developed a common identity. They had also relied on mutual insurance and know they could count on their neighbors.

When considering structural elements such as proximity and settlement organization, the settlement failed. Its buildings were widely dispersed and the beneficiaries did not speak to each other very often. However the lack of repeated interactions had not hampered settlement unity.

Settlement organization also left much to be desired. The *associação* did not meet frequently. When I asked the president how often they meet, in one sentence he said they meet every month, and then every three days, and then every two weeks. In the end he said, “the *associação* has sort of stopped, its stopped meeting for almost a year now. Instead of meeting we talk when we see each other”. In the months prior to my visit they were trying to get the *associação* started again, but when they called people to the meeting, not enough people came to establish quorum. Even when the technical advisors came, they could not get a majority of the settlement to the meetings. Three of the beneficiaries valued the *associação* as the device that could help them improve settlement conditions, but they were the minority.

Interviews with the technical advisors revealed that the lack of settlement organization was their biggest frustration. Interview after interview the reason the techs gave for the settlement failing was their lack of organization. At the beginning they were more organized. They were not organized enough to seek development projects or complete the projects they received. After the projects fell through, the beneficiaries saw no need to organize, and disbanded completely. Each time they tried to organize, albeit haphazardly, and failed, it reinforced their lack of confidence in the associação. When the beneficiaries try to organize, to get the associação working, people do not come to the meeting. They had to cancel the last two (when I was there) meetings because they did not have quorum. Without settlement organization, they would not be able to receive projects that would get them out of their precarious livelihood. While the beneficiaries could help those who were most affected, they had not learned to help themselves to overcome their situation together.

Without participation in the associação, the beneficiaries did not make decisions together, they did not build community efficacy, therefore the pathway could not fully develop. The settlement was much like the second settlement: stuck. It was stuck because they did not build their houses to code and therefore were not eligible for further credit. Without access to credit they could not reform the houses and bring them into habitable conditions. Without access to credit, either individually or as an associação, their potential was confined.

Bridging and Linking Social Capital

The settlement had both emotional and structural bridging social capital. Several of the beneficiaries (eight out of ten) had friends outside of the settlement and/or interacted with members from outside the settlement. Most of the bridging ties were emotional ties as

beneficiaries visit friends in other communities or in Caninde. The beneficiaries had friends in different communities, which means more diverse streams of information.

There was also structural bridging social capital. One of the beneficiaries went from community to community on his motorcycle selling household wares. He traveled to all of the neighboring communities daily. He said it was his son's business, but he was the only one I ever saw on the motorcycle selling anything. Another beneficiary also has a bar in a neighboring community, which he tends nightly. There is also a religious element and four of the ten beneficiaries mentioned being active in a religious group.

These elements, both emotional and structural, should provide a great degree of information to help the settlement as well as help develop greater trust. Whatever bridging benefit the beneficiaries who were engaged in these actions received, it was not reflected in the community.

The same is true for linking social capital. Beneficiaries have connections to politicians and to social movements but they do not use it. While I was in the settlement, a couple of the men went into Caninde on motorcycles to support a protest against the mayor. The beneficiaries have to pay a small sum every year for drought insurance. They paid a small part and the municipality was supposed to pay a larger part. The beneficiaries paid their part but the mayor had not paid his part yet and it was already looking like it was going to be a drought year. The rural workers union and several movements were protesting in front of the city hall. Based on my observations, the community did not meet to discuss the protest or how it affected them. The linking connections, which should be providing information and access to resources for the community, were not there. They did not bring all of their individual connections together for the

benefit of the settlement.

Does it follow the pathway?

Even though the settlement was not successful, they had most of the elements of the theoretical pathway. The settlement had some kinship ties, but not as many as in the previous settlement. Even without the strong family presence the community was united. The beneficiaries shared common characteristics and were friends prior to joining the settlement. The beneficiaries built these elements into a common identity. It had not translated into trust as measured by the wallet-returning question. However if trust were measured in trusting a beneficiary with a loan, then trust is high. To average the two types of trust, trust is considered present but weak in the settlement. The pathway worked for emotional social capital but failed for structural bonding social capital. The spatial design of the settlement does not increase beneficiary interactions. Community organization is also absent, therefore so is collective decision-making, efficacy, and settlement norms.

Bonding Social Capital		Bridging Social Capital		Linking Social Capital	
Kinship	W	Generalized Trust	W	Generalized Trust	A
Common Characteristics	S	Access to Information	S	Access to Resources	S
Common Identity	S	Friends outside the Community	S		
Trust	W	Outside Groups	S		
Informal Insurance	S				
Proximity	A				
Collective Decision Making	A				
Efficacy	A				
Norms/Sanctions	A				

Table 9: Does it follow the pathway? Case 4

The settlement had multiple streams of bridging and linking social capital. They had emotional bridging social capital through ties to friends in other communities and they had structural bridging social capital because they belonged to outside groups as well. They furthermore had ties to social movements, which should provide access to resources. The resources had not manifested, but they are positioned in the right way to have them. So why were they not successful?

Redistributive Settlements Summary

These two settlements had more in common than the MBLR settlements had to each other. Both of these settlements had high bonding emotional social capital, and they both had emotional and structural bridging social capital as well as structural linking social capital.

Bonding Social Capital			Bridging Social Capital			Linking Social Capital		
	3	4		3	4		3	4
Kinship	S	W	Generalized Trust	S	W	Generalized Trust	S	A
Common Characteristics	S	S	Access to Information	S	S	Access to Resources	S	S
Common Identity	S	S	Friends outside the Community	S	S			
Trust	S	W	Outside Groups	S	S			
Informal Insurance	S	S						
Proximity	A	A						
Collective Decision Making	S	A						
Efficacy	S	A						

Norms/Sanctions	S	A						
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Table 10: State Settlements Comparison

In each of the settlements the beneficiaries developed a collective identity, and settlement cohesion was strong. The absence of kinship in the fourth case did not diminish the strength of the emotional ties. Both of the settlements also had informal insurance, which allowed the beneficiaries to lean on one another when they had difficulties. This is the type of tie that was most often noted for detractors of social capital--the type of tie that helps one survive was not necessarily the type of tie that will help them thrive. In any case these settlements have very high levels of reciprocity.

