



**LUND UNIVERSITY MASTER OF SCIENCE IN INTERNATIONAL
DEVELOPMENT AND MANAGEMENT**

Community Driven Development in Timor- Leste: A Case study of the National Village Development Program from 2015 to 2020.

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Abstract

This research paper is a mixed-methods single case study that contributes to filling a gap within the literature surrounding the implementation of the National Village Development Program (PNDS-Programa Nasional Dezenvolvimentu Suku) in the village of Fahilebo, Timor-Leste. The research goals were to first identify the major differences between PNDS' effects and Community-Driven-Development theory. Second, uncover the underlying reasons found by the program's beneficiaries and development practitioners for the perceived PNDS' effects both concerning poverty reduction, and social capital between 2015 and 2020. The study collected 143 surveys that were compared to the 2015 Timor-Leste's National Census or to the 2015 PNDS Baseline. PNDS-attribution of the effects was based on the findings of 19 semi-structured interviews with program beneficiaries and development practitioners which were used to explain PNDS' performance, plus two triangulation rounds. The study found positive effects in poverty reduction from the construction of small-scale infrastructure by the means of income and productivity, and public services provision. While the results showed positive PNDS' effects regarding inclusion and participation and access to information, it is not possible to conclude that PNDS raised social capital. Nonetheless, no major differences were found with CDD's theory-participatory development, resulting in Fahilebo's public sphere enhancement because of PNDS.

Key words: Community-Driven Development, Timor-Leste, National Village Development Program, Participatory Development, Poverty Reduction, Social Capital, Mixed-Methods.

Word Count: 15005

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Acronyms

CAVR	Truth Commission for Timor-Leste, Comissão de Acolhimento, Verdade e Reconciliação de Timor Leste
CDD	Community-Driven Development
CMT	Community Management Team
CNRT	Timorese National Resistance Council
F-FDTL	Timor-Leste Defense Force
FRETILIN	Revolutionary Front for an Independent Timor-Leste
INTERFET	International Force for East Timor
IRR	Internal Rate of Return
KDP	Kecamatan Development Project
MMR	Maternal Mortality Ratio
MoU	Memorandum-of-Understanding
PNTL	National Police of Timor-Leste
UNSC	United Nations Security Council
UNTAET	United Nations Transitional Administration in East Timor
MIS	Management and Information System

Introduction

This research paper is a mixed-methods single case study that addresses the implementation and effects in poverty reduction and social capital of the National Village Development Program (PNDS-Programa Nasional Dezensolvimentu Suku) in the village of Fahilebo, Timor-Leste between 2015 and 2020.

PNDS is based on Community-Driven-Development's (CDD) principles, a participatory approach built to construct small scale infrastructure in states that face/d lack of public services delivery, political instability, weak state presence and/or conflict. Originating more than two decades ago, CDD has earned its place within the academia and development practice throughout the world¹. It has proven effective in the provision of small scale infrastructure in a participative, cheap, and transparent way, increasing ownership of local development projects (Anderson, 2019). Hence, CDD is important in the way that it consolidates itself as a promising field to strengthen the link between local development and weak governability while helping the most forgotten and vulnerable communities with equity criteria.

Assumed to be effective as a model for community development in conflict-affected and fragile countries where government existence is negligible, CDD consolidated itself in Timor-Leste in 2012 with the National Village Development Program (PNDS). Unlike other CDD initiatives around the world, this program is a fully state-funded program aimed at constructing small-scale infrastructure throughout the country and is the focus of this paper.

¹ CDD was made highly visible in 1997 in Indonesia with the Kecamatan Development Project (KDP) which was thought to and managed to build cheaper and higher quality infrastructure than public institutions (Guggenheim, 2004; World Bank, 2013). The idea of such an endeavor was for local communities to increase their ownership of development projects by the means of a participatory methodology that would let them select, prioritize, and implement their development projects. CDD is also meant to jump the long timeframes of government agencies (due to human resources challenges) and to decrease the risk of corruption by the means of budget management and transparent decision-making. Differing from past elite participation and decision-making, CDD expanded in the early 2000s and as of 2018, the model has reached 77 countries (Anderson, 2019). The model has been expanded to measure and enhance local empowerment, social cohesion, and governance which is in turn said to be out of its scope and such impacts not achieved, a discussion that will be later reflected upon.

The National Village Development Program (PNDS) delivers grants to local communities depending on population size and remoteness so local communities get to select, prioritize, construct, and manage their own development projects. According to decree-law 08 of 26/06/2013, PNDS will initially last 8 years with an estimated \$USD 300 million. Within the first implementation years, every village² was supposed to receive a subsidy varying between \$USD 40,000 and 70,000, with the possibility of increases in subsequent years³ (which never happened).

Text Box 10. PNDS projects in Fahilebo

No.	Project Description	Project Status	Infrastructure Budget	Materials Budget	Labor Budget
1	Gravitation-based Water System	Approved	USD 34098,8	USD 16276,2	USD 4697,46
2	Entrance/Bridge, Drainage, and Retaining Wall	Completed in 2016	USD 39500	USD 14100,85	USD 3616,24
3	Gravitation-based Water System	Completed in 2016	USD 39500	USD 17675,72	USD 4107,19
4	Gravitation-based Water System	Ongoing	USD 34098,8	USD 10566,33	USD 2558,81

From reviewing the existing empirical literature, it became clear a significant gap remained as there have been almost no academic studies exclusively focusing on PNDS other than evaluations from the Australian Aid Support Program, and past monitoring led by the Asia Foundation. Precisely due to this gap, this particular case was chosen. Thus, evaluating CDD's experience in Timor-Leste is of high relevance as it poses a promising path to building infrastructure in a cost-effective, timely, and transparent manner while leaving community knowledge along the way, and perhaps impacting other welfare outcomes.

² Timor-Leste's subdivided in 13 districts (now called municipalities), these into 65 sub-districts (now called administrative posts) and 442 sukus (villages). A suku is a cluster of aldeias (hamlets), of which there are 2250 in total. The *xefe de suco* (village chief) is the leader of each suku. The Chief receives a small 'incentive payment' to lead and motivate the community to maintain the chosen infrastructure projects such as roads and wells, and other types of activities. The Chiefs also leads a suku council, composed of aldeia heads, a treasurer, and representatives of customary elders, women, and youth (World Bank a. , 2009).

³ Decree-law 08 of 26/06/2013 states that program's objectives are to i. promote proximity mechanisms between the central government and the villages, ii. promote the participation of local communities, and iii. create jobs to construct and maintain local infrastructure. The central government transfers the money directly to the villages' bank accounts in three payments. A first operational subsidy of 10-14%, the second one of 50% of the infrastructure allocation, and a third one of the remaining 50% of the infrastructure allocation after 70% of the project's completion. The cost of the project could be less than the infrastructure allocation, which means that the village would keep unspent money in its bank account.

To contribute to filling this gap, the goal of the present research is to identify the major differences between PNDS' effects and CDD's theory concerning poverty reduction, and social capital between 2015 and 2020. A second objective for this research is to explicitly the underlying reasons for the program's beneficiaries and development practitioners for the perceived PNDS' effects in poverty reduction and social capital. First, it hypothesizes positive effects in poverty reduction from the construction of small-scale infrastructure in Fahilebo between 2015 and 2020. Second, it hypothesizes that the larger the quantity of PNDS projects will lead to a larger social capital increase in the same period. The study accepts hypothesis one and rejects hypothesis two, finding not many differences between PNDS' effects and CDD's theory.

The present research uses a convergent mixed methods research design, which is a type of design in which qualitative and quantitative data are collected in parallel, analyzed separately, and then merged. A survey was used to identify PNDS' effects in poverty reduction and social capital in the village of Fahilebo, in the administrative post of Liquiça, Timor-Leste from 2015 to 2020. Semi-structured interviews explored in detail the reasons provided by project beneficiaries/partners and development practitioners for the identified effects of PNDS in poverty reduction and social capital. To manage reliability/credibility and robustness risks, two information-triangulation rounds were put forward. The reason for collecting both quantitative and qualitative data is to enhance the research's findings by means of triangulation, completeness, context, and unexpected results (Bryman, 2006).

The present research makes four main contributions to the literature. First, having a mixed-methods approach and two triangulation rounds, the study uses quantitative data to identify PNDS effects between 2015 and 2020 to then explain the mentioned changes using qualitative information. Hence, the research contributes to fill a vast gap in the literature concerning the single case of PNDS as CDD. Second, this research uses both rich surveys and individualized in-depth interviews including diverse views of project beneficiaries/partners and development practitioners from the lowest level of responsibility at the local level to a former president and Nobel Peace Prize winner. Third, even though it is a case study, the hypotheses and findings provide relevant and timely learning for Timor-

Leste’s development just as valuable across a variety of CDD contexts. Fourth, having a large number of surveys (143) and interviews (19) provides solid analytical generalization. As a result, this research’s contribution is thought to be significant as it is focused to have relevant theoretical, heuristic, and practical effects (Tracy, 2010).

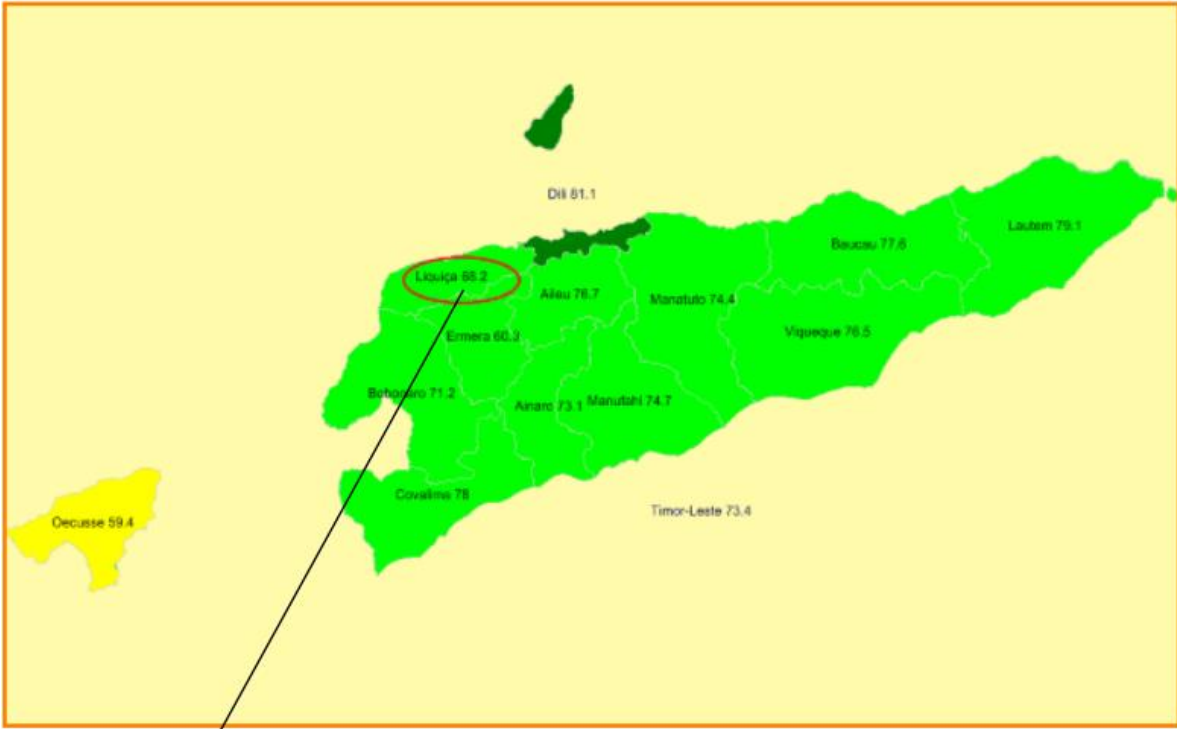
The following maps locate the discussion.

Timor-Leste’s Map



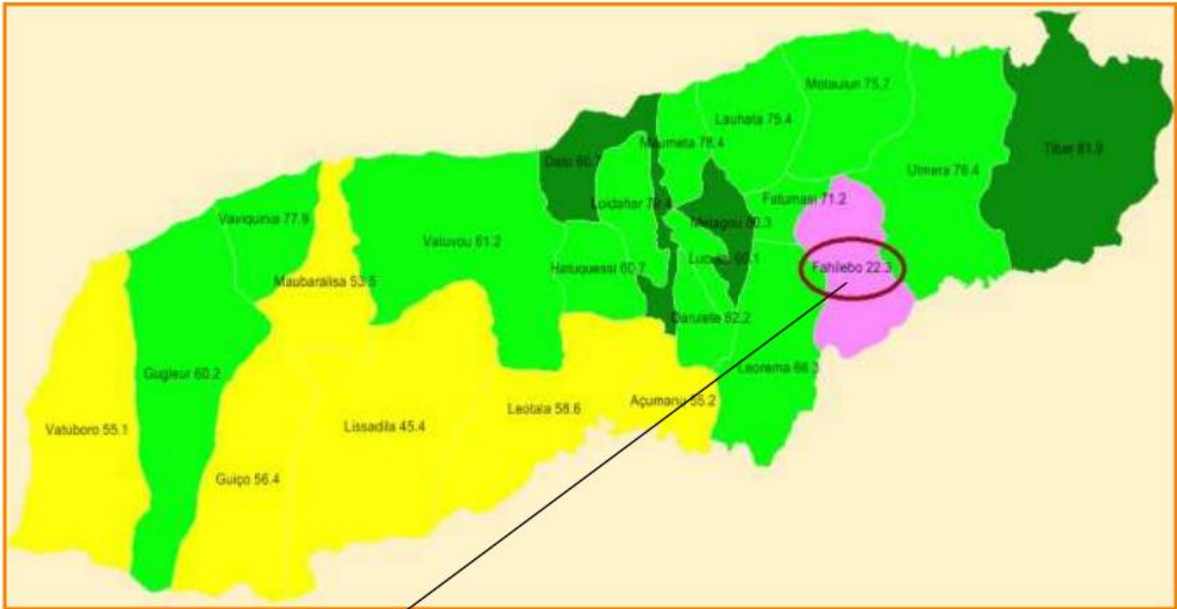
Source: (Hotpot.se, 2013)

Liqueça’s municipality Map



Source: (Ministry of Finance, 2015)

Fahilebo's village Map



Source: (Ministry of Finance, 2015)

This thesis is divided into five different sections. First, a theoretical framework presents the conceptual background and reasoning behind local participatory development. Second, a literature review documents the contemporary discussion about CDD and informs the reader about the works written about PNDS. Third, a methodology section presents the underlying research design, the leading research questions, the data collection and analysis procedures, as well as the assumptions, expectations, and limitations of the study. Fourth, a findings section identifies PNDS' effects on poverty reduction and social capital in Fahilebo between 2015 and 2020. Then, it presents program beneficiaries' and development practitioners' reasons for the mentioned effects portraying the two triangulation rounds. Fifth, a discussion and conclusion section discusses the hypotheses and compares the PNDS' effects in poverty reduction and social capital to the theoretical framework summarizing the findings.