Putting aside the differences for a moment we could see that both of these settlements have multiple emotional and structural bridging as well as linking social ties. The beneficiaries in the third case were able to capitalize on those connections whereas the fourth case was not. There were two themes that could be separated from the chart: the fourth settlement did not have the same levels of trust, either particularized or generalized, and the lack of organization.

The lack of organization has prevented the resources and information captured by individual beneficiaries from benefiting the settlement as a whole. The prolonged lack of organization fatigued the beneficiaries such that they were convinced that they could not change the settlement; therefore, they did not actively seek improvements. The third settlement had an *associação* that met regularly and through which the beneficiaries decided how the settlement would function and improve. They were able to establish goals and work collectively towards them. The fourth case did not have that. In lieu of working together towards settlement improvement, the beneficiaries were only able to employ temporary emergency measures to

ensure survival, but they had not developed the foresight to improve the settlement. The beneficiaries had not crafted a vision for settlement development and how they could work together to achieve that. Instead they were relying on their individual abilities to survive.

Chapter 6: What Comes Next?

This research suggested that social capital—defined as all of the institutions, values, and relationships individuals maintain which provide tangible goods otherwise not available to the individual or their community—was not the driving force in settlement success or failure. The research considered the three types of social capital—bonding, bridging, linking—divided into both the emotional and structural components. My contention was that all of the types of social capital should be present for economic development to occur. To test the hypothesis, I traced a potential causal pathway constructed from previous social capital research. This chapter shows how the cases either fit or did not fit the model and isolates the variables present in the successful cases but not in the failed cases. Based on these results, I propose an alternate theoretical pathway. The final section questions whether social capital can contribute to the study of land reform settlements.

Summarizing the cases

The cases provided good controls because they shared similar attributes. All of the beneficiaries were sharecroppers prior to joining their respective settlements. By design both the MBLR and State versions of land reform set caps on beneficiary possessions and income prior to joining. As shown in their survey responses, most came with nothing. A few came with a little livestock, but not enough to set one settlement or one beneficiary apart from the others. The beneficiaries were economically homogeneous.

The beneficiaries were also already a part of the community near where the settlements formed. They either lived on or near the land where the settlements were created. They therefore knew or were friends with other beneficiaries prior to joining. The beneficiaries therefore all had

a stock of potential bonding social capital.

The settlements were all within a couple of kilometers from a larger village. I did not discuss it in-depth throughout the cases because there was limited interaction between the beneficiaries and those villages. The first case was off the main road but the closest village was slightly farther away than in the other settlements. After factoring for ease of transport, I considered it to be the same. The district center was less than two kilometers away from the second settlement. This village was larger and more developed than the closest village to the other settlements. However, none of the beneficiaries have ties to the village. The village in the third case was the closest to the settlement of the four. It was the one where the beneficiaries have more contact; therefore it is referred to more. The village in the fourth case was a couple kilometers from one end of the settlement. The village was large enough that there were several bars, one owned by one of the beneficiaries. The village was so close that he tended bar nightly. In other words, all of the settlements are within kilometers of a nearby, larger village which controlled access to other markets or other means of communication.

Another aspect where the beneficiaries received the same attention was technical support. The technical support provided was shoddy in all of the settlements. None of the settlements had a consistent technical team. All four of these settlements either were, when I was there or briefly prior, advised by the same technical staff. In some of the cases they were able to either overcome the lack of support or supplement the paucity of support. In others the lack of technical support was too much of a hurdle for them to overcome. Officially the settlements received the same sporadic aid. While the beneficiaries started in similar circumstances, they did not have the same results. Ideally, adequate tech support would be provided by either INCRA or SDA to all of the

settlements it created. However the tech support they provided was deficient and could not lead to development. The moral of the story, in these cases, is that in a situation where tech support is limited, the settlements that succeeded did so in spite of the allotted tech support.

The common settlement characteristics suggest that the settlements started out with similar resources and were provided with similar tools. The factors that played into a settlements success or failure therefor had to be with internal characteristics. The successful cases should have replicated the pathway depicted in the following diagrams. How well did the cases fit the model?