Theoretical Framework

CDD theoretical foundations lie within participatory development. Hence, the purpose of this section is to set the theoretical basis of how local participatory development is supposed to work, as well as to state the lens through which the data analysis will be addressed. First, market and government failures will be addressed since participatory development is aimed at contributing to repairing market and government failures. Second, the aims and means by which participatory development corrects these failures and theoretically contributes to the virtuous cycle are pointed out. Finally, CDD will be located within participatory development and a definition of CDD will be provided.

Participatory development is perceived to contribute to the widest development challenge of articulating a virtuous cycle of checks and balances between government, markets, and civil society that corrects and compensates for each other's failures and weaknesses (Mansuri and Rao, 2013). The roots of participatory developments can be historically traced back to most cultural and religious traditions long before Athenian democracy⁴.

⁴ Recent notions of participation can be found in the works of John Stuart Mill and Rousseau. The 1950s-1960s shows the first wave of participatory development where multiple donors financed and promoted decentralization, community-based development, and cooperative institutions. The 1970s brought a decline in the interest put in it, as policy shifted the funding to large-scale investments in industrial and agricultural growth.

Both market and government failures are closely connected. Market failures happen because of the inability to allocate resources efficiently. Cowen (1988) argues that markets fail due to the existence of monopolies/oligopolies, public goods, incomplete markets, externalities, imperfect information, and inequality⁵ (Cowen, 1988) which tend to inhibit growth and deepen poverty traps (Mansuri & Rao, 2013). Development has thus been enforced and challenged to help correct market failures (Devarajan & Kanbur, 2005; Hoff & Stiglitz, 2001) with the aim of ensuring that poor people benefit from development so resources are distributed equitably (Atuguba, 2013). In theory, correcting market failures enlarges development benefits and allocates larger shares to the poor in situations where market failure disproportionately affects them. As a consequence, the existence of government is then justified to correct market failures and inequity. Inequity combined with market failures can create a disproportionate aggregate welfare loss for poor people magnifying inefficiencies. Accordingly, the government intervenes by for example providing public services or by enforcing equalizing interventions (i.e. land reforms), balancing the scale for those communities that were left out by markets, and thus correcting inequality and poverty traps (Mansuri & Rao, 2013).

Similar to markets, governments can fail. It happens when a political intervention or policy leads to less efficient resource allocation than the market would have produced (Besley, 2006). Bates (2008) traces government failures⁶ mainly to the government lacking essential information⁷. At the core of clashes and links between government and markets lies

The 1980s resulted in critiques of this model as it was seen as disempowering to poor communities as this ‘top-down’ approach would bias their interests. Lead economists like Elinor Ostrom and Amartya Sen called for a ‘bottom-up’ deliberative approach where local communities would have a say in the decisions taken on their interests allowing the creation of ‘social capital’ (Mansuri & Rao, 2013). Authors like Wong and Guggenheim (2018), locate the modern roots of CDD in the works of Bourdieu (1986), Coleman (1988), and Putnam (1993; 2000) that pointed out how the historical development of cultural and social institutions plausibly explain patterns of development and cooperation. The waning of structural adjustment programs reactivated the interest in funding participatory approaches in the 1990s. Out of this interest, community-driven development gained attention (Mansuri & Rao, 2013).

⁵ Since it is not the purpose of this text nor is there enough space to discuss market failures, the reader can initially read more about it (Cowen, 1988) and (Stiglitz, 1989).

⁶ Government failures are different from political failures in the way that these last ones are recurrent to all governments within a democratic framework.

⁷ Specifically, these refer to i. information failures, or put differently, ignorance in the misallocation of resources (decentralization being a given solution to this problem), ii. information asymmetries or principal-agent problems, iii. coordination problems where decision-making processes are crossed by different groups’ levels

development, which tries to resolve their failures and inequalities within inclusive long-term growth (Acemoglu & Robinson, 2006; World Bank, 2005). Current globalization and interconnectedness lead to market and government failures on a global as well as on a local level being closely linked to each other.

In this maze, local participatory development comes in with the aim of building an effective local civic sphere. Habermas (1991) argues that civil society works in the way that it triggers a ‘public sphere’ that allows the creation of a ‘third space’ in which citizens, publicly and collectively, engage with markets and states, creating a symbiotic link to the effective functioning of them⁸.

Thereupon, local participatory development is meant to contribute to enhancing civic action to force market and government agents to act according to citizens’ common interests and against private interests of individuals, thus compensating/correcting each other’s failures/weaknesses⁹. In relation to markets, civil society (from local to global level) has the function of acting as a watchdog (i.e. consumer groups), and of generating economic activity (i.e. microfinance organizations); regarding governments, its function is to keep them transparent and accountable (Mansuri & Rao, 2013). Consequently, an effective all-level civic sphere corrects the government’s failures, creating a virtuous cycle wherein market, government, and civil society complement, and balance each other in a check and balances system.

Interest in participatory development led to the theorizing that local participation builds community-level social capital, increases the demand for good governance, empowers communities, and enhances poverty targeting, sustainability, efficiency and effectiveness, development’s inclusiveness, and poverty reduction efforts (Adusei–Asante & Hancock, 2012; Baird, McIntosh, & Ozler, 2009; Bennett & D’Onofrio, 2015; Binswanger–M.,

of influence, and iv. Inequity wherein the costs of government failure drop disproportionately on the poor, these last ones having less legal and procedural information than the rich that try constantly to retain power (Bates, 2008).

⁸ It is further argued that an effective civil society is a space where individuals turn into citizens voluntarily working and participating in collective benefit. Moreover, Tocqueville (2000) stresses that giving community members statutory recognition and bureaucratic legitimacy is the path that democratic culture is entrenched into a country’s national political culture, giving way to new democracies to arise from bottom-up processes.

⁹ In theory, in the absence of civil accountability and regulation, political leaders will follow their interests of capturing rents, preserve the existing hierarchies, and ultimately holding on to power, and markets will only be motivated by profit maximization.

Jacomina, & Spector, 2010; Chase & Woolcock, 2005; Dongier, et al., 2003; van Domelen, 2007; 2008). Participation is expected to i. lead to cutbacks in rent-seeking and corruption, and more equitable allocation of public resources, and ii. ameliorate service delivery effectiveness, development projects design, and targeting of benefits. The reasoning behind these expectations is that participation aims to include local preferences and knowledge in the decision-making processes that privates, donors, and governments hold (Mansuri & Rao, 2013).

It is reasoned that communities not only have the best knowledge about local context leading to accurate priorities and appropriate designs but also having stronger incentives and a larger ability to stop corruption and make efficient use of resources (Wong & Guggenheim, 2005)¹⁰. In addition, it is theorized that by treating beneficiaries not as targets but as partners, this lets governments enforce long-demanded lists of local infrastructure and service delivery gaps, letting them focus on bigger investments without the incentives of central governments (particularly relevant in disruption-vulnerable, conflict or, disaster recovery contexts) (Wong & Guggenheim, 2018).

According to Mansuri and Rao (2013), the two most efficient ways to promote local participation are community development and decentralization of authority and resources to local governments¹¹. Community development fosters endeavors to bring households, neighborhoods, and villages to manage development resources without having to rely on local governments. This is precisely where Community-Driven Development (CDD) and along with other forms of local participation is hypothesized to hold the ability to stimulate citizenship, building self-reliance and collective action, enabling inclusive civic engagement and enhancing ‘pro-social thinking’. By CDD this paper will understand a modality of community development that

“gives control of decisions and resources to community groups. These groups often work in partnership with demand-responsive support organizations and service

¹⁰ Based on this assumption, the World Bank supported approximately 400 CDD projects in 94 countries reaching almost \$30 Billion by 2012, representing between 5 and 10% of its lending portfolio (Wong, 2012).

¹¹ Decentralization similarly alludes to efforts to strengthen municipal and village governments in the supply (invigorating the ability to provide services at the local level) and demand (bracing citizen’s participation at the local level) sides (Mansuri and Rao, 2013).

providers, including elected local governments, the private sector, NGOs, and central government agencies. CDD is a way to provide social and infrastructure services, organize economic activity and resource management, empower poor people, improve governance, and enhance security of the poorest” (Dongier, et al., 2003, pg. 303).

Regarding the projects’ design, the theory highlights that attention must be given to elite capture and flexibility. CDD’s vulnerability to elite capture has been highlighted (Platteau, 2004; Mansuri & Rao, 2007), that is, the likelihood to fall in the hands of a few individuals/local leaders who take all the decisions most frequently without the community’s consent. Mansuri and Rao (2004), argue that understanding/identifying between ‘benevolent’ elite domination and pernicious types of capture is necessary to understand project dynamics and outcomes. Wong and Guggenheim (2005) state that CDD projects are not always appropriate to every context proposing design flexibility in order to respond to regional differences¹².

Literature Review

The following section presents a brief overview of current evidence-based discussions on CDD’s implementation. This section has as its purpose to inform what the literature has compiled about CDD’s implementation, and to set the hypothesis for this research. Based on this section the expectations regarding PNDS implementation are laid out.

Perceived to be proven effective in its objectives, CDD has been constantly evaluated to account for the many effects that projects around the world have tried to make of it. CDD became a new development model wherein by letting local populations learn democracy by doing, it skipped political processes that were thought to be necessary for projects that instead required ownership and adaptation building in representative institutions¹³.

¹² Furthermore, Wong and Guggenheim (2005) argue that CDD projects work best whenever they make part of a broader reform strategy looking to improve efficiency and quality in local governance.

¹³ Having recently emerged, the academic works around CDD have spun around its effectiveness and the effects around the globe (Guggenheim, 2006).

Framed within a democratization trend CDD's growth has been thought to improve decentralization processes. Wong & Guggenheim (2005) argue that East Asia has been the region where decentralization and democratization have occurred in parallel. In the region, CDD projects aim to have pointed to local empowerment and poverty reduction through the participatory planning process at either commune, village, or sub-district level¹⁴.

Based on the evidence, a great amount of the literature agrees that CDD is effective in building small-scale infrastructure in a timely and cost-efficient manner. In Sierra Leone, Casey, Glennerster, and Miguel (2011) find that treatment communities had more local public goods of higher quality than in control areas, finding also that the benefits of CDD projects were distributed in an equitably and broad manner with minimal leakage of project resources in an extreme-poverty and civil-war context.

In an attempt to evaluate the World's Bank CDD projects over 25 years span Wong (2012), finds that most programs i. did well at geographically targeting poor areas, benefitting poor households and individuals, ii, have implied positive impacts on access and use of services, particularly in drinking water, education, and health, iii. Have good rates of return and are cost-effective compared to other modes of service delivery. Moreover, in a recent study synthesizing the results from randomized controlled trials Casey (2018), finds that CDD can deliver public goods with modest economic returns at low costs in difficult areas.

However, almost the same literature that recognizes CDD's positive effects in small-scale infrastructure negates its effects on behavioral changes, social capital, or conflict. In its evaluation of CDD projects over 25 years Wong (2012) finds that based on evidence, despite the positive effects for poverty welfare reduction and increased access to services, most projects did not have an impact on social capital, conflict, or on the theorized spillover effects on local governance. Correspondingly, Hassan, et. al. (2017) conclude that it is difficult to allocate the outcomes of any local service delivery initiative exclusively on citizen

¹⁴ They argue that CDD programs can improve the quality of decentralization by shaping and informing decentralization regulations, promoting greater civic participation, voice, and accountability in local governance, also by delivering cost-effective and time-efficient state services to difficult-to-reach areas. Central to this stand is the thesis that local governments with real resources and power given by a precisely defined decentralized framework will do better (Elekwa & Eme, 2013).

participation. Parks, et. al. (2013) review 15 community-based development projects¹⁵ in the Philippines, finding little evidence to suggest that community-based development projects have an impact on improving formal local governance. In terms of peacebuilding, an analysis of a CDD project in Kyarinnseikgyi township, Kayin State, Myanmar found no evidence of the project's impacts on peacebuilding efforts (Myint, 2019).

Even though it has been theorized CDD has spillover effects in local governance, social cohesion, and social capital there is evidence arguing that these have not been found. Humphreys, Sanchez de la Sierra, and van der Windt (2012) find that CDD in the Democratic Republic of Congo had no impact on economic well-being and socio-political behaviors or attitudes of the studied population¹⁶. In a study about Sierra Leone Casey, Glennerster, and Miguel (2011), find that the CDD project led to no fundamental changes in interaction neither between community members nor in the way they would collectively act outside the project limits. They found no impact on social capital. Hence, neither greater participation nor collective action nor empowerment of marginalized groups were seen in local affairs outside the project's boundaries.

Several authors argue that CDD delivers some of its purported outcomes depending on the projects'/programs' design and the particular country's context (Bennett & D'Onofrio, 2015; Davis, 2004; Cliffe, Guggenheim, & Kostner, 2003). CDD is meant to operate on the principles of decentralization, learning-by-doing, transparency, local government empowerment, and accountability (horizontal and vertical) (Davis, 2004), all concepts subject to local interpretation and operation. Depending on where the projects took place, outcomes were different (Barron, Humphreys, Paler, & Weinstein, 2009; Beath, Christia, & Enikolopov, 2012; Casey, Glennerster, & Miguel, 2011; Fearon, Humphreys, & Weinstein, 2008; Humphreys, Sanchez de la Sierra, & van der Windt, 2012). Thus, a projects' design and the countries' particular context and circumstances shape the effects that CDD will have.

¹⁵ The difference between community-based development and community-driven development projects is that while the first terms allude to projects that actively include beneficiaries in their management and design, the last one refers to projects in which communities have direct control over resources/funds, management, and project decisions (Mansuri & Rao, 2004).

¹⁶ There was no evidence where the *Tuungane* intervention led to behavioral changes with no difference between control and treatment areas and no positive changes in the position of women nor gender parity.

Another central point of criticism is the question of universal values and hierarchy between donors and receivers. Murray Li (2006) argues that World Bank members position themselves to hold the knowledge of what empowerment should look like, focusing on correcting the conduct of local dwellers but leaving unimproved the conduct of investors, the military, senior officials, etc¹⁷. Carroll (2009), adds that in CDD projects –like the KDP- the World Bank uses its funds to exalt neoliberal values such as competition, transparency, and accountability thus tying its funding to injecting its ideology, extending capitalist social relations and the institutional framework that comes with it.

The most recent debate concerning CDD effects relates to the 2018 3IE report (White, Menon, & Waddington, 2018). In a review of 25 impact evaluations of 23 CDD projects/programs in 21 low and middle-income countries, the report mainly concludes that while CDD projects/programs have made a significant positive effect in small-scale infrastructure it does not have any positive impacts to other welfare outcomes or governance¹⁸. Finally, the report states that CDD programs have weak effects on health and predominantly insignificant effects in terms of education or other welfare outcomes.

To sum up, the literature on CCD highlights it as a policy tool that displays positive effects regarding small-scale infrastructure at reasonable cost and quality but with non-significant effects on other welfare outcomes. It also places importance that the country's context and the specific particularities of the project's/program's design (as differences in terms of funding source, budget, scale, time frame, etc.) directly impacts its effects. Another important factor to highlight is the propensity for CDD programs to be elite captured. Thus design, implementation, and evaluation must be wary to identify it and have measures that allow for correction (i.e programs'/projects' flexibility). The next section elaborates on PNDS as an

¹⁷ Regarding the KDP she complains about how the project did not overlook but neither acted on the fact that accountability, social/economic rights, etc are a product of struggles of interests and social forces.

¹⁸ Regarding participation, the report finds that a great number of community members hear about CDD programs but do not attend to meetings, decision-making is limited to a certain amount of individuals, community members tend to speak less at meetings, women are only half as likely to be aware of CDD programs and also less likely to speak or attend to community meetings.

illustration of the implementation of a CDD program within the specific context of Timor-Leste.

Far-Flung into Timor-Leste

Despite progress, vast foreign aid, and great efforts from recent independence in 2002, the State confronts multiple challenges that pose an unstable situation. Annex 1 elaborates on detail on the country's context. One crucial challenge in the country's rural development is the provision of basic State's services. As chart 1 shows, historically the State basic services provision and roads have been poor. Still until nowadays a great portion of the country has no access to electricity, safe drinking water, basic sanitation, and the state of the roads to access territories is meager, aggravating further development. Moreover, the country presents highly-fluctuating differences at the municipal and administrative-post level wherein a great number of villages are almost impossible to access, having distant villages (i.e. in Viqueque, Lautem) that have never seen the presence of the State (Peake, 2013).

Equally important, the 2015 National Census found 34 local languages and 5 foreign languages¹⁹ that are spoken in this small island country (15.000 km²), as well as varied traditional beliefs and rituals. Not only Timor-Leste's institutions have to adjust State's services to these particularities but also to rule in a foreign language, as all official documents are written in Portuguese²⁰. Accordingly, the portrayed scenario shows Timor-Leste's urgent need for local development, infrastructure, and basic services provision and the importance of the context to draw attention to cultural and social differences.

¹⁹ Local languages: Tetun Prasa, Tetun Terik, Adabe, Atauran, Baikenu, Bekais, Bunak, Dadu'a, Fataluku, Galoli, Habun, Idalaka, Idate, Isni, Kairui, Kawaimina, Kemak, Lakalei, Lolein, Makalero, Sa'ani, Makasai, Makuva, Mambai, Midiki, Nanaek, Naueti, Rahesuk, Raklungu, Resuk, Tokodede, and Waima'a. Foreign languages: Portuguese, Indonesian, English, Malay, Chinese.

²⁰ Peake (2013) notes that by 2013, 10 to 15% of the population spoke Portuguese.

Chart 1. Access to basic services and roads in Timor-Leste between 2001 and 2007.

Basic Services	2001	2007
Drinking water from an improved source	50.1	64.7
Basic Sanitation	41.2	48.5
Electricity	25.6	36.1
Nearest vehicle passable road		
Walking time to get there (minutes)	8.8	18.6
Accessibility during rainy season (%)	82.7	68.5
Number of times it was used last month	27.4	26.4

Source: (World Bank a., 2009:5)

As shown above, and considering the learnings from Annex 1 and Annex 4, multiple internal divisions and the political, economic, social, generational, historical, linguistic, and geographic differences summed to the program’s design and dispositions make of PNDS a unique CDD case. In this way, while CDD projects/programs share common goals and principles, the particular context directly impacts the programs’ outcomes. Taking into account the country’s context, Annex 4 addresses in detail PNDS’ performance in light to its particular design. PNDS represents a gap in the literature due to how under-researched it is. Due to this gap, this particular case was chosen, as there have been almost no academic studies done exclusively on PNDS other than the evaluation from the Australian Aid Support Program, and past monitoring led by the Asia Foundation.

Methodology

This chapter presents the underlying research design, the statement of purpose, the leading research questions, the data collection, and analysis procedures, as well as the hypothesis, assumptions, expectations, limitations, and the criteria to choose the particular case study.

This research uses a convergent mixed-methods approach. Mixed-methods research is hereby understood to collect both quantitative and qualitative data and enforce further data analysis and interpretation of the quantitative and qualitative data (Johnson, Onwuegbuzie, & Turner, 2007). These procedures were informed by the philosophy of pragmatism²¹ (Kaushik &

²¹ While poststructuralism and constructivism are linked to qualitative research and post-positivism is connected to quantitative research, this study is based on the pragmatism philosophy in the way it provides tools for mixing

Walsh, 2019) and the Community Driven-Development theory. A mixed-methods²² approach was chosen for this research to use its strengths of drawing on quantitative and qualitative research while minimizing the limitations of both of these²³.

This paper responds to the following research questions,

- In Fahilebo, between 2015 and 2020, Which are the major differences between PNDS' effects and CDD's theory concerning poverty reduction, and social capital?
- Between 2015 and 2020, What are the underlying reasons found by the program's beneficiaries and development practitioners for the perceived PNDS' effects in poverty reduction, and social capital?

Following the gap in the literature concerning PNDS and pragmatism, the abovementioned questions were developed in order to elaborate on PNDS as a CDD experience²⁴. The literature review was also used to extract from it the hypothesis, assumptions, and part of the expectations for this research. As can be seen, the research questions include the literature review in the way that CCD reduces poverty. According to the literature, we can develop the following hypothesis:

methods and approaches, i. a logic, in the way it uses the combination of ideas and methods to contribute to address, frame and provide tentative answers to the research questions, and ii. an epistemological justification via pragmatic epistemic standards or values.

²² Mixed methods as an approach to research originated approximately between the late 1980s and early 1990s in works of diverse fields. In the research world, terms like multimethod, mixed research or mixed methodology have been the terms used to define this type of research, nonetheless, publications such as the SAGE's Journal of Mixed Methods Research and the SAGE handbook of mixed methods in the social & behavioral sciences denominate it as mixed methods (Bryman A., 2006; Creswell & Plano Clark, 2011; 2018; Creswell, 2015, Creswell & Creswell, 2017; Tashakkori & Teddlie, 2010).

²³ Pragmatically, mixed methods are useful to have a deeper understanding of the research questions and problems i. evaluating the outcomes and processes of a program, or a policy decision, ii. developing a more complete understanding of cases for comparison, iii. comparing different perspectives arising from the quantitative and qualitative data, iv. Developing better-contextualized measurement instruments by using both quantitative and qualitative data, and v. explaining quantitative results with qualitative data collection and analysis (Creswell & Creswell, 2017). Thus, mixed-methods were chosen to i. find unexpected results; ii. triangulate the information and greater validity; iii. provide a more comprehensive account of the area of study; iv. offer contextual understanding and broad relationships among variables; v. to use qualitative data to illustrate quantitative findings, and vi. include/combine the researcher's perspectives with those of the participants while uncovering relationships between variables and revealing the meaning of them to the participants (Bryman A., 2006).

²⁴ Due to how unexplored this case is, the questions are thought to be relevant in the way they contribute to the debate on the impacts of CDD and to shed light on PNDS successes so its lessons can be used in other latitudes bearing in mind contextual differences.

- **H1:** the construction of small-scale infrastructure in Fahilebo between 2015 and 2020 will lead to poverty reduction.
- **H2:** the larger the quantity of PNDS projects in Fahilebo between 2015 and 2020 will lead to a larger social capital.

In consequence, the dependent variables in this paper are social capital and poverty (reduction), whereas the independent variables are built-in small-scale infrastructure and the number of PNDS projects²⁵. Drawing on the previous theorization, the assumptions were made.

Text Box 11 Research's assumptions

Research's assumptions:

- PNDS provides a voice for local villagers (and disadvantaged ones) to participate in their development projects (including decisions regarding funds);
- The implementation of CDD projects/programs leads to poverty reduction;
- Community leaders participate in PNDS projects because of its expected benefits;
- The risk of local elite capture for PNDS projects is present;
- PNDS will not try to change local dwellers' behaviors without questioning the contradiction of capitalist accumulation and the dispossession followed by it.

Regarding the research's expectations, based on the literature review it is expected that socialization and election lead to competent women and men involved in implementation, identification of useful projects with workable plans, fairly wide community participation, successful accountability meetings, and poor maintenance of built projects. It is also expected that PNDS' particular design and the country's context will shape the program's effects.

²⁵ The first hypothesis assumes an inversely proportional relationship between the independent and dependent variables, whereas the second hypothesis assumes a proportional relation between the variables

Data collection was done between January and February 2020 with the permission and support from the PNDS Director. Besides the criteria to select the village²⁶, Fahilebo was chosen because it is what the literature has denominated a common single-case-study in the way it allows us to capture an everyday situation aiming for the case to provide lessons about the social processes around PNDS as a CDD policy example (Yin, 2017)²⁷.

As illustrated by Text Box 3 Data collection consisted of the implementation of surveys and semi-structured interviews. The analysis portrays the results of the 139 household surveys in Fahilebo, in Bazartete's administrative post, in Liquiça's municipality, in Timor-Leste.

Text Box 12 Quantitative data collection

3 Surveys were implemented

- 139 household surveys
 - The survey comprised 67 questions including interval/ratio (rating scale, Likert scale, and matrix questions), dichotomous, categorical (multi-choice, & checkbox), and demographic questions to characterize the sample.
 - Designed to collect information about
 - The individual who was responding to the questionnaire;
 - The household conditions;
 - The implementation of PNDS;
 - The local provision of public services;
 - Interpersonal trust within the community.
- 4 surveys to local leaders: 3 Hamlet Chiefs and the Village Chief
 - The survey comprised 49 questions including interval/ratio (rating scale, Likert scale, and matrix questions), dichotomous, and categorical (multi-choice, & checkbox).
- These surveys were fully translated into Tetum to be easily understood by local dwellers.

Sample size was determined according to Cochran's (1977) formula presented by illustration

1. The sample was composed of 139 households out of the 200 households living in Fahilebo

²⁶ Considering the research's time and budgetary constraints the selection of the village was based on: population equal or less to 2500, chosen for PNDS Phase III, Tetum speaking village, classified as remote or non-remote, travel distance from Dili, more than 3 projects in the village in at least two different areas, included within the PNDS Baseline study, and not located within Dili's municipality (due to the heterogeneity of the population). The matching between the criteria and the data led to choose Fahilebo village in the municipality of Liquiça.

²⁷ In this way, this case study is to be a tool and play a supporting role in facilitating the understanding of Community-Driven-Development projects in general and its implementation in Timor-Leste, in that sense this research is instrumental in its purpose (Stake, 2005).

in 2015 (69.5%)²⁸. The sample resembles closely to the population increasing its representability and strength of the results²⁹.

Illustration 2. Sample size formula

$$\text{Sample size} = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N}\right)}$$

N= Population size 200 households e=Margin of error 0.5 z= z-score 1.96 (for a confidence level of 95%
 p=(estimated) proportion of the population 0.5

Source: (Cochran, 1977)

Data collection and analysis were aimed at researching real effects in Fahilebo’s population, providing solid analytical generalization about PNDS in the CDD framework. Statistical generalization was not able to be reached due to the context’s constraints³⁰. However, having such a large sample of the population (69.5% of Fahilebo’s 2015 households) reduces the probability of selecting an unrepresentative sample, and the likelihood of containing large sampling errors as new observations are introduced (Watt & van den Berg, 1995) (Sampieri, Collado, Lucio, Valencia, & Torres, 1998) (Otzen & Manterola, 2017)

On top of that, 19 semi-structured interviews were conducted with community beneficiaries/authorities at the community level, PNDS officials (ranging from the local, regional, and national level until the PNDS Director), high-rank international-aid officials

²⁸ In 2015, Fahilebo had 1190 people, 625 males (52.5%) and 565 females (47.5%). Of these, 164 were under 5-years-old kids (13.7%), and 93 were older than 60 years old (7.8%) (Ministry of Finance, 2015).

²⁹ Out of the sample survey, 52.5% of the respondents were males, 47.5% were females, and the average respondent was 39 years old (mean 41.5, mode 29). The average surveyed household was composed of 6.3 family members (median 6, mode 4). There were 105 children under 5-years-old (approximately 15%, and almost 1 per family), and 56 elders older than 60 years old (8.4%). As one can see the sample is very much alike the population, and while also being quite homogeneous the quantity and homogeneity of the sample increase the representability of the sample and strength of the results.

³⁰ There is no list (official or not) of the village inhabitants or any other accurate dwellers’ information that could be used to i. identify/contact households, giving an equal probability of being chosen for the sample, that is, selection bias, or ii. avoid members of the population to decide not to participate in the research, put differently, response bias. Creating such a list was out of the scope of this paper and it exceeded the research’s time and resources constraints.

and the Nobel Peace Prize winner José Ramos-Horta³¹. Protecting the rest of their names, annex 2 portrays the positions held by the interviewed individuals. Key informants were sampled using the snowball sampling method in which additional respondents are going to be identified based on referrals from key stakeholders. Program subjects were selected using the purposive sampling method, thus a list of key stakeholders was prepared prior to the arrival to the field site (Creswell & Poth, 2018; Yin, 2003). Data collection and analysis involved multiple sources of information such as direct observations, interviews, audios, videos, archival records, documents, and reports in four³² different languages³³.

The research design is a single adaptive case study³⁴ that traces the effects of PNDS longitudinally from 2015 to 2020 at the local level. Thus, this research aims to develop an in-depth description and analysis of the National Village Development Program following the longitudinal rationale³⁵.

The analysis of the collected information was done in two steps. First, the survey-based gathered data was compared to Timor-Leste's 2015 Census, and in those cases where the Census did not comprise specific information assessed by the survey questions, the collected data was matched with the 2015 PNDS Baseline survey. Second, the information from the 19 semi-structured interviews was analyzed using the qualitative data analysis software NVivo. The software was used as this research comprises a large volume of information³⁶.

³¹ The interviews used an adaptive interview guide designed to differentiate the questions for community leaders/authorities that had –or had not- a role to play within PNDS, non-participants, and PNDS officials. The interviews were conducted in English, having a translator when needed.

³² Tetum, Portuguese, Spanish, and English.

³³ Overall, the data collection process was based in the basic principles of asking the right questions depending on the interviewees' experience and position, trying to interpret the answers fairly, being a good listener without having preconceptions or ideologies, staying adaptive to the context, having a firm grasp of the studied issue, and above all conducting research ethically (Yin, 2017).

³⁴ Case-study research is often overlooked due to a common misunderstanding: its impossibility to generalize and thus contribute to scientific development (Flyvbjerg, 2006). Yet, case-study research is ideal to generalize in the way Karl Popper (1963) used 'falsification' to test a scientific proposition: If one observation does not fit with a given proposition, that proposition is generally invalid and must be revised. Put in another way: the existence of one black swan falsifies the proposition of 'all swans are white'.