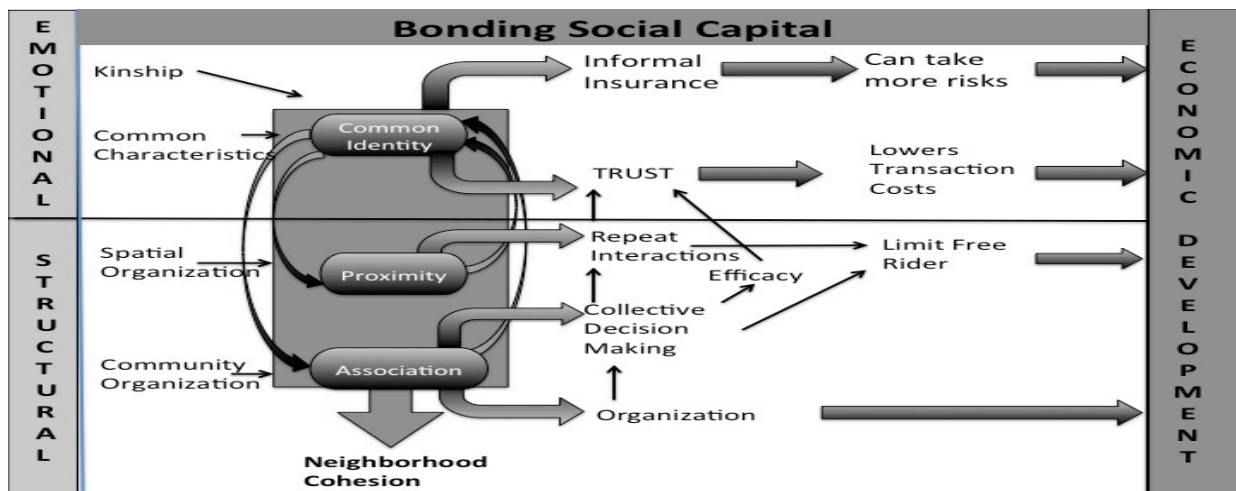


Figure 4: Bonding Social Capital Revisited

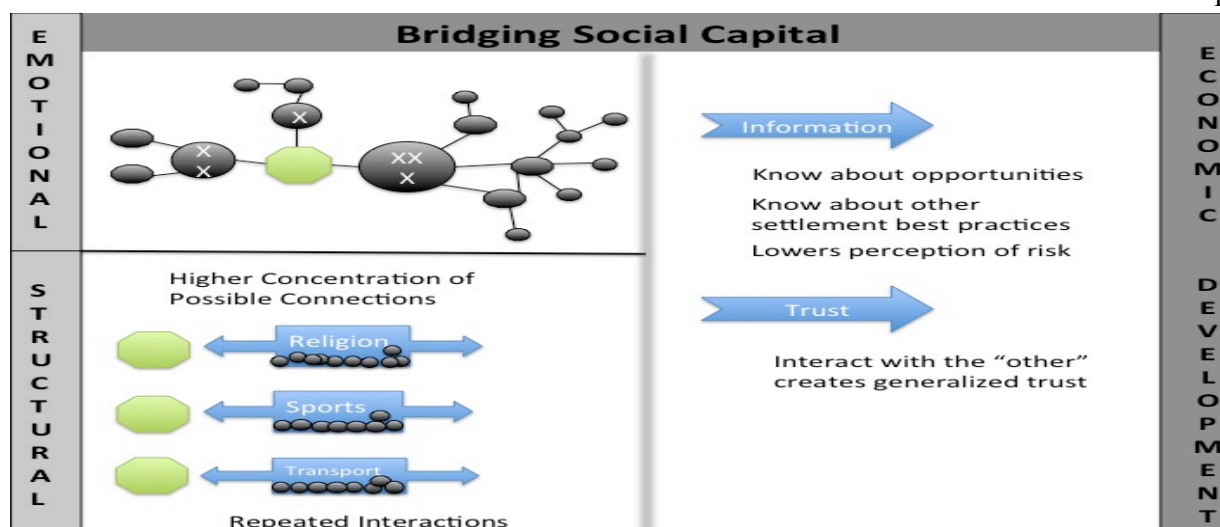


Figure 5: Bridging Pathway Revisited



Figure 6: Linking Social Capital Revisited

The first case is the successful example of market-based land reform. The settlement outcome suggested that social capital should be high. It was not. The level of emotional bonding social capital in the settlement was low but they did have trust and informal insurance. They therefore had the final elements but they did not have the intermediary step. This case followed the structural theoretical pathway. The beneficiaries lived close to one another and interacted regularly. The proximity criterion was therefore met. The beneficiaries met regularly as the *associação* to discuss settlement improvements.

The benefits of bridging and linking social capital, namely information & resources, were also present in the settlement in limited amounts. The settlement also had a significant amount of negative linking social capital. The only part that followed my hypothesized pathway was structural bonding capital. Therefore the pathway did not explain why the settlement succeeded. It should have, by all accounts, failed. Instead the settlement was doing well. What path did the settlement take that led to economic success and circumvented the other variables?

The second case was deficient in every aspect. After the settlement outmigration the remaining beneficiaries gave up on the settlement. The beneficiaries who remained had limited bonding social capital. The structural determinants of bonding social capital were not present either. They were the most geographically concentrated, so they should have plenty of chances for interaction but they did not. The settlement *associação* had not functioned in years. In this settlement the benefits of those ties, access to information, and resources were isolated to one person. They had approximately the same amount of bridging and linking social capital as the first case but they have been unable to capitalize on it for the wealth of the whole community. The case fits the theoretical pathway because they do not have measurable quantities of the intermediary variables and therefore according to the theory should fail. They have all of the building blocks required for the pathway, they just did not continue on the path. What happened?

The third case is the poster child for social capital. This case follows the predicted theoretical pathway. There was a rich trove of emotional bonding social capital. They had a well-structured *associação* that met frequently. There were high levels of bridging social capital measured by the multiple ties in the community. The same was true for linking social capital. As in the first case, the benefits produced by the bridging and linking ties were brought back to the

community. The resources were shared at the associação meetings and through these interactions they were able to create opportunities. This settlement had almost all of the elements of the theoretical pathway working the way theory suggested. The theory predicted success, and the case is successful.

The forth case, based on the theoretical pathway, should have succeeded. It had the highest levels of reciprocity, trust, and informal insurance out of the four settlements tested. It had some organization, but the meetings were infrequent and the leadership was not very active. The beneficiaries also lived spread apart from one another. It had bridging social capital at both the emotional (visiting friends) and structural (religious organizations and commerce) levels. They also had linking social capital and ties to movements and protests in Caninde. Regarding relationships, this settlement had the strongest. Even though it had strong bonding social capital ties, the settlement also had multiple linking ties to government and social movements. If social capital were about whom one knows, then this settlement should have succeeded. There must be another variable or set of variables that could better predict success.

How accurate was the theoretical pathway?

The theory and the selected cases suggested that two settlements should fail and that two should be successful. Unfortunately, they are not the same settlements. If the theory were sound, the two successful cases should follow the same path and have the same variables. Likewise the two failing settlements should not have the same variables interacting in the same way. The causal pathway should be present in both successful settlements for literal replication and absent in the failed settlements for theoretical replication.

The following table summarizes how the pathway worked in each of the cases. The S

stands for cases where the particular element is strong. The number of self-reported ties determined the strength of the ties. If more than fifty percent of the beneficiaries reported the different bonding or generalized trust indicators it was considered strong. If more than thirty percent of the beneficiaries reported bridging or linking ties then they were considered strong. The W stands for weak cases, where some ties existed but only nominally. The A stands for an absent variable.

Variables in the Settlements					
		Case 1	Case 2	Case 3	Case 4
Successful		Y	N	Y	N
Bonding	Kinship	W	S	S	W
	Characteristics	S	S	S	S
	Common Identity	A	A	S	S
	Trust	W	W	S	S
	Insurance	W	A	S	S
	Proximity	S	S	A	A
	Collective Decision Making	W	A	S	A
	Efficacy	W	A	S	A
	Norms/Sanctions	S	A	S	A
Bridging	Emotional (Friends outside)	W	W	S	S
	Structural (Outside groups)	W	A	S	S
	Generalized Trust	W	W	S	W
	Information	W	W	S	S
Linking	Emotional	W	W	S	S

	Structural	W	W	S	S
	Generalized Trust	A	A	S	A
	Resources	S	W	S	W

Table 11: Comparison Across Cases

Comparing the very best—Case 3—with the worst—Case 2—suggested that the theory works. Both fit the roles that theory suggested; social capital had an impact on economic development and without it settlements should fail. The other two cases did not fit the model well. One settlement, according to the theory, should have failed but did not. The other should have succeeded but did not. Looking at how theory predicted the cases and the case results provided an interesting, symmetrical typology.