³⁵ That is one in which the interval from 2015-2020 presumably reflects the anticipated stages at which changes should appear, following the before and after logic (Yin, 2017).

³⁶ It proved convenient to this research as the software analyze across different formats using the same thematic structures/nodes, carry out complex search and retrieve operations, link research notes to coding, and examine possible relationships between themes (King, 2004).

Thus, the quantitative analysis allowed the longitudinal identification of PNDS effects in relation to poverty reduction and social capital, whereas the qualitative analysis was used to further and explain the identified changes according to the reasons provided by the program's beneficiaries/partners, and development practitioners.

Concerning the qualitative analysis, after the transcription of the interviews, the information went through a systematization, organization, categorization, and primary and secondary coding that allowed description, grouping between topics, and results illustration³⁷. The second coding level consists of establishing the relationships between the categories and their illustration is done through conceptual networks³⁸. Chart 2 portrays the qualitative analysis phases.

³⁷ The coding allowed us to locate units of analysis, assign them categories and codes based on the content segments of the interviews. The content segments induced categories and were grouped in terms of similarity, however, a new category was set if the segments' meanings were different.

³⁸ The double coding process, the interpretation process, and its visual illustration allow i. description of isolated findings; ii. identifying relationships; iii. formulating tentative relationships between social phenomena; iv. identifying broader theoretical schemes that contextualize an identified pattern; v. formulating explanations; and vi. reviewing data in a search for evidence that invalidates or corroborates the assumptions that guide the research (Bonilla & Rodríguez, 1997).

Chart 2 Qualitative analysis process phases

PHASE	DESCRIPTION	INDICATOR
PHASE 1 LOCATION OF DOCUMENTARY SOURCES	Review of secondary sources such as literature, journal articles, manuals, evaluations, data sets, etc.	Literature review and theoretical framework elaboration.
PHASE 2 INTERVIEW DIGITALIZATION	Interview <u>Transcription</u>	Primary source documents introduced into the <u>NVivo</u> hermeneutical Unit.
PHASE 3 Reading and categorization	<u>Identification of important segments and code allocation.</u> Construction of matrices	<u>Quotes, codes, and comments on documentary sources.</u>
PHASE 4 Theoretical construction “Linking concepts to networks”	Interpretation. Intertextuality. Connection of concepts, theories and comments made on textual study.	Construction of maps or semantic networks.
PHASE 5 Writing and results display	Results writing. Final report writing.	Findings and discussion sections.

While the strengths of this research design relay on the identification of changes in outcomes, the weaknesses rely on the explicability of the changes³⁹. Unable to qualitatively generalize, this research is limited to not fully determine, within acceptable levels of certainty the magnitude and impact of the effects of PNDS, even more so for higher-order outcomes such as quality of local governance, government legitimacy or poverty. It is evident that these complex causal processes are due to a myriad of factors. Part of the qualitative information was taken from practitioners that might have preconceived assumptions of the well-functioning of PNDS and the causal chain of effects, also impacting the research’s

³⁹ For instance, this research presents an assessment of PNDS impacts on outcomes directly affected by program’s activities, an estimation of local heterogeneity in impact types and their correlating factors; in turn, this analysis can provide an efficacy assessment of the distributional implications of PNDS useful to inform design/reform decision-making.

explicitability abilities. However, to mitigate these weaknesses, the information regarding the explicitability of the changes was triangulated between primary and secondary sources to provide completeness and account for possible flaws.

Findings

The following section has as its' purpose to respond to both research questions⁴⁰ ensuing the procedure mentioned in the methodology and specified immediately below. The poverty reduction and social capital sub-sections first explain what this research understands by each of these terms and right after explains the proxies used to measure them and the reasons for their inclusion. Thereafter, each of the proxies that produced significant longitudinal results in relation to PNDS implementation were addressed whereas the detailed findings for the remaining proxies were compiled in Annex 3. The addressed proxies' sub-categories first identify the major effects of PNDS in Fahilebo between 2015 and 2020 using the quantitative data and; second, provide the reasons found by program's beneficiaries and development practitioners for the identified PNDS' effects.

Aiming to shed light upon other CDD contexts, Annex 4 provides the reasons that beneficiaries and practitioners offered to explain PNDS' performance in relation to its design and the particular country's context. The present findings went to two rounds of information' triangulation. The first one between primary sources. Then, these findings were also triangulated to secondary sources. Annex 5 comprises the findings of the second triangulation round. A brief summary of these two annexes will be presented with the concluding remarks.

To longitudinally identify PNDS effects (that is to compare 2015 and 2020 data) in poverty alleviation and social capital, this research compares the gathered data with information compiled within the 2015 Timor-Leste's Census at the village level. When Census information was not available, the data was compared with the 2015 PNDS Baseline study,

⁴⁰ The first research question is particularly guided to identify PNDS' implementation effects, so the hypotheses can be tested. The second research question alludes to the explanations given to PNDS' identified effects using qualitative data (semi-structured interviews) in poverty reduction and social capital. Once the hypotheses have been tested, the goal of the mentioned explanations is to be able to compare the findings to the statutory CDD theoretical framework.

which comprised two sections⁴¹. National level data of the 2015 Baseline was also included and used within the longitudinal comparison as a measure taken by this research to reduce the risk of information bias/unreliability⁴².

Poverty Reduction

This research understands poverty not as lack of income but as the dissatisfaction of basic needs (Feres, Mancero, & Medina, 2011), as capability deprivation (Sen, 1984: 1985: 1993: 2003), and lack of entitlements/basic rights (Humanos, 1993; Hunt, Nowak, & Osmail, 2004)⁴³.

To be able to pragmatically measure poverty the multidimensional poverty index framework was used, as it suits better this research in the way it aims to measure non-income based dimensions of poverty, providing a more comprehensive assessment of poverty/deprivation. This framework was also used to identify changes regarding poverty in Fahilebo between 2015 and 2020 to account to what extent PNDS has been responsible for these changes (or not). Considering the research's time limitations and resource constraints without and the intention to design/enforce an index, or identify the poor⁴⁴, Text Box 3 shows the dimensions and indicators used to measure poverty.

⁴¹ First, a qualitative and quantitative baseline survey report. Second, a report of process monitoring of PNDS socialization, election and prioritization processes. The baseline survey was administered to a 102 village (suco) sample randomly selected from PNDS Phase-III villages, within those 102 villages, 2 hamlets (aldeias) were randomly sampled and 8 households were randomly sampled within those hamlets. The qualitative survey sampled 16 villages among the mentioned 102 villages and distributed 3 instruments to gather information on formal and informal institutions, public goods and services and social cohesion. The monitoring of the socialization, and election was done in 14 villages and 28 hamlets, while the monitoring of the prioritization was done in 13 villages, and 26 hamlets (Muizarajs, et al., 2015).

⁴² The 2015 Baseline survey sample is representative of Timor-Leste's households; however, information at the municipality and village level must be interpreted with caution, as the actual municipality level aggregate values may differ from the presented municipality level aggregate estimates (Muizarajs, et al., 2015).

⁴³ Regarding poverty this research acknowledges i. different welfare dimensions are not captured by income (Sen, 1984); ii. development's aim is to increase capabilities wherein income importance is instrumental (Sen, 2003); iii. the relationship between capabilities and income varies between individuals, households, and communities (Sen, 1985); and iv. that there are factors impacting capability deprivation differently than income (Sen, 1993; Villatoro, 2017).

⁴⁴ It is by no means the aim of this paper to do an estimation of multidimensional poverty in Fahilebo nor to state how many poor households are living in the village. Letting formal Timorese institutions bear the responsibility of stressing and measuring poverty from local to national levels, the focus of this paper is on the effects of PNDS in poverty reduction.

Poverty was measured across 4 dimensions and 12 indicators:

- Living conditions:
 - Roofs;
 - Floors;
 - External Walls Construction Materials.
- Education:
 - Educational level.
- Income and Productivity:
 - Asset Ownership;
 - Income Source;
 - Livestock Rearing;
 - Agricultural Engagement;
 - Financial existence.
- Public Services Provision:
 - Access to Water;
 - Roads and Transportation;
 - Electricity.

Not all the indicators are useful to identify PNDS effects in Fahilebo as PNDS projects' were only focused on roads and transportation and access to water; however, they were included to control for unintended consequences and to comprehensively measure poverty. Then, this paper will only discuss the income and productivity and public services dimensions' as they showed significant longitudinal results about PNDS implementation. Annex 3 portrays in detail the findings for the dimensions of living conditions and education⁴⁵.

This research acknowledges that different external factors could influence the findings. For instance, throughout the data collection process, multiple primary sources highlighted Fahilebo's massive emigration to find job opportunities mainly in foreign countries and Dili. The Village Chief confirmed it stressing that a village Census was put forward in 2019, showing almost no increase in population from 2015 to 2020. Even though this would explain

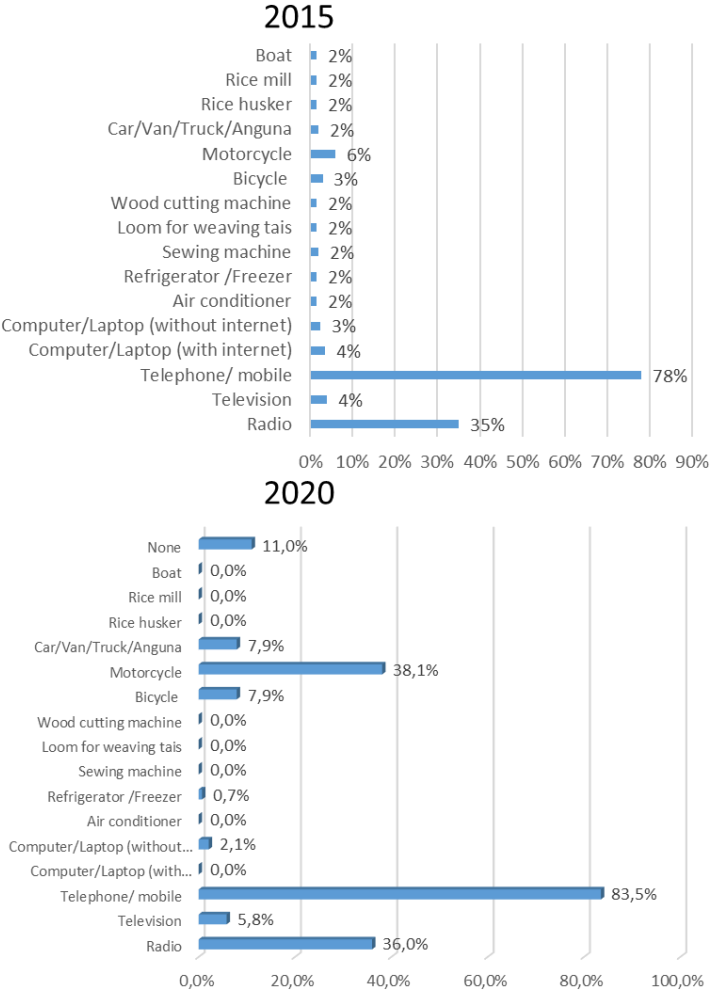
⁴⁵ Between 2015 and 2020 in Fahilebo, there were no significant changes in terms of roofing materials and household floors. On the contrary, the material of external walls saw a diversification moving to long-lasting materials. Educational level was low and judged to impact negatively PNDS implementation. Nevertheless, practitioners nor beneficiaries provided clear explanations as to how and if the construction of small-scale infrastructure impacted living conditions and education in Fahilebo between 2015 and 2020. Consequently, this research found no effects concerning the dimensions of living conditions and education that can be attributed to PNDS implementation.

the changes in asset ownership, livestock rearing, and many other identified changes in this research, there are no official records of the ‘Census’ nor any sort of documents to support it.

Income and Productivity

Regarding assets, Graph 1 shows that in the assessed period asset ownership generally decreased in the exception of the acquisition of mostly motorcycles/scooters (which in the small Timorese market do not depreciate as fast) and to some lesser extent smartphones, and cars.

Graph 1. Asset ownership in Fahilebo.

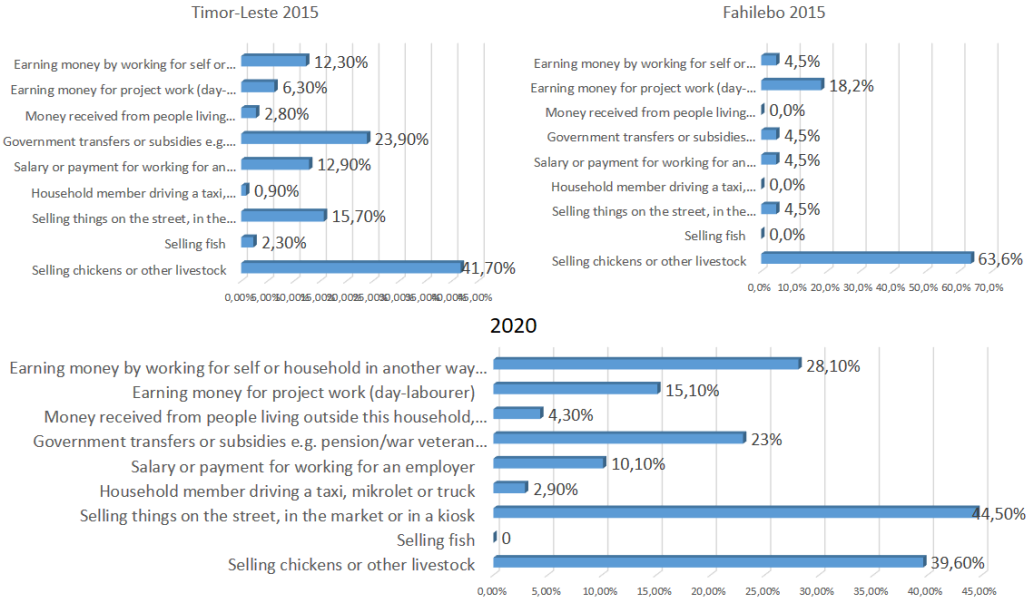


*The percentages shown by the criteria in the graphs were calculated out of the total of households.
 **The 2015 was made by the autor with information of the 2015 National Census and the 2020 out of the collected information for this research.

As graph 2 portrays, the source of Fahilebo’s income has changed in the last five years. Selling livestock saw a decrease of 24%, and earning money for project work (day-laborer) a minor one of 3.1%, while the other productive activities rose⁴⁶. Compared to the national percentage activities, these increasing/decreasing trends remain almost the same.

As a result, in the five years, income-generating activities diversified towards informal individual activities, selling things in the street market or a kiosk being the most popular activity. While livestock dependency is still widespread, in Fahilebo income generation grew in the number of activities and quality formally-remunerated jobs lightly improved with a significant dependency in the state. In practice, the latter means that Fahilebo’s citizens have better chances of alleviating poverty without having the possibility to skip it.

Graph 2. Source of income received by Fahilebo’s households



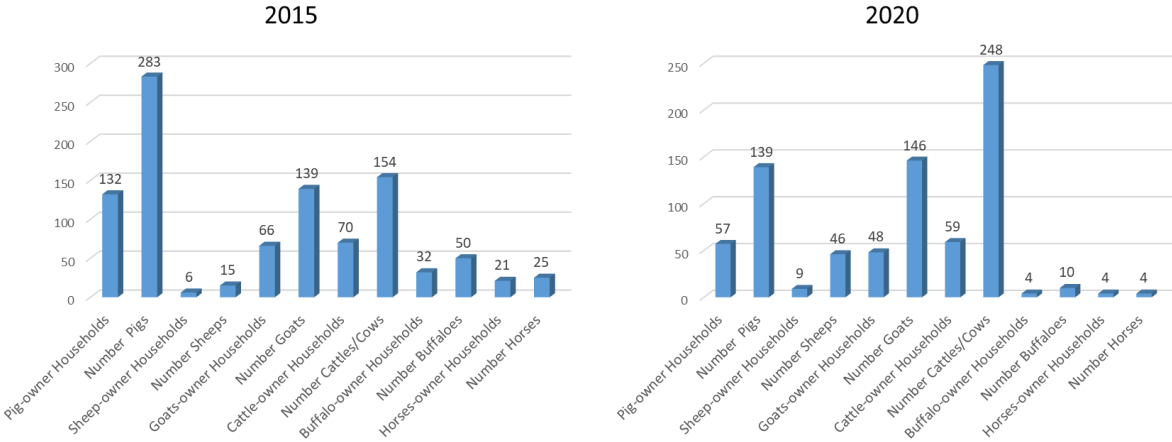
*The percentages shown by the criteria in the graphs were calculated out of the total of households.
 **The 2015 was made by the autor with information of the 2015 National Census and the 2020 out of the collected information for this research.

Graph 3 shows that the number of households involved in pig-rearing, and animal-quantity significantly decreased whereas the cattle-quantity exponentially increased in a fewer amount

⁴⁶ The most prominent activity changes were to sell things on the street, in the market or in a kiosk which saw a rise of 40%, earning money by working for self or household in another way (not crop income) with an increase of 28.1%, getting income through government transfers or subsidies (e.g. pension/war veteran payments) with a rise of 18.5%; working for someone else/earning a salary with an increase of 5.6%; receiving money from people living outside the household, including money for bride price and traditional practices (gifts, remittances), with an increase of 4.3%; and having a household member driving a taxi, ‘mikrolet’ or truck with a rise of 2.9%.

of households. The number and households rearing lightly increased while the number of households involved in the rearing and quantity of buffalos and horses decreased.

Graph 3 Livestock rearing in Fahilebo



*The 2015 graph was made by the autor with information of the 2015 National Census and the 2020 out of the collected information for this research.

Regarding agricultural engagement, this study found that in 2020 53.2% of the households are producing mainly for home consumption with some sales on the side, while 40.5% do just minor agricultural activity (in their backyard), and 6.3% produce mainly for selling with some consumption on the side. The 2015 Census has only information at the administrative post level. Being a very homogeneous population (at the administrative post and suco level), 57.2% were doing only minor agriculture, 35.8% were producing mainly for home consumption with some sales on the side, and 2.7% were producing mainly for selling with some consumption aside. Thus, the 5-year period saw an increase of 17.4% in home consumption with sales on the side, a decrease in minor agriculture of 16.7%, and an increase in production to sell of 3.6%.

Concerning financial existence, the property of households’ bank accounts saw a great increase. While in 2015 according to the Census 9% of the households had a bank account, in 2020 29.5% of them had one having a 20.5 percentage points increase.

Research's findings for the income and productivity indicator in Fahilebo between 2015 and 2020:

- Asset ownership generally decreased;
- Income-generating activities diversified towards informal individual activities;
- The number of households involved in pig-rearing, and animal-quantity significantly decreased whereas the cattle-quantity exponentially increased in a fewer amount of households;
- The agricultural engagement saw an increase in home consumption with sales on the side, a decrease in minor agriculture, and a minor increase in production to sell;
- Financial existence increased.

There was no explanation given by practitioners nor projects' beneficiaries concerning the changes in asset ownership, and livestock rearing, unlike for the mentioned changes in income generation activities, agricultural engagement, and financial existence. Beneficiaries argued that the construction of the water and road projects created the conditions for the diversification of income-generating activities, the rise of agricultural engagement, and the increase in financial existence, consolidating themselves as indirect effects of PNDIS implementation (MdC, 2020). Without having clear findings, asset ownership, and livestock rearing changes could be explained due to the massive work-related emigration stressed by primary sources.

Explaining agricultural engagement, community leaders and members of the CMT stressed that the implementation of water projects have raised planting of vegetables, corn, and cassava that they can now sell to other municipalities. They also stress that the road projects have led to the mentioned diversification of income-generating activities, as they have a better chance to access other markets and raise their income (AdC, 2020; JdS, 2020). Having a better road meant that vehicles could come in and out of Fahilebo, giving the possibility to local dwellers to go to new markets from 1 to 3 times in a week earning \$US 100 a day (AC, 2020). This information was triangulated between different primary sources to guarantee its reliability. The CMT accountant argued that the increase in financial existence was related

to PNDS implementation and led to a risk reduction perception wherein past experiences projects' money holder was injured or killed (LdSG, 2020).

As a result, this research finds that the latter mentioned identified longitudinal changes in Fahilebo can be attributed to PNDS implementation. So, PNDS projects' led to poverty alleviation by the means of higher agricultural engagement, the diversification of income generating activities despite predominantly informal, and raising financial existence.

Public Services Provision

Text Box 5 shows the sub-indicators used to measure public services provision. They were chosen according to the literature review.

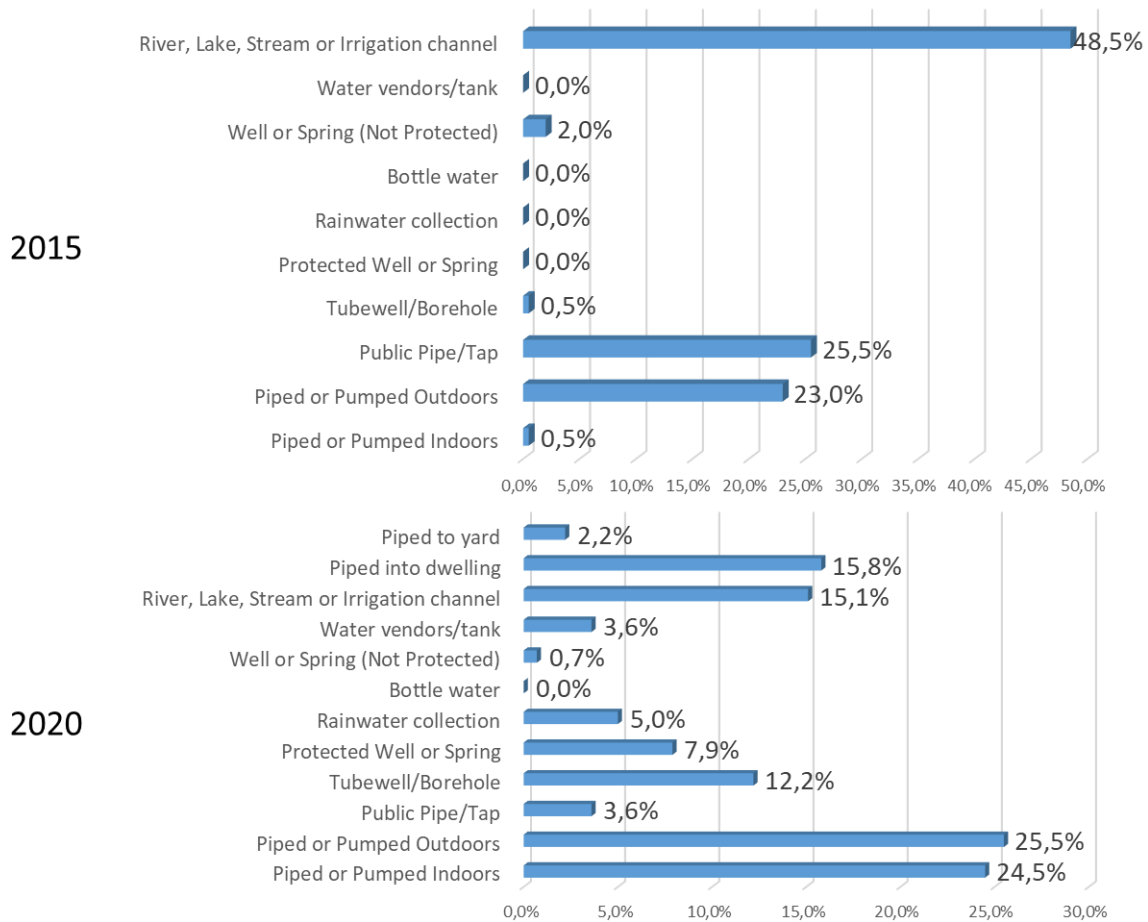
Text Box 15 Public Services Provision sub-indicators

- **Public Services Provision sub-indicators:**
 - **Access to water:**
 - Number of times of water collection per household a day;
 - Time invested in collecting water
 - Type of water source.
 - **Roads and Transportation:**
 - Transportation Time;
 - Household Accessibility.
 - **Electricity (included in Annex 3).**
 - **Perception indicators were included to characterize PNDS' water projects and their functionality.**

In terms of water access, Graph 4 shows that the water source for Fahilebo's households changed significantly. In the last five years, the dependency of water from rivers, lakes, streams, or irrigation channels decreased by 33.4% to be diversified so Fahilebo's citizens have better access to piped water⁴⁷.

⁴⁷ For instance, access to piped/pumped indoors water grew by 24%, and people are getting water from growing sources such as water vendors, rainwater collection, wells/springs, and tube wells. Public pipes/taps decreased 21.9% but most importantly 15.8% of the households have now the possibility of getting water piped directly into their dwelling, 2.2% into their yard, having also more diverse ways to get access to water. Accordingly, water sources in Fahilebo have diversified currently having better access to piped water.

Graph 4. The water source used by Fahilebo's households



*The percentages shown by the criteria in the graphs were calculated out of the total of households.

**The 2015 was made by the autor with information of the 2015 National Census and the 2020 out of the collected information for this research.

In the same respect, according to the 2015 PNDS Baseline, on average Fahilebo's citizens collected water 3.6 times a day with a median of 3 times and a mode of 2. At the national level, people collected water 3.4 times a day with a median of 2 times and a mode of 2. The data of 2020 points to an average of 2.2 times a day, with a median of 2 times and a mode of 1. Hence, the data shows a reduction of the times that Fahilebo's citizens collect water a day where most of the households collect it once a day⁴⁸.

When asked about water-fetching time, according to the PNDS baseline of 2015, in Fahilebo people spent on average 25.2 minutes since they leave until they get back with the water with

⁴⁸ According to the 2020 gathered data, 89.2% of the population said they boil the water before consumption, whereas a worrying 5% do not do anything to it increasing their and others' risks.

a median of 15 minutes. At the national level, the average is 13 minutes, with both median and mode of 5 minutes. The data collected by this study in 2020 points to an average of 14.4 minutes, with a median of 5 minutes and a mode of 0 minutes. Due to unreliability of the baseline data at the village level, the information needs to be compared with national data, which points out that nonetheless, the average and median values are almost the same, the mode points out that 23% of Fahilebo's households do not have to spend time fetching water anymore.

According to this research, in 2020 64.7% of Fahilebo's citizens stressed that the water systems have presented repairs in the past 12 months, and 32.4% of them said that it did not. In the same year, 36.7% of Fahilebo's citizens argued that the water source was public, 31.7% said that the water source was private for only one household, and 29.5% manifested that it was shared between a few households. Concerning PNDS' impacts on the local water systems, on a scale of 1 to 5 Fahilebo's people evaluated them to be positive 4-36%, excellent 5-19.8%, fair 3-19.8%, very unsatisfactory 1-14.4%, and unsatisfactory 2-9.9%. Due to a lack of data and unreliability of it, these findings could not be compared longitudinally.

An unexpected outcome of the survey has to deal with water collection. 50.5% of the surveyed households in Fahilebo affirmed that everyone collects water in their households, while 36% affirmed that women and children were the ones bearing this task, and 9.9% stressed that men were collecting the water.

The reasons provided by practitioners and programs' beneficiaries in this research concerning the identified longitudinal changes plus the 2020 perception information on the water system in Fahilebo, were entirely tied to PNDS' water projects and highlighted to have had remarkable positive effects (EB, 2020; AdC, 2020; JdS, 2020; MP, 2020; AC, 2020; SDS, 2020; DG, 2020). They stressed that Fahilebo's community has now more diverse water sources, increased access to piped water, while having more time to invest in income-generating activities (SDS, 2020; DG, 2020), and can fulfill other water needs than just basic ones. For instance, a household can now have access to 60 to 70 liters of water per person per day whereas before the PNDS projects they were only able to have 10 to 20 liters of water per person per day (MP, 2020). Both practitioners and beneficiaries explained the positive perception of PNDS projects as the tacit fact that now most of Fahilebo's households

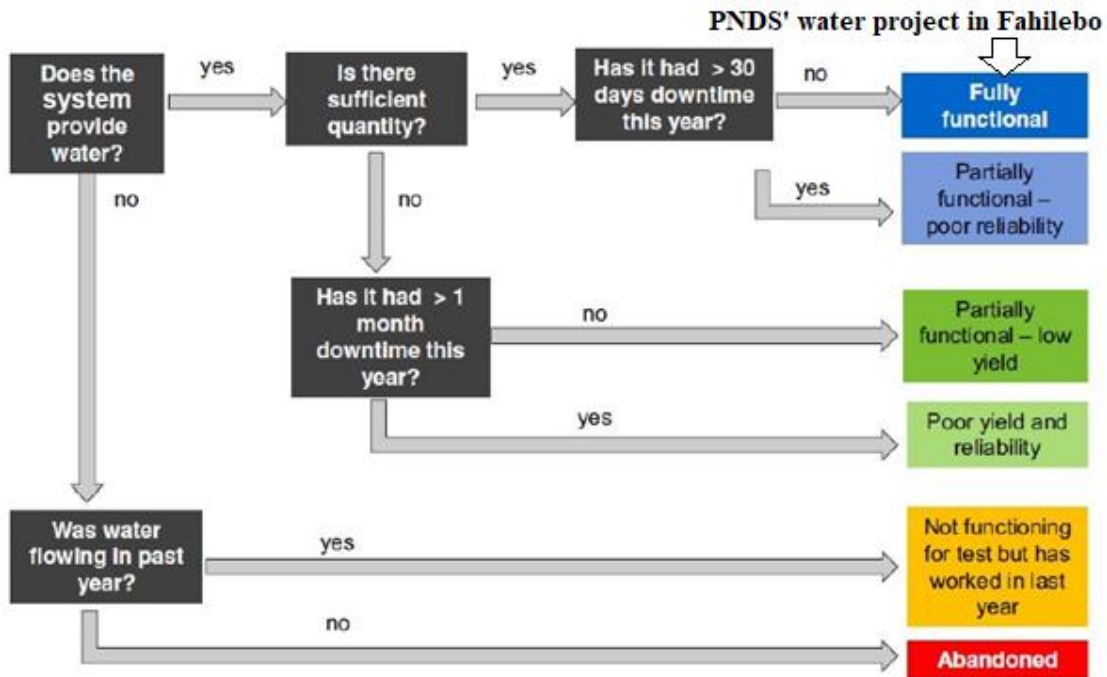
have access to an improved water source, because the community can see this improvement (ADC, 2020; AC, 2020), and was involved within the prioritization (JdS, 2020). Beneficiaries also highlighted that access to water improved the health situation within Fahilebo (MdC, 2020; JdS, 2020).