	Theory Predicts Success	Theory Predicts Failure
Successful	Case 3	Case 1
Failing	Case 4	Case 2

Table 12: Success/Failure Typology

This section will examine how the first and forth cases deviated from the theoretical pathway and explain the divergences. I will then re-evaluate the second and third cases.

Case 1

The first case highlighted the importance of organization in community development. Even though the settlements all have to have an associação the presence of the structure is not enough. As Uphoff (2004) found, an association—I would argue especially a mandated association—is a starting point but unless it and the values that come with it become a part of the

community it will not function. This settlement has integrated the associação as a part of settlement life. Frequent interactions during associação meetings overcame their division and engendered a far greater amount of trust than the emotional connection would suggest. Decisions were taken together and the forward momentum provided an incentive to continue interacting in that manner. They were building collective efficacy and learning to trust their own and their neighbor's judgment. The process of making decisions together meant that the beneficiaries learned to trust one another. They had sufficient interactions to know their neighbors well. These repeated interactions formed the basis of trust within the settlement. It was, as Olson (1971) pointed out, one of the only ways to avoid the Prisoner's Dilemma. They learned particularized trust based on expectations of what the other would do (Herreros, 2004). Through the organization the settlement developed a superficial trust that allowed them to work together, even if they could not depend on everyone.

Putnam (1993) argues that one of the externalities created through participation in associations is a broader more generalized trust. "Internally, associations instill in their members habits of cooperation, solidarity, and public-spiritedness" and once a habit is ingrained it carries over into other aspects of people's lives (Putnam, 1993, p. 89-90). This settlement did not generalize trust to a broader trust. The beneficiaries did not trust people from other communities and certainly not any linking ties. Two possible reasons are a) they did not have connections to people outside of the settlement or b) because associação decisions were dominated by one individual. Even if they did not develop a generalized trust, through the organization, they developed trust amongst the other beneficiaries.

Organization, not a common identity, was the vehicle through which the beneficiaries

established trust. While kinship and common characteristics could be important in establishing a pre-disposition to trust, in this case it required organization to coalesce those feelings into neighborhood cohesion. I would argue that this is the case for the other settlements as well. Whether the type of organization was something external, such as an *associação* or strong family leaders to establish internal organization, the pure existence of common characteristics will not lead to the creation of common identity. On an individual level these ties were created naturally, but on the community level, some kind of organization or direction was needed.

If organization is needed it begs the question of who should be doing the organizing. In the settlements the technical support was supposed to fulfill that role as part of the original beneficiary capacitation. Unfortunately they did not. Fafchamps (2007) comes to the conclusion that “If governments are too weak or disorganized to provide public goods directly, provision can be organized via community-based organizations...effective delivery of public goods on a voluntary basis requires trust and *strong leadership*” (p. 111 italics are mine). Leadership is most important when there is a gap in service provision.

The social capital literature when it refers to leadership commonly incorporates it within organization (Gittell & Vidal, 1998). When leadership is spoken about separately from an organizing force within social capital it is talked about in terms of building leadership (McCallum & O’Connell, 2009) or through leadership development programs to build a leader’s skill set through networks. Fafchamps (2007) points out that there is an “omitted variable bias in the study of social capital” (p. 106). He argues,

“Community leaders often play a crucial role in fostering the creation of social capital—e.g., membership drive—that they can harness for a particular goal. Observing a

relationship between social capital and the presence of a public good may be due to the presence of a third, unobserved factor: leadership. The distinction between the two effects is important for policy because good community leaders are rare and leadership is much harder to replicate than groups” (p. 106).

When leadership works for development it is rolled into social capital and hard to parse out if the results are due to the leader or social capital.

Community leaders act as the liaison between outside resources and the community (Coleman, 2000). Because they act as intermediaries they have to cultivate relationships both within the community and outside of it. If either of those relationships breaks down, the leader is either seen as illegitimate within his community or by the outside resources. In either case he/she can no longer lead. Ideally, community leadership would be diffused rather than hierarchical and many of the beneficiaries should have bridging and linking ties (Flora & Flora, 2004). In their absence, the second best option was to have a trusted leader act as gatekeeper. In this case as the president was the only one with external ties, he has become the gatekeeper, regulating what comes into the settlement. He also built legitimacy over time as the information he provided improved life in the settlement. Several interviewees attributed the success of the settlement to this individual.

The drawback to this situation was the degree to which the settlement is democratic. Even though the beneficiaries in the settlement stated that they made decisions democratically, the president stated that he made all the settlement decisions and that everything flowed through him. He was correct. In the absence of other ties to provide contradictory information, he determined the direction debates took by the information he shared. That information is the only point of view they had.

Leadership in social capital is often spoken about in the context of clientelism (Portes &

Landolt, 2000, p.546; Molenaers, 2003, p. 120) and corruption (Titeca & Vervisch, 2005). In other words as a break down of the trust and bonding social capital the leader has with his/her community. Titeca and Vervisch's research on social capital in communities in Uganda showed how leaders who act as gatekeepers slowly alienated themselves from the population or became corrupt. While a strong community advocate prevented settlement failure, it will be interesting to see this community in five years to see whether the settlement will still be successful and the necessary bonding social capital will have been created.

A capable leader could help a community overcome otherwise crippling deficiencies. The beneficiaries in the first case clearly depended on the leader. The leader actively sought multiple avenues of personal and structural connections of both bridging and linking social capital. He would go into Caninde to talk to friends at the union. Here he was exposed to other beneficiaries and those running the union. He sought technical support and was a familiar face at all three technical support agencies. He made the personal connections with the technical agencies who did not work in the settlement and built upon the structural connections created with the technical support that was working within the settlement. When I was at the settlement he was planning a trip to Fortaleza to speak with the agents at SDA because of a problem with their land title. These connections gave him access to information he otherwise would not, had he waited for the infrequent visits from the techs.