Regarding the fair perception of PNDS results, the property of water sources, and maintenance of the water system, projects' beneficiaries and practitioners stated that while the water system does not cover the totality of Fahilebo's population, its well-functioning has led to jealousies that impact its maintenance (ADC, 2020; JA, 2020; JS, 2020; SdS, 2020). Project beneficiaries/partners manifested that the 2016 PNDS water project still provides water to most of the population⁴⁹. Triangulating information to assess the quality of the implemented PNDS' water project in Fahilebo, Bonsor's, et al. (2018) approach was used to shed light on its functionality. Shown by illustration 1, project beneficiaries assessed Fahilebo's water system to be fully functional (ADC, 2020; SdS, 2020; ADC, 2020; MdC, 2020). Practitioners highlighted the high quality of PNDS projects' in Fahilebo⁵⁰, explaining it due to PNDS' strict quality standards and projects' specifications (SdS, 2020).

⁴⁹ Its functioning is limited in the rainy season, wherein if heavy rain comes the water system provides water twice or three times a week. Nevertheless, whenever heavy rain stops community members maintain it so it is functional again (ADC, 2020).

⁵⁰ An engineer and technical PNDS advisor, argues that the quality of infrastructure in Fahilebo's implemented projects is high but implementation is characterized by delays like in most projects along with the country (SdS, 2020).

Illustration 1. An approach to assess the functionality of rural community water supplies



Source: (Bonsor, MacDonald, Casey, Carter, & Wilson, 2018:3)

Projects' beneficiaries and practitioners also argued that PNDS has also brought jealousies between hamlets due to projects' location at the village level, and its successful outcomes have led to jealousies deriving in public goods flaws (SdS, 2020; JA, 2020; JS, 2020)⁵¹. Concerning the current ongoing water project in hamlets Fatuneso and Tuhiroleten, administrative-post practitioners highlighted a lack of consistency from community members regarding permission to implement PNDS projects (JA, 2020; JS, 2020)⁵².

Therefore, the longitudinal changes regarding Fahilebo's type of water source, the number of times dedicated to fetching water, and water-fetching spent time, can be attributed to

⁵¹ Practitioners at the sub-district level stress that the positive results in water systems construction have created jealousies between community members and fundamental problems *à la* tragedy of commons (Hardin, 1968) where when the project is functioning well, other community members try to adapt hoses so they can also benefit, negatively impacting its functionality and complicating its maintenance (JA, 2020; JS, 2020).

⁵² They argue that at the early stage of implementation, the plot-owners where the water sources are located give permission to carry out the required survey, but when it comes to project implementation they deny permission for the pipes to go through their plots (JA, 2020; JS, 2020). Partners have also explained implementation deferrals due to delays in construction materials arrival, however, they express that so far there have not been any issues regarding implementation

PNDS implementation according to beneficiaries' and practitioners' explanatory reasons. Also, there has been no other project/policy that has dealt with water access between 2015-2020.

The roads and transportation component was measured using transportation time, and household accessibility. Transportation time did not produce any results⁵³. According to the PNDS Baseline study, in 2015 59% of the surveyed households were located along a 4-Wheel-Drive passable road in Fahilebo and 71% at the national level. According to the collected information in 2020, 80.6% of the households were located along a 4-Wheel-Drive passable road in Fahilebo. Thus, comparing this data to the more reliable 2015 national baseline information, an improvement of 10 percentage points in household accessibility can be identified for the 5-year period.

According to this research, on a scale of 1 to 5 in 2020 Fahilebo's citizens evaluated PNDS' impacts on roads and transportation to be positive 4-36%, fair 3-30.6%, unsatisfactory 2-12.6%, very unsatisfactory 1-11.7%, and excellent 5-9%. Due to a lack of data and unreliability of it, these findings could not be compared longitudinally.

The reasons provided by development practitioners and beneficiaries for the improvement on household accessibility was allotted to PNDS road projects, by the means of a significant improvement of community's access to the sub-district's capital, and connection to other municipalities (AnC, 2020; MdC, 2020; AC, 2020; MP, 2020; MdC, 2020). These sources also tied the findings in household accessibility to the contribution of Fahilebo's PNDS road projects to income generation and access to markets. The overall less positive perception of PNDS' road projects (compared to the water projects) was explained through the lack of regular work on the road which, negatively impacting the road's quality (AnC, 2020).

⁵³ When asked about the length when going to Dili (Timor-Leste's capital), in the wet season 73.7% of Fahilebo's citizens said to take 60 minutes to get there. The wet season was used as it is when the state of the roads worsens. This information could not be matched with information either of the 2015 Census or PNDS Baseline due to lack of information and lack of reliability of the available information.

Research's findings for the public services provision indicator in Fahilebo between 2015 and 2020:

- PNDS reduced poverty by the means of
 - Shortening the number of times that Fahilebo's citizens collect water a day;
 - Reducing the number of households that have to fetch water providing them with piped water;
 - Increasing household accessibility;
 - Building primarily a water system that is fully functional.

Most importantly, practitioners highlighted PNDS' value for money and outlined PNDS cost-effectiveness compared to other construction models (DG, 2020; MM, 2020; AR, 2020). Their claims also match what the 2016 and 2018 economic impact studies have shown about PNDS' implementation. The 2016 study estimated an Internal Rate of Return (IRR) according to the type of PNDS investment⁵⁴; chart 1 summarizes the IRR's⁵⁵. She concludes that 96% of beneficiaries for irrigation projects were satisfied or very satisfied as PNDS irrigation systems increased vegetable production by 400%. 74% of water projects' beneficiaries were satisfied or very satisfied with their results⁵⁶ (Pomeroy, 2016).

⁵⁴ The 2016 study assessed 53 projects in 5 municipalities, implementing surveys aimed at estimating time savings per household, and monetizing the value of time saved in relation to the average rural wage rate. Also, beneficiaries of 13 water projects were interviewed to qualitatively understand livelihood activities. Based on the surveys, the value of the benefits was estimated over the life of the projects- 10 years.

⁵⁵ While the IRR on roads and bridges is less than the investment cost 82% of beneficiaries for bridges and 59% for roads said to very satisfied or very satisfied, leading the author to conclude that estimating the value of time saved was not a convenient impact's evaluation.

⁵⁶ "A separate survey² conducted by the Secretariat indicated that fully 40% of beneficiaries are using improved access to water to raise their incomes, either directly (for example, growing and selling vegetables or investing in animals for sale) or indirectly (for example, using their time saved to make and/or sell things in their communities). Another 31% were growing vegetables for own consumption" (Pomeroy, 2016:2).

Chart 2. Summary of 2016 PNDS projects' economic impact study Internal Rate of Return (IRR)

	Clean Water	Roads & Bridges	Irrigation	Total
Total Investment	\$626,972	\$235,781	\$55,589	\$918,342
Investment Weight	0.68	0.26	0.06	1.00
IRR by Category & Overall	133%	-1%	72%	95%

* 12% is the typical benchmark for a successful investment.

Source: (Pomeroy, 2016:2)

The 2018 PNDS economic impact study sampled 145 projects with a value of at least \$US 10,000 throughout all municipalities in Timor-Leste outside the capital, Dili and found the IRR's shown by Chart 2. The roads and bridges IRR incorporated the value of farmers' primary crop sales. 49% of respondents stressed that

“they now have better access to markets as a result of the new/upgraded road, and 41% of households that identified a person with a disability living there said that they now had improved access to health services” (Pomeroy, 2018:iv).

Irrigation findings showed that farmers

“used irrigation systems to change the composition of padi, maize and vegetables they planted, increased the amount of padi they saved for home consumption and increased the production and sale of high-valued vegetables” (Pomeroy, 2018:iv)

It also increased fishponds construction and household consumption of fish protein. Regarding water projects, the study showed that 24% of respondents save more than 2 hours a day, and use this time that they spent fetching water to increase income. Thus, the economic impact studies confirm the cost-effective and cheap character of PNDS projects.

Chart 3. Summary of 2018 PNDS projects' economic impact study IRR

2017 PNDS economic impact study	Roads and bridges	Irrigation	Clean water systems (direct uses of water)	Clean water systems (indirect uses of water)
IRR	25%	36%	22%	66%

* 12% is the typical benchmark for a successful investment.

Source: Author's chart based on (Pomeroy, 2018)

Social Capital

The present research refers to social capital as those features of social organization that have the ability to improve society's efficiency by facilitating coordinated actions, examples of it are trust, norms, and networks (Putnam, Leonardi, & Nanetti, 1994). These features are ordinarily public goods wherein trust is an essential component. Putnam et al. (1994), argues that social trust can arise from norms of reciprocity and networks of civic engagement. These norms evolve because they facilitate cooperation and lower transaction costs, whereas networks of civic engagement such as cooperatives, mass-based parties, neighborhood associations, and so on, represent intense horizontal interaction. Based on Putnam, et al. (1994) understanding of social capital, this research broke down social capital to five proxies so it can be measured: trust, collective action, groups and networks, inclusion and participation, and access to information.

As social capital is meant to be productive in the way it facilitates cooperation, each of these proxies was chosen as all decrease the likelihood of individual rational suboptimal free-rider behavior. In what follows the links/reasons to its inclusion. Trust is imprinted in every transaction (either commercial or not) conducted over a period of time, and thus the greater level of trust, the greater chance of community members *chooses* to cooperate (Putnam, 1993). In relation to social capital, collective action is understood by this research as the way individuals have found conjunctive courses of action between short-term self-regarding choices and one that benefits all if followed by a large group of individuals within a community (Ostrom & Ahn, 2009). Inclusion and participation proxies' social capital as it is meant to leverage from local information/knowledge to teach beneficiaries through learning by doing, reduce corruption risks, enhance the program's targeting, align local preferences to investments, strengthen cost-effectiveness, and finally ensure the equitable distribution of benefits (Casey, Glennerster, & Miguel, 2011). Groups and networks foster cooperation and increase social capital as these horizontal interactions transmit information across group members creating incentives to behave trustworthily, increase reciprocity, and potential costs to selfish/opportunistic behavior, embodying successful past collaboration (Ostrom & Ahn,

2009; Putnam, 1993). Finally, access to information was included as trust and cooperation depend on reliable information (Putnam, 1993).

The body of this paper only discusses the results concerning the proxies of inclusion and participation and access to, while the detailed results for trust, collective action, and groups and networks proxies are compiled in Annex 3. However, a brief description can be found in the concluding section.

Inclusion and Participation

Inclusion and participation were longitudinally measured according to the community's perception of participation in decision-making, and specific participation in non-remunerated construction projects.

According to the 2015 PNDS Baseline, 52.1% of Fahilebo's citizens affirmed that when an important decision has to be made for the village, it is best for the decision to be made by everyone in the community, 39.1% of them pointed to the village chief, and 8.6% of them to the village council. At the national level, the results were: everyone in the community 46.6%, village chief 43.3%, and village council 9.2%. In 2020, the results for this inquiry were: everyone 44.6%, village chief 43.2%, and village council 10.8%. As has been seen, the community's perception of participation in decision-making remained the same. In 2015, 34.7% of the PNDS Baseline respondents were involved in a community construction project in Fahilebo without any monetary payment in the last year. Nationally, this figure was 29%. In contrast, in 2020 61.2% of Fahilebo's population participated in community construction projects without remuneration, exhibiting a representative increase of 26.5-32.2 percentage points.

The longitudinal results for the inclusion and participation proxy showed a representative increase in participation in community construction projects without remuneration, despite it still being low, and short as showed by the collective action findings. The second indicator of this proxy had no significant effects.

The increase of participation in non-remunerated construction projects was explained by beneficiaries by the positive results that they see in PNDS implementation (particularly in

water; CDA, 2020), their will to contribute to their village's well-being (EB, 2020; JDS, 2020), and the perceived fairness of PNDS-implementation agreements reached at the local level (ADC, 2020; LDS, 2020). Concerning the agreements in the selection and prioritization process, beneficiaries stressed community owned the process, is it a consensual process in which the community collaborated as a whole, excluding the possibility of elite capture (ADC, 2020; JDS, 2020). Beneficiaries also highlighted that participation almost always decline as implementation advanced as the community progressively lost interest (LDS, 2020).

Concurring with beneficiaries' explicatory reasons and arguing that PNDS has achieved to include communities into the development process (AR, 2020), practitioners focused on the reasons to explain the still predominant lack of participation due to the need of Fahilebo's citizens to earn a living (MP, 2020; CDA,2020), and to the PNDS' incentives structure (SdS, 2020; CDA, 2020). Practitioners emphasized the poor economic situation of Fahilebo characterized by a lack of employment and work-related emigration (MP, 2020). Community members usually complain about low monetary incentives⁵⁷ to which practitioners concur adding that these reasons also negatively impact people's continuity in PNDS projects⁵⁸ (MP, 2020; SdS, 2020). Regarding the new PNDS projects, practitioners explained low participation due to the labor-intensive work that the water capturing infrastructure and public tap water system needs, which also impacts projects' delays (SdS, 2020). To raise participation practitioners suggested to liaise PNDS projects to church activities as well as to further partnerships with church leaders (MP, 2020).

Following the theoretical framework and the literature review, projects' beneficiaries and practitioners were asked about the likeliness of elite capture, however, the results were mixed and unclear, hindering the possibility of reaching a causal explanation⁵⁹.

⁵⁷ A program's representative earns a maximum of \$US 30 per-month, while skilled labor community members earn \$US 5 per-day, and non-skilled laborers get \$US 3 per-day (without mentioning the physical difficulty of the work).

⁵⁸ Practitioners expressed that a way to incentivize people into participating is to lengthen the socialization period, which would also carry other benefits in terms of access to information.

⁵⁹ Beneficiaries manifested that the selection process was done by the community but the prioritization was crossed by the village chief and village leaders' evaluation (EB, 2020). It was argued that the community follows and accepts leaders' decisions and guidance also stressing that the community cannot oppose the decisions taken with the local leaders. However, it is unclear to what extent the selection and prioritization decisions were influenced by local leaders. Community leaders argued that their involvement in PNDS projects

Regarding women's participation, beneficiaries pointed out that the community respects and promotes women's participation by involving them in the village's development also following government and PNDS projects' regulations on the matter (MdC, 2020). They also manifested that women's participation has been closely related to operation and management roles whereas men do the hard construction work (EB, 2020) and that there were no differences between men and women in voting in the selection and prioritization process (AC, 2020). Practitioners highlighted that projects are balanced, having around 70% of women managing projects' funds⁶⁰ (AR, 2020).