The settlement leadership had also been able to convert the information into workable plans and resources by capitalizing on settlement organization. One of the roles for the settlement associação meetings that several beneficiaries mentioned was to talk about information the president had received from his interactions with the techs in Caninde and

Fortaleza. The associação provided the backdrop to be able to share the experiences across the community. Without the organizational aspect, the information would not have been deliberated and community decisions would not have been made together, which means that people would not have been invested in the community plan. The information was shared and debated by several people.

The first case was successful because they internalized the associação and organized themselves as a community. The benefits of their organization were amplified through the social capital created by the community leader. The leader is important but community organization is just as important. Without a community, there is no community leader.

Case Four

The forth case was diametrically opposed to the first case. It should have succeeded. This case had all of the relationship variables in social capital except for organization. Field (20003) suggests, “what social capital brings to social theory is an emphasis on relationships and values as significant factors in explaining structures and behavior” (p. 139). In this case it does not hold. The lack of structure and behavior is not explained by beneficiary relationships. This case showed that even if all the other elements are present, without an efficient settlement organization including leadership, they were not sufficient. The beneficiaries had a lot of social capital but, because it had not been harnessed and directed towards development, it was wasted.

Bridging social capital was wasted because the beneficiaries did not have the necessary channels to share information. One of the benefits of multiple ties was the variety of information to which the beneficiaries had access. Bringing together the vast library of peoples’ different stories served as a way to check the reliability of information. If a beneficiary knew someone

profiting from making cheese, it could be an anomaly. If three beneficiaries had friends profiting in the cheese business, the information would be more reliable. This trove of information would be lost if the beneficiaries did not have an organized way to share this information with each other.

The inability to compare and share information also translated into an inability to secure resources. Multiple beneficiaries had linking social capital but the beneficiaries did not capitalize on them because they were not organized. According to the beneficiaries and the technical team, there had been flashes of organization over the years, but inevitably they would disband again. Would a leader have made the difference?

The settlement does not have a defined leader or even a defined cadre of leaders. The current president does not know much about the settlement organization or even what the function of the associação is. He also does not go out of his way to bring resources for the settlement. Even though he and a couple other men went to Caninde to protest, they talked about the protest like it was a party. He does not know how to build the linking ties that could direct resources to the settlement. A leader, like in the first case unites the beneficiaries and seeks ways to improve life in the settlements. This case does not have that leader. I cannot speculate that the settlement would have been a success if they had had that leader, but it most certainly is not without one.

Since this settlement followed the theoretical pathway in every way but organization, it seems likely that settlement organization is the lynchpin to success or failure. Or perhaps settlement organization can overcome the absence of other variables, but the other variables cannot overcome the absence of the settlement organization.

Case Three

The third case was, of all the settlements, the most successful. Settlement evolution followed the theoretical pathway perfectly: bonding, bridging, and linking social capital levels work in harmony. Superficially one could conclude that social capital was a good determinate of settlement success. Digging deeper, it was hard to determine which came first, organization or social capital. The diverging results of the first and forth cases required me to reflect on this case. The settlement was based on a splinter group of the neighboring community associação. The initial group that established the settlement was part of another associação. Membership in the other group generated the unity needed to take advantage of the opportunity the potential settlement provided. Did the settlement succeeded because of social capital or because of organizational skills that existed prior to the settlement's founding?

Based on the experience of the other three cases, we could conclude that carrying over emotional social capital did not have an effect on settlement success. In all the cases, the settlement beneficiaries knew and lived near each other prior to the settlement. Therefore the same levels of, as Coleman (2000) would say, incidental social capital should have carried over with them into the settlement. If carryover were present then cases 1 and 2 would also have high emotional social capital, but they did not.

Based on the beneficiaries' legacy of cooperation from the prior settlement, they were already semi-organized before creating the settlement. Their organization permitted them to create the settlement. This revealed that the beneficiaries were already accustomed to the structure of the community associação. A template they used to create the settlement associação. They also brought something else: trust.

Did the organization drive the type of trust that would be useful in community building and economic development? I would argue that it was the most important difference and the defining variable upon the rest of this settlement's success is built.

Case Two

This case had so many problems that it was impossible to pinpoint why it failed. Would this settlement be more successful if they were organized? Would it have stopped the flight of half of the beneficiaries? Hypothetically it could make a difference. If the settlement were organized then the beneficiaries would have had a forum in which to discuss disagreements. Instead of escalating into a generalized feud, the fight could have been resolved at the beginning. If the settlement were organized and able to capitalize on their resources, then the houses would have been built to the correct dimensions and they would have had access to credit. If the settlement were organized, then the beneficiaries would not have let the community goods fall into disrepair. No one maintained them and the investment was wasted. If they had been organized, they could have developed a community work schedule to deal with problems. They could have established a protocol so that their houses were not burgled. Again speculating, the organization would have at least provided the beneficiaries with a venue to discuss community problems together. It would have given the beneficiaries a way to plan together and, through that planning, build trust in each other so that they could change the settlement. Organization could have benefitted this settlement in multiple ways. While it would be impossible to know whether this settlement would have succeeded, it might be possible to know that without organization the settlement could not go forward.

This case, like the first case, had a gatekeeper figure that left the settlement in search of

improvements. However, because they did not have a functioning associação, like the beneficiaries did in the first case, that information did not get to the other beneficiaries. An effective organization could have tied the potential gatekeeper into the community and allowed for others to also share the wealth. Without an organization, and without emotional bonds to the other beneficiaries, the only person with bridging or bonding ties kept them to himself.

Alternate pathway

The social capital model needs to be revised in light of the four cases studies. The literature on social capital stresses the importance of bridging and linking social capital for community development. Bonding social capital is only highlighted to emphasize its potentially negative consequences. My research indicates that the importance of bonding social capital has been underestimated. In the cases considered bonding social capital was a better predictor of settlement success. Bridging and linking social capital are important to individual success but to convert individual success to community success requires strong bonding social capital. The emphasis on external ties in the development oriented social capital literature needs to be re-evaluated. Bonding social capital, especially organization and leadership, determine whether isolated individuals or communities succeed.

Revisiting the initial pathway we can see that some elements were not as important as they were thought to be at the beginning of the research. For example, proximity should have influenced social capital by fostering repeated interactions but it was not as important as theory suggested (Healey 1998; Zhou, 1998). Just because the beneficiaries lived close together did not mean more interaction. The second settlement is the most concentrated geographically and had a dearth of social capital. Even though the beneficiaries live within a hundred yards of each other,

their interactions were sparse. Conversely the two cases that showed frequent interactions and had the most emotional bonding social capital were not designed into compact agro-villas.

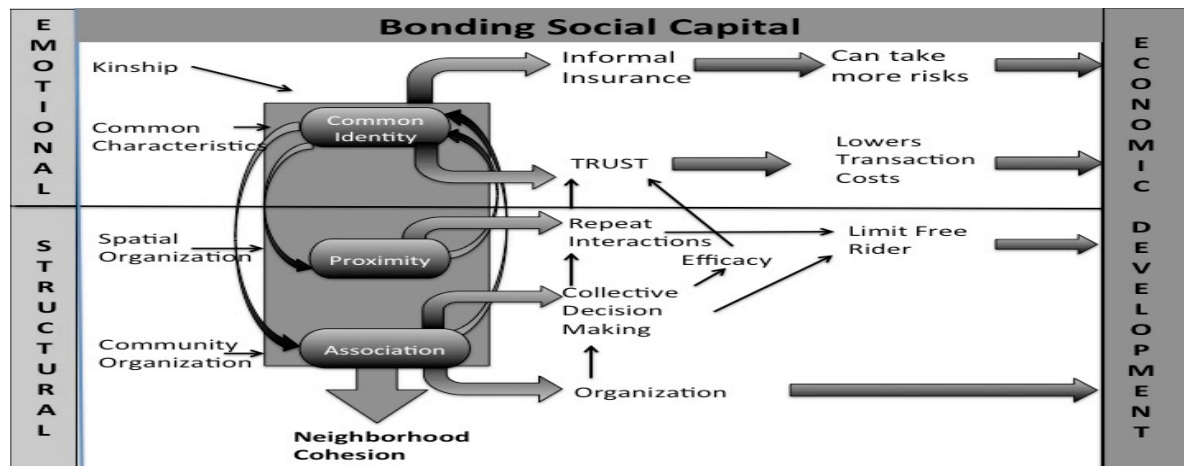


Figure 4: Bonding Social Capital

I would not argue that the spatial organization of the settlements would not facilitate interaction. All other things being equal, having nearby neighbors could increase interaction. What was evident, however, was that proximity on its own was not a determinate of interaction. If the beneficiaries already had a pre-disposition to interact, then proximity might matter in how often they spoke to each other. Proximity would help if the beneficiaries already had some ties to the other members of the community. In the absence of a greater force such as settlement organization, proximity did not create those ties.

Proximity should have also increased potential vigilance and thereby limited free-riding. My research did not suggest that proximity provided a vigilance function. The beneficiaries in the second case were spatially close, but had not formally established norms. Without an organizational structure to create the norm, there was nothing to enforce. They also did not have

the possibility of soft sanctions such as loss of prestige or respect because the beneficiaries rarely interacted with each other and therefore did not have prestige or respect to lose in the eyes of the others.

Proximity was not missed in the successful settlement that did not have it. Vigilance was achieved through the organization. They met frequently and had to be accountable to the others in the meeting. The associação fostered vigilance through self-reporting and through the trust built through beneficiary interactions. Organization provided the same function as proximity. Through the organization beneficiaries had repeated interactions—constructive, directed, goal oriented interactions. These types of interactions built a deeper trust than repeated, undirected interactions such as commenting on the latest soap opera. Not that those interactions are unimportant, but they might not be necessary to build the trust necessary for economic development.

The elements that build social capital, such as kinship or common characteristics, were also not as important as the pathway suggested. They might serve to facilitate discourse, or facilitate interactions, but they needed to be worked on by an organizing force, whether external such as settlement organization or through a head of the family, to coalesce into a common identity.

A common identity was essential to establish trust and provide informal insurance. Importantly, if it was not created naturally, it could be created through community organization. For example, one of the successful cases in this research did not have high levels of generalized trust and even stated that they could only count on themselves if something went wrong. However, they were doing well and had some degree of trust through their interactions in the

meetings. This finding is consistent with Das Gupta's (2004) study of India where he analyzes how disparate communities will come together to work towards a goal if they are organized: regardless of pre-existing relationships.

The research suggested that the key variables were organization and leadership. Without organization, even if the beneficiaries had all of the other types of social capital, it would not help them capitalize on the connections and multiply the benefits across the community. Leadership and organization are conjoined. One cannot have an organization without some kind of leadership structure. Whether the leadership is hierarchical or flat, fixed or rotational; leadership is an important aspect of community organization.

I created an alternate pathway for bonding social capital based on the findings. The pathway removes the variables of kinship and proximity, and, based on the cases, changes the order of some variables making some first order variables dependent on others.

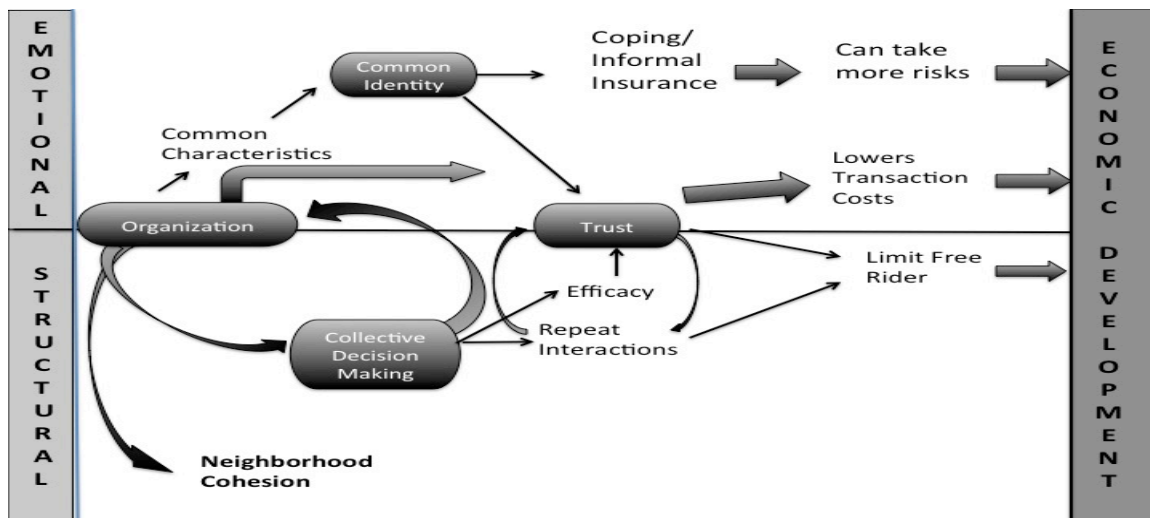


Figure 5: Alternate Pathway

The model makes two significant modifications concerning organization and trust. The model centralizes organization as the most important variable in bonding social capital.