Text Box 17 Research's findings for the inclusion and participation proxy

According to triangulated information between primary and secondary sources, PNDS implementation strengthened Fahilebo's public sphere between 2015 and 2020 by the means of

- Higher involvement in non-remunerated construction projects due to more engaged citizens that rationally choose to cooperate;
- PNDS has meant a proven effort to inclusion and women's participation promotion at the village level;
- Further research needs to be conducted regarding elite capture as results were inconclusive.

Access to Information

Access to information was quantitatively measured by the number of citizens that recognized the program, and their capability (based on information) to assess its impacts. This proxy was not matched longitudinally because of a lack of comparable data. Due to the fact that this proxy is better captured qualitatively, the semi-structured interviews were also structured in

was limited to monitoring without having a strong role in implementation, participating also to verify that every hamlet gets a share of the positive results (MdC, 2020; ADC, 2020; JDS, 2020). At the administrative post-level practitioners argued (not specifically for Fahilebo) that changes in PNDS project implementation depend mainly on villages' chiefs who often make the decisions concerning these projects (JA, 2020; JS, 2020). Consequently, this research cannot elucidate clear and reliable findings regarding elite capture.

⁶⁰ Out of the total number of the PNDS team members managing projects' funds.

order to provide an assessment of the extent to which beneficiaries portray the knowledge and PNDS-related information in their responses.

By 2020, 94.2% of Fahilebo's population has heard about PNDS, and in a scale from 1 to 5 Fahilebo's citizens assessed overall PNDS impacts as positive 4-46%, fair 3-11.5%, excellent 5-11.5%, very unsatisfactory 1-10.8%, had no effect 10.8%, and unsatisfactory 2-4.3%. 75.5% think that PNDS has achieved the best results in water, followed by roads and transportation 21.6%. In terms of community participation, Fahilebo's community assessed it to be positive 4-51.4%, fair 3-20.7%, poor 1-11.7%, negative 2-10.8%, and excellent 5-5.4%. Thus, almost everyone in Fahilebo has heard of PNDS and more than half of the population considers that its effects have been positive emphasizing particularly good results in the water system, community participation, and to a less extent in roads and transportation.

The reasons given by beneficiaries regarding the high recognition and positive perception of PNDS performance revolved around the transparency of its procedures, and the skills and learnings that they have taken from it. Projects' transparency and beneficiaries' access to information was illustrated by the village's board, as projects' implementation information/status of the works was posted in it (MdC, 2020). Transparency was also appreciated in the socialization phase where beneficiaries recounted to derive most of their knowledge about PNDS (AC, 2020). They also expressed to have learned about project management and implementation, accumulating practical skills related to the construction differences between tube and tap water systems (JDS, 2020; AC, 2020). Beneficiaries stressed having learned new skills in multiple-projects budget management (>\$US 39,000), operational control, and teamwork (LDS, 2020). Finally, it was argued that projects' implementation has not faced many difficulties as the CMT has managed to solve projects' issues.

Confirming the reasons of beneficiaries for the mentioned changes, practitioners added on the improvements to be done. They expressed PNDS challenges remain mainly in achieving communities' understanding of PNDS, its goals/aims, and its procedures, which however improved it is still low, as well as to transform 'communities' mindset' and their irregular

patterns of involvement and compromise (MaM, 2020). As a result, they emphasized the need for a longer socialization phase as it is crucial to give information to the community, so they understand their priorities and needs (MP, 2020)⁶¹.

Most importantly, this research's qualitative data elucidated beneficiaries' continuous knowledge, information, and learnings relating to PNDS' projects, aims, phases, effects, community process, etc; having clear their roles in it. Therefore, according to the paragraphs above, this research finds that there was a positive effect of PNDS in terms of access to information where beneficiaries had access to information and based on it were able to consistently assess PNDS results. As recounted, beneficiaries' and practitioners' reasons relied upon the program's transparency and the learnings that the community has taken from implementation. However not possible to compare longitudinally the effects on this regard, the findings were based on previous PNDS projects' implementation in Fahilebo since 2015.

Text Box 18 Research's findings for the access to information proxy in Fahilebo

According to triangulated information between primary and secondary sources, this research finds that there was a positive effect of PNDS in terms of access to information in Fahilebo.

- Beneficiaries' have solid knowledge, information, and learnings relating to PNDS' projects, aims, phases, effects, community process, etc; having clear their roles in it.
- Beneficiaries had access to information and based on it were able to consistently assess PNDS results.

⁶¹ In the same way, practitioners manifested the need to better manage expectations concerning infrastructure and evade intra-village jealousies/disputes over projects' implementation. To do so, it was highlighted the need to provide close advice from technical, financial, and social PNDS staff with accurate information and explanations about the reasons for projects' selected locations (SdS, 2020).

Discussion and Conclusions

This final section is aimed at presenting the concise results to the research's hypothesis. Subsequently, it compares these results to the theoretical framework. Ultimately, it portrays debates that the study found along and addresses matters for further research.

Rightly hypothesized, this research's triangulated findings proved that the construction of small-scale infrastructure in Fahilebo between 2015 and 2020 led to poverty reduction by the means of income and productivity and public services provision. Concerning income and productivity, this research found that PNDS implementation achieved higher agricultural engagement, the diversification of income-generating activities however predominantly informal, and raising financial existence. Attributing the effects to PNDS implementation, the reasons provided by development practitioners and program beneficiaries to these effects relied upon the construction of the water and road projects that led to an increase in vegetable-planting, access to other markets, and augmenting the number of bank accounts within Fahilebo's community.

Regarding public services provision, this paper shows that PNDS projects reduced Fahilebo's poverty by the means of access to water and household accessibility. Consequently, PNDS projects shortened the number of times that Fahilebo's citizens collect water a day, reduced the number of households that have to fetch water providing them with piped water, and by building primarily a fully functional water system. Asserting these results, beneficiaries' and practitioners' reasons revolved around the more diverse water sources that Fahilebo's community now possesses, the increased access to piped water, the gained extra time to invest in income-generating activities and the fulfillment of other water needs beyond the basic ones. This study revealed that PNDS' successful outcomes brought jealousies between hamlets due to projects' location, and led to jealousies deriving in public goods flaws. Regarding the improvement in household accessibility, primary sources explained this PNDS effect by the means of a significant improvement of the community's access to the sub-district's capital, and connection to other municipalities.

The water projects reveal in a positive perception shared by more than half of the interviewed households and explained by primary sources by the fact that now most of Fahilebo's households have access to an improved water source, and because they were included in the prioritization. The less positive perception of PNDS road projects was explained through the recurring issues concerning road maintenance.

Hypothesis two produced mixed results, as not necessarily the larger the quantity of PNDS projects in Fahilebo between 2015 and 2020 proved to lead to larger social capital. This researched showed that not all of the social capital variable proxies' portrayed PNDS-attributable effects. In Fahilebo between 2015 and 2020, trust perception saw a significant change in two out of the four indicators used to measure it: an increase of trusting neighbors with money, and a reduction of the perception that community members would take advantage of others. However, summed to the myriad of external factors that can influence trust and given that the reasons provided by practitioners and beneficiaries were not pointing at PNDS to explain these changes, no results can be attributed to PNDS implementation.

Based on the 2020 data, the collective action proxy found that the community's involvement in construction projects and within PNDS projects in Fahilebo has been low, short, and predominantly not remunerated. Beneficiaries' reasons for these findings relay upon the voluntarily, low, and sometimes non-remunerated character of construction projects, pushing them to invest their free time on (mostly PNDS) construction projects. Practitioners' and beneficiaries' reasons evidenced that PNDS has sparked Fahilebo's public life and the lack of major implementation issues concerning current PNDS projects, other than financial concerns.

The inclusion and participation proxy saw a significant change pointing to a higher involvement in non-remunerated construction projects that according to triangulation between primary sources can be attributed to PNDS implementation while the other indicator for this proxy saw no major change. The reasons provided by beneficiaries and practitioners to explain this effect relied upon the positive results of PNDS implementation, their will to contribute to their village's development, and the PNDS-implementation agreements reached within the village. Practitioners added that the reasons for the low, short, and predominantly

not remunerated community's participation responds to the need of Fahilebo's citizens to earn a living (MP, 2020; CDA,2020), to low PNDS' incentives, and the labor-intensive work. No concluding findings were found regarding elite capture.

No effects were found concerning the groups and networks proxy to social capital, as there were no changes in the community's participation in the village chief election, and null effects were found concerning the community's perception of conflict. Thereupon, no results can be attributed to PNDS implementation in Fahilebo between 2015 and 2020 emanating from the groups and networks proxy.

According to this research's 2020 collected data almost all of the surveyed households had/were able to access information concerning PNDS and based on this information could assess its performance. Beneficiaries' reasons for the mentioned effects relied upon the program's transparency, information accessibility, and the skills and learnings they have taken from it. Confirming beneficiaries' reasons, practitioners' added that even though progress on the matter, deeper and broader understanding of PNDS is still needed at the community level, as well as ameliorating patterns of involvement and compromise. Most importantly, is it to be emphasized that all interviewed beneficiaries (and tacitly practitioners also) portrayed a solid overall PNDS understanding as well as specific knowledge to fulfill satisfactorily their roles.

As Annex 5 portrays, to guarantee the reliability of the information and leverage from the strengths of mixed methods, this research's findings in terms of poverty reduction and social were triangulated not only between primary sources but also with secondary sources. On one hand, the findings of the second triangulation round for the poverty variable confirmed PNDS' direct positive effect in poverty reduction from PNDS's high-quality small-scale infrastructure in Fahilebo in a cost-effective and timely manner. Technical independent evaluations supported the alleged high quality of PNDS projects, notwithstanding the need for more regular maintenance. Furthermore, the mentioned triangulation ratified this research's findings in terms of income and productivity and public services provision. Therefore, this research aligns with the literature that stresses that CDD is effective in reducing poverty through building small-scale infrastructure as Timor-Leste's case showed.

On the other hand, the second triangulation round for the social capital variable was compared mainly with the findings of the 5-year-plus PNDS monitoring of the Asia Foundation. It showed that while nearly every respondent thought it could be improved, all respondents reported a positive experience out of PNDS implementation, rating PNDS to have had a profound impact both directly and indirectly due to the community-driven approach (Asia Foundation, 2017). It also confirmed Fahilebo's civic sphere enhancement due to PNDS' process (in all its phases), particularly in its positive effect of increasing the community's participation, achieving community mobilization, creating new leaderships and strengthening inclusion and women's roles at the local and national levels (Asia Foundation, 2016). This research's findings also match the conclusions of the Asia Foundation regarding the challenges of PNDS implementation. Moreover, this triangulation round found that increased community participation has been essential to project targeting and identify the prioritized needs of the community, and that PNDS learned capabilities led to enriching Fahilebo's public life resulting in useful projects and in Fahilebo's civic sphere enhancement.

However, due to the mixed results on social capital, this research aligns with the literature that stresses the difficulties of allocating outcomes of any local service delivery initiative exclusively on citizen participation (i.e community empowerment, social cohesion, governance), as it was proven in Timor-Leste's case. Future research could be focused on the magnitude of CDD programs/projects on gender outcomes.

Therefore, this research's findings confirm hypothesis one and reject hypothesis two. Concerning hypothesis two, although there were positive PNDS' effects regarding access to information, and inclusion and participation, the collective action, trust, and groups and networks proxies showed either no effects or null results. Paired with the fact that i. a myriad of external factors can influence these proxies; ii. there was a relevant but still low magnitude of the positive results, and; iii. acknowledging that community dynamics, and program's design shape CDD's effects in other welfare outcomes besides infrastructure-related effects, it is not possible to conclude that PNDS raised social capital in Fahilebo between 2015 and 2020. The research confirmed the expectations, and the assumptions but the one stressing the risk of local elite capture for PNDS projects as it was inconclusive, showing the need for further research.

As has been seen up until now and regardless of rejecting hypothesis two, the PNDS effects found by this research show no major differences with CDD's theory concerning poverty reduction and social capital. This research has shown that in Fahilebo market has failed to allocate resources equitably, as most of its population is poor, illustrated by this research's multidimensional poverty dimensions. The government has also failed in its task to correct market failure through public services as they are almost inexistent. Though, in Fahilebo PNDS is consolidating itself as the main equalizing intervention by which the government tries to correct inequality and poverty traps. Most specifically, PNDS is correcting information failures, information asymmetries, and coordination problems allocating larger development benefits shares to the poor.

The results of the inclusion and participation and access to information proxies reveal the enhancement of Fahilebo's public sphere to provide public services such as water and roads in a transparent and accountable way. In parallel with the participatory development framework and other already mentioned effects, PNDS in Fahilebo heightened involvement in non-remunerated construction projects, promoted inclusion and women's participation, created new leaderships, and led to the successful community-driven implementation of construction projects, among others. This is how it facilitated cooperation, decreased the likelihood of individual rational suboptimal free-rider behavior, lowered transaction costs, and aligned local preferences to investments giving reliable information in the process. This does not translate into a living panacea, but keeping the proportions it contributed to creating a virtuous cycle between market, government, and civil society despite their flaws and weak presence.

Therefore, this research confirms the arguments exposed within the theoretical framework in the way that PNDS stimulated citizenship, built self-reliance and collective action, enabled inclusive civic engagement, and enhanced 'pro-social thinking'. In the process, it profited-from and included local preferences and community knowledge in Fahilebo's decision-making process. History but not development projects will assess if CDD gave community members statutory recognition and bureaucratic legitimacy so new democracies can arise from this bottom-up process. In brief, no major differences were found between the PNDS effects in Fahilebo and participatory development.

A constant lesson showed by this research concerned the tacit but often forgotten importance of context, communities' dynamics, and design to projects'/programs' performance. Compiled in Annex 4, Textbox 2 shows the findings of the particularities of Timor-Leste's case.

Text Box 10. PNDS' performance in light of its particular design

Timor-Leste's CDD experience showed success due to:

- High amount of built small-scale infrastructure;
- National-budget funding;
- A merit-based selection system to public servants;
- PNDS' model of ownership and demand-driven projects;
- Direct public transfers;
- Local financial accountability;
- PNDS' apolitical character;
- PNDS wide indicative menu.

Its challenges reside mainly in:

- Operation and maintenance;
- Broadening the community's attitude to voluntarism;
- Meeting community participation goals;
- Interaction between PNDS and the municipal and administrative-post governments as a vehicle to decentralization.