Organization is pulled up from the purely structural level to straddle both the structural and the emotional. It is recognition that, while an organization is structural, participation can generate emotional ties. Emotional ties that previously did not exist.

Elements thought of as strictly emotional, such as a common identity, can be developed at the community level through social organization. Twenty strangers in a room who have similar characteristics are still just twenty people in a room unless they create some kind of social organization. It is through the construction of these relationships that they can create a common identity. Participating in an association is akin to being in a room with strangers. Strangers turn into colleagues and friends through a conscious construction of these relationships. A functioning association provides *directed* involvement that can create emotional connections. While at the individual level common characteristics can organically lead to a common identity, at the community level that identity must be created through some kind of organization.

Trust, like organization, straddles the line between emotional and structural social capital. Trust is generated through emotional bonding social capital but also from participation in associations and collective decisions. Collective action is beneficial to the formation of trust through several avenues. First, trust is based on the expectations one has about what others will do. The simplest levels of trust arise from repeated interactions among beneficiaries. By interacting frequently, trust is created. Second, the process of making decisions together builds a deeper level of trust than mere interaction. The process of engaging others in debate and together deciding on the most productive course for the settlement allows people to get to know their neighbors better and, therefore, trust. The third way making decisions together builds trust is by

establishing collective efficacy. For example, if beneficiaries come together and make decisions that do not benefit them or they do not see forward progression, the beneficiaries will be unlikely to see the benefit of continuing with the associação, as was the case in the fourth settlement. They come together for a short time and try to organize but because they do not receive positive reinforcement they shortly disband again. Positive momentum gives the community a sense of collective efficacy, a belief that together they can achieve positive things for their community. Through collective efficacy they build trust in each other and trust in the associação. These elements can, as in the case of the social movement, sustain the organization in moments when perhaps they are not successful (Einwohner, 2002).

The problems with free-riding, which in the original diagram were solved through proximity and repeated interactions, are solved in this diagram through trust and collective decision making within the organization. Communities decide on the norms, monitor, and sanction. They do this based on the trust created through both collective identity and organization. The free rider problem, the problem of all collective action, is solved by organization and sanctions (Ostrom, 1990).

The necessity of organization is obvious by looking at the diagram. In the cases of these four settlements, organization, including the leadership, provided the best explanation for success or failure. The most important qualification is that the quality of the organization matters. All of the settlements in these cases were required to have an associação to organize the community. The existence of an association is therefore not a good determinant of organization. There is a missing link between what makes an association useful in terms of organization and ultimately bonding social capital. The difference is to what extent the individuals internalize that the

association is a) something that is a part of them and b) a benefit to them. Creating a quality association requires capacity and leadership. Without which the association can exist on paper but not in practice.

“Hornsburg and Land (1998) noted, social capital provides a policy language for expressing ideas that community organizers have long held as common knowledge” (as stated in Gittell and Vidal, 1998, p. 51). For a community to organize, they need to have trust, develop a collective identity, and have strongly knit ties with other people: elements now linked to bonding social capital. However those are all pre-existing elements present in the social movement literature (Einwohner, 2002; Taylor, 1992; Gamson, 1992; Jenkins, 1983). Does social capital add anything to the study of these settlements that was not already part of the community organization literature?

Without ties to outside information and resources the first and third cases, the successful cases, would have had a difficult time. Even if the first case were organized, had they built their houses to the wrong dimensions, they would have been ineligible for credits. If it were not for information, would this case have turned out like the second? Everything indicates that it would. The third case is prospering because of many outside connections. They have access to information about resources through friendships with both, the technical staff and the rural worker syndicate. These connections have undoubtedly improved their lives as they have insider, real-time information other settlements do not have. These connections were crucial to their success.

The research led me to focus on elements of bonding social capital over bridging or linking social capital. In these settlements there were simply not enough bridging or linking

interactions to be able to generate a pathway. The paucity reduced the variable to a binary—they did or did not exist, rather than how the ties interacted.

Surprisingly, the government did not play a part in the beneficiaries' social capital. The interview questions included questions about the role of government in the settlements. In terms of policy, how the government factored in the land reform settlements and was seen by the beneficiaries was important. Out of all of the beneficiaries I interviewed, none answered that the government facilitated life in the settlement or interactions with other settlements. One of the main sources of linking social capital that I expected to see was therefore absent.

My research, while acknowledging that bridging and linking social capital matter, highlights the importance of bonding social capital. In looking for ways to connect resources to communities in need, the social capital literature has glossed over the importance of strengthening community ties. Internal ties are just as important if not more so than external ties.

Does Solidarity matter? Solidarity matters more to the economic development of a community than the presence of a multitude of ties to resources or information. The absence of multiple external ties can be compensated by a strong community organization. Even with limited external ties a community can be successful as long as those ties are shared within the community. However the presence of bridging and linking ties cannot overcome the absence of community organization.

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Appendix A: Beneficiary Survey

Name:

Type of House:

State of Upkeep:

Number of Family Members

Electronics	Have?	When Purchased?
Television		
Sound System		
Satellite Dish		
Refrigerator		
Stove		
Dvd		
Motorcycle/Bicycle		

Livestock	Livestock at onset	Livestock now	Change
Cattle			
Sheep			
Goat			
Pigs			
Donkey			
Horse			
Chicken			
Bees			

Cash Crops (Kg)	Initial Yield	Current Yield
Beans		
Corn		
Castor Beans		

Consumption Crops (Kg)	Initial Yield	Current Yield	Sell any of it?
Manioc			
Vegetables			
Fruits			

Other Income	Quantity
Government	
Crafts	
Honey	
Cheese	

Appendix B: Beneficiary Interview Guide

I would like to ask you some questions about the settlement and your community.

Why did you decide to join the settlement?

How did you find out about the settlement?

Do other people live in your household?

What is their relation to you?

Did they come to the settlement with you or later?

What community groups are you active in?

How often do you go to meetings?

What is/are the groups' function?

Are you active in any groups outside of the community?

Do you speak to your neighbors every day? Every week?

Do you consider your neighbors friends?

If you had the resources, would you lend a neighbor money?

If the situation were reversed would they lend you money?

Do you think your neighbors are only concerned with themselves or with the settlement?

If you had a bad year and your crops failed what support could you count on to help you?

What kind of help would be offered?

Has something like that happened to you in the past couple of years?

How did you get through it?

If you lost your wallet in the settlement would it be returned?

I would like to focus now on your relationships with people outside of the settlement.

Where do the majority of your family members live?

Where do the majority of your friends live?

How often do you interact with beneficiaries from other settlements outside of the settlements?

When you do, where do you meet?

Does the government foster any of these interactions?

If yes, how does the government foster any of those interactions?

How often, if ever, do you visit other settlements?

If you go, why do you go?

If you lost your wallet in another settlement, would it be returned?

How often do people from outside the settlement visit you? Does the government?

How much do you trust people from other settlements outside the community? From nearby cities? If you lost your wallet in a nearby city would it be returned?

Could you give me examples?

Do you trust them in the same manner that you trust people from your settlement?

Thank you very much for sharing your experiences with me.

Appendix C: Settlement Leader Interview Guide

I would like to start by asking you a couple of questions about the association as a whole.

How was the association formed?

Were community members responsible for its creation?

What is the organizational structure of the association?

Do you have elections?

If yes, how often do elections occur?

Can anyone run for office?

How often do you meet?

What are some of the reasons you meet?

How often are meeting to discuss problems?

Who can be a part of the association?

How many people are active participants in the association?

What is the main difficulty in keeping people active?

Some associations belong to a regional federation of associations, I would like to ask you some questions about that if I may.

Does the association belong to the federation of associations?

Is it mandatory to be a part of the federation?

Who sought out the relationship with the federation?

What does it mean for an association to be active in the federation?

Is the association active in the federation?

What extra responsibilities does the association have by belonging to the federation?

What are the benefits of belonging to the federation?

How much do you trust that the federation works for the associations?

I would like to switch topics again and ask you some questions about the association's relationship with the government.

What are the associations ties to government agencies?

Which government programs is the association involved with?

Why those particular programs?

What role does the association play in the program?

Are there characteristics of the program that make it easier for the association to work with?

Are there other programs that you know about that would help you but are too hard to work with?

Do you feel sufficiently informed about the government programs available to you? How do you stay informed?

Where there any circumstances where you attempted to give suggestions or inputs to the government?

What were the circumstances?

What have been the results?

What challenges have you had to deal with in working with the government?

Has the association participated, or been invited to participate, in any of the government

development planning processes?

Given that the government isn't the only actor in the settlements I would like to ask you some questions about your relationship with some of these other actors.

What other organizations does the association belong to?

What other organizations does the association have ties to?

Are the ties personal or organizational ties?

What goals have you worked for where you needed ties to a larger association, government, or organization?

What associations, government agencies or organizations did you need ties to?

How did you create the ties to _____?

Why specifically _____?

What role did _____ play in achieving the goal?

What role did the association play in achieving the goal?

What challenges have you had to deal with in working with _____?

Has the association participated, or been invited to participate, in any of the _____ development planning processes?

Thank you very much for sharing this information with me.

Appendix D: Technical Support Interview Guide

I would like to start by asking a couple of general questions about the _____ settlement.

When did you start providing technical support to _____ settlement?

I'd like to get an idea of how the settlement was when you first started working there.

When you think about the houses, meeting rooms, roads, or any other buildings, what was your first impression of the infrastructure?

When you think about their crops or animals, what was your first impression of settlement production?

When you consider the association, and how organized the beneficiaries were, what was your first impression of the settlement organization?

Over the past _____ years has the settlement, in your opinion, improved or declined?

In what aspects have they improved/declined?

To what do you credit the improvement/decline?

I'd like to ask you a couple more questions about the settlement but this time focusing on the present.

Compared to most of the other settlements you personally work with, how does this settlement compare in regards to infrastructure?

What about organization?

What about its' productive capacity?

What kind of infrastructure does the settlement presently have?

How well have the beneficiaries maintained the infrastructure?

What kind of services do the beneficiaries have access to in the settlement (water, sewers,

healthcare etc.)?

For the services they have: Are the services sufficient?

For the services they don't have: Where is the closest_____?

I would like to change the focus a little and ask you some questions about the beneficiaries.

How many families currently make up the settlement?

How many of those are original members?

Did any families leave? Why did families leave?

Have the families stayed in agriculture or moved to an urban area?

Where have the families gone?

Have any new members joined the settlement?

Are the new members family members of those already in the settlement?

If not, were they introduced to the settlement by existing beneficiaries?

Why have the new members joined the settlement?

In some settlements beneficiaries not only farm but also have alternative means of income, what other kinds of income does the settlement have?

In some settlements the land is farmed collectively, in some individually and in others its mixed.

How are the crops farmed in the settlement?

How are the animals tended to?

Taking everything—income, food production, secondary production etc—in to account do you think the beneficiaries are able to sustain themselves?

Is the settlement up to date on loan payments?

If not, why did they fall behind?

How many beneficiaries receive some kind of government assistance?

What kind of assistance do they receive?

In your opinion could the beneficiaries survive without government assistance?

Moving along, I'd like to ask you some questions about the _____ settlement association.

Compared to the average settlement, do you consider the settlement association well organized?

Are they effective at achieving settlement goals?

Sometimes associations will represent only part of the settlement; do you think this association represents the settlement as a whole?

Are some people excluded from receiving the benefits achieved by the association?

If so, in what ways are they excluded?

To what extent does the association have the capacity to rally the settlement to make improvements in the settlement?

What are some of the projects the association has requested?

Are the beneficiaries a part of the project planning process?

Did the beneficiaries receive technical support during the planning stages?

What kind of technical support did they receive?

Do you think the technical support they received was sufficient?

Of those projects have any of them been granted?

What channels, governmental or otherwise, did they use to get the projects?

Thank you very much for your time.