Future research could be directed to the links between CDD-PNDS with decentralization effects, as well as to defining and guiding the unclear path to 'capacity building'. Without being its aim, this study saw the disassembling between the efforts put into community development in PNDS and the decentralization efforts. In practice, PNDS integration to the *Integrated District Development Plan* has not yet happened as regulated by Decree-law 04 of 15/02/2012. Thus, gearing PNDS into a larger structural change plan still awaits. In this direction future research could debate to what extent is decentralization necessary in a country of 1.2 million inhabitants with low education levels, state proficiency, and what the international community calls low 'capacity'. In the same direction, future research could also address the undefined but yet appealing 'capacity building' apparent school of thought

and the extent to which along with decentralization could have been adopted and/or imposed by the long-standing international presence/*argot* in Timor-Leste.

This paper has shown that delving into the country's context and program's particularities CDD initiatives can indeed contribute to other welfare outcomes than the ones strictly pursued by the construction of small-scale infrastructure (i.e providing water or transit). These cannot be taken for granted and instead, they depend on a myriad of factors, and hence, one cannot expect to derive high-order/structural changes (i.e. poverty's end) of an approximate \$US 30 per citizen/year. CDD is not a one-size-fits-all solution. The change of traditional patterns of gender, class, inequality, etc is a task for social movements. Nonetheless, the life of a myriad of poor people can be enhanced as was seen in the case of Fahilebo, where a considerable amount of its population has access to piped water directly into their homes.

References

- AC, A. d. (19 de February de 2020). Interview with Fahilebo's Delegate to the CMT. (H. F. Ramirez, Entrevistador)
- Acemoglu, D., & Robinson, J. A. (2006). *Economic Origins of Dictatorship and Democracy*. New York: Cambridge University Press.
- Achmad, J. (2003). East Timorese refugees in West Timor. En J. Fox, & D. Soares, *Out of the Ashes: Deconstruction and Reconstruction of East Timor* (págs. 190–206). Canberra: ANU E Press.
- AdC, X. a. (19 de February de 2020). Interview with Tuhilo Kraik's Hamlet Chief. (H. F. Ramirez, Entrevistador)
- Adusei–Asante, K., & Hancock, P. (2012). Theories in community–driven development operations: A case study of Ghana local government system. *European Journal of Business and Social Sciences*, 1(5), 83-98.
- Aljazeera. (10 de March de 2020). *Aljazeera "Xanana Gusmao returns as East Timor PM in coalition government"*. Obtenido de

<https://www.aljazeera.com/news/2020/03/xanana-gusmao-returns-east-timor-pm-coalition-government-200310040355997.html>

AnC, F. C. (21 de February de 2020). Interview with Fahilebo's CMT Vice President. (H. F. Ramirez, Entrevistador)

Anderson, B. (2019). Community-driven development: a field perspective on possibilities and limitations. *Development Policy Centre Discussion Paper #82, Crawford School of Public Policy, The Australian National University, Canberra.*

AR, P. I. (18 de February de 2020). Interview with Program Implementation Advisor Support program to PNDS. (H. F. Ramirez, Entrevistador)

Asia Foundation. (2016). *Consolidated Analysis Report for PNDS Phases I, II and III. Participation and Implementation Monitoring 2012-2016.* Dili, Timor-Leste.

Asia Foundation. (2017). *The Role of Local Authorities in PNDS Implementation.* Dili.

Asia Foundation(a). (2017). *Trial of Community Score Cards for the National Village Development Program (PNDS) and Community Contribution and Collaboration between EJS and Suku Councils. July 2016 – June 2017.* Dili.

Atuguba, R. (2013). Equality, non-discrimination and fair distribution of the benefits of development. En O. o. OHCHR, *Realizing the right to development. Essays in commemoration of 25 years of the United Nations Declaration on the right to development* (págs. 109-116). New York and Geneva: United Nations Publication.

Australian Government, D. o. (2017). *Timor-Leste National Program for Village Development Support Program (PNDS-SP) Annual Progress Report (2016-2017).*

Baird, S., McIntosh, B., & Ozler, M. (2009). *Targeting in a Community-Driven Development Program: Applications & Acceptance in Tanzania's TASAF.* Washington, DC: World Bank.

Barron, P., Humphreys, M., Paler, L., & Weinstein, J. (2009). Community-based reintegration in Aceh: assessing the impacts of BRA-KDP. En P. ed. Barron, *Indonesian Social Development Paper No. 12.* Jakarta: The World Bank.

- Bates, R. H. (2008). State Failure. *Annual Review of Political Science* 11(1), 1–12.
- Beath, A., Christia, F., & Enikolopov, R. (2012). *Empowering women: evidence from a field experiment in Afghanistan*. MIT Political Science (Working Paper No 2012–13).
- Bennett, S., & D'Onofrio, A. (2015). Community-driven development in conflict-affected contexts: Revisiting concepts, functions and fundamentals. *Stability: International Journal of Security and Development*, 4(1).
- Besley, T. (2006). *Principled Agents? The Political Economy of Good Government*. Oxford, U.K.: Oxford University Press.
- Binswanger–M., H., Jacomina, P. d., & Spector, S. (2010). *Local and Community Driven Development*. Washington, DC: The World Bank.
- Bonilla, E., & Rodríguez, P. (1997). *Más allá del dilema de los métodos*. Bogotá: Grupo Editorial Norma.
- Bonsor, H., MacDonald, A., Casey, V., Carter, R., & Wilson, P. (2018). The need for a standard approach to assessing the functionality of rural community water supplies. *Hydrogeology journal*, 26(2), 367-370.
- Bourdieu, P. (1986). The Forms of Capital. En J. (. Richardson, *Handbook of Theory and Research for the Sociology of Education* (págs. 241-258). Westport, CT: Greenwood Press.
- Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done? *Qualitative research*, 6(1), 97-113.
- Bryman, A. (2006). *Mixed methods: A four-volume set*. Thousand Oaks, CA: Sage.
- Butterworth, D., & Dale, P. (2011). *Local Governance and Community Development Initiatives: Contributions for Community Development Programs in Timor-Leste*. World Bank.
- Cardno. (2016). *Programa Nasional Dezenvolvimentu Suku (PNDS) – Support Program. Mid Term Review*. Dili, Timor-Leste: Cardno Emerging Markets.

- Cardno. (2017). *Annual Progress Report (1 July 2016 – 30 June 2017) National Program for Village Development Support Program Phase 2 (PSP2)*. Dili, Timor-Leste: Cardno Emerging Markets.
- Carroll, T. (2009). 'Social development' as neoliberal Trojan horse: The World Bank and the Kecamatan development program in Indonesia. *Development and Change*, 40(3), 447-466.
- Casey, K. (2018). Radical decentralization: Does community-driven development work? *Annual Review of Economics*, 10, 139-163.
- Casey, K., Glennerster, R., & Miguel, E. (2011). *The GoBifo project evaluation report: assessing the impacts of community driven development in Sierra Leone*. Final report available at:
http://cega.berkeley.edu/assets/cega_research_projects/25/The_GoBifo_Project_Evaluation_Report.pdf.
- CAVR, C. d. (2006). *Chega! Final Report of the Commission for Reception, Truth and Reconciliation in East Timor*.
- CDA, P. F.-a. (21 de February de 2020). Interview with PNDS' social facilitator at the administrative-post level responsible for Fahilebo. (H. F. Ramirez, Entrevistador)
- Chase, R., & Woolcock, M. (2005). Social capital and the micro-institutional foundations of CDD approaches in East Asia: evidence, theory and policy implications. *Arusha Conference 'New Frontiers of Social Policy'*. December, 2003.
- Cliffe, S., Guggenheim, S., & Kostner, M. (2003). *Community-driven reconstruction as an instrument in war-to-peace transitions*. Washington D.C: CPR Working Papers, Paper No. 7. The World Bank.
- Cochran, W. G. (1977). *Sampling techniques, 3rd ed.* . New York, NY: Wiley.
- Coleman, J. (1988). Social Capital in the Creation of Human Capital. *American Journal of Sociology* 94, S95-120. <http://www.jstor.org/stable/2780243>.

- Cowen, T. (. (1988). *The theory of market failure: A critical examination*. George Mason University Press.
- Creswell, J. (2018). *Qualitative Inquiry & Research Design, Choosing Among Five Approaches*. Thousand Oaks: Sage.
- Creswell, J. W. (2015). *A concise introduction to mixed methods research*. Thousand Oaks, CA: Sage.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research (2nd ed.)*. Thousand Oaks, CA: Sage.
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research (3rd ed.)*. Thousand Oaks, CA: Sage.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry & Research Design. Choosing Among Five Approaches. Fourth Edition*. Thousand Oaks, CA: Sage.
- Crocker, C., Hampson, F., & Aal, P. (2007). *Leashing the Dogs of War: Conflict Management in a Divided World*. Washington, DC.: United States Institute of Peace Press.
- Davis, D. (2004). *Scaling-up action research project, phase one: lessons from six case studies. Unpublished manuscript*. Washington D.C: World Bank.
- Democratic Republic of Timor-Leste. (s.f.). Decree-Law 04 of the 11th of February 2004.
- Democratic Republic of Timor-Leste. (s.f.). Decree-law 04 of the 15th of February 2012.
- Democratic Republic of Timor-Leste. (s.f.). Decree-Law 08 of the 26th of June 2013 .
- Devarajan, S., & Kanbur, R. (2005). *Framework for Scaling-Up Poverty Reduction with Illustrations from South India. Working Paper*. Ithaca, NY.: Department of Economics, Cornell University.

- DG, P. D. (24 de February de 2020). Interview with PNDS' Director. (H. F. Ramirez, Entrevistador)
- Dongier, P., Domelen, J. V., Ostrom, E., Ryan, A., Wakeman, W., Bebbington, A., . . . Polski, M. (2003). Community Driven Development. En J. (. Klugman, A *Sourcebook for Poverty Reduction Strategies* (págs. 301–331). Washington, DC: World Bank.
- EB, F. I. (21 de February de 2020). Interview with Fahilebo's Implementation Team Chief CMT. (H. F. Ramirez, Entrevistador)
- EITI, E. I. (2015). *Timor-Leste 2015 Reconciliation report*.
https://eiti.org/files/documents/2015_eiti_report.pdf.
- Elekwa, N. N., & Eme, O. I. (2013). Community driven development in the local government system: a new strategy. *Kuwait Chapter of the Arabian Journal of Business and Management Review* 3(1), 1.
- Fearon, J., Humphreys, M., & Weinstein, J. (2008). *Community-driven reconstruction in Lofa County: impact assessment*. New York: Stanford & Columbia Universities.
- Feres, J., Mancero, X., & Medina, F. (2011). Conceptos de pobreza. Curso Pobreza y Distribución del Ingreso, Magíster en Gestión y Políticas Públicas de la Universidad de Chile.
- FG, D. C. (19 de February de 2020). Interview with District Coordinator of PNDS in Liquica. (H. F. ramirez, Entrevistador)
- Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, vol. 12, no. 2, 219-245.
- GDS, G. D., TLMH, T.-L. M., & ICF. (2018). *TimorLeste, Demographic and Health Survey 2016*. Dili, Timor-Leste and Rockville, Maryland, USA: GDS and ICF.
- Gonzalez-Devant, S. (2008). *Displacement in the 2006 Dili Crisis: Dynamics of an Ongoing Conflict*. RSC Working Paper, no. 45. Department of International Development. University of Oxford.

- Guggenheim, S. (2004). Crises and contradictions: understanding the origins of a community development project in Indonesia. En A. Bebbington, S. Guggenheim, E. Olson, & M. Woolcock, *The search for empowerment: social capital as idea and practice at the World Bank* (págs. 111–44). Hartford, CT: Kumarian.
- Guggenheim, S. (2006). Crises and contradictions: Understanding the origins of a community development project in Indonesia. *The search for empowerment: Social capital as idea and practice at the World Bank*, 111-44.
- Habermas, J. (1991). *Structural Transformation of the Public Sphere*. Cambridge, MA: MIT Press.
- Hardin, G. (1968). The Tragedy of the Commons. *Science*, VOL. 162, 1243-1248.
- Hassan, F. A., Ong'ayo, H. A., Osore, M. K., Morara, G. N., & Aura, C. M. (2017). What have been the impacts of World Bank Community-Driven Development Programs? CDD impact evaluation review and operational and research implications. *Open Journal of Social Sciences*, 5(11), 160-180.
- Hoff, K., & Stiglitz, J. E. (2001). Modern Economic Theory and Development. En G. Meier, & J. (. Stiglitz, *Frontiers of Development Economics* (págs. 389–459). Oxford, U.K.: Oxford University Press.
- Hotpot.se. (02 de 27 de 2013). *Kartor för Oceanien/Stilla havet - Tourist maps/Travel maps - Turistkartor/Resekartor*. Obtenido de http://hotpot.se/maps-oceania-pacific_ocean.htm
- Humanos, C. M. (1993). Declaración y programa de acción de Viena. Viena: Naciones Unidas.
- Humphreys, M., Sanchez de la Sierra, R., & van der Windt, P. (2012). *Social and economic impacts of Tuungane: final report on the effects of a community driven reconstruction program in Eastern Democratic Republic of Congo*. New York: Columbia University. Available at <https://www.3ieimpact.org/sites/default/files/2019-01/ie7.pdf>.

- Hunt, P., Nowak, M., & Osmari, S. (2004). *Human rights and poverty reduction: A conceptual framework*. United Nations.
- JA, T. S. (21 de February de 2020). Interview with Technical Subdistrict Support Official; (H. F. Ramirez, Entrevistador)
- JdS, X. a. (19 de February de 2020). Interview with Fatuneso's Hamlet Chief. (H. F. Ramirez, Entrevistador)
- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of mixed methods research* 1(2), 112-133.
- JS, T. S. (21 de February de 2020). Interview with Technical Subdistrict Support Official. (H. F. Ramirez, Entrevistador)
- Kaushik, V., & Walsh, C. (2019). Pragmatism as a Research Paradigm and Its Implications for Social Work Research. *Social Sciences*, 8, 255, 2-17.
- King, N. (2004). Using templates in the thematic analysis of texts. En C. Cassell, & G. (. Symon, *Essential guide to qualitative methods in organizational research* (págs. 256–270). London: Sage Publications.
- LdSG, T. C. (21 de February de 2020). Interview with Fahilebo's CMT Treasurer. (H. F. Ramirez, Entrevistador)
- Leach, M. (2008). Surveying East Timorese Tertiary Student Attitudes to National Identity: 2002–2007. *South East Asia Research* 16(3), 405–431.
- Leach, M. (20 de January de 2020). *In Timor-Leste, failed budget sparks a political crisis*. Obtenido de Lowy Institute, The interpreter: <https://www.lowyinstitute.org/the-interpreter/timor-leste-failed-budget-sparks-political-crisis>
- LS, H. o. (20 de February de 2020). Interview with the Head of Monitoring and Evaluation within PNDS Support Program of Australian Aid. (H. F. Ramirez, Entrevistador)
- MAF-TL. (2012). *Ministry of Agriculture and Fisheries - Democratic Republic of Timor-Leste. Strategic Plan 2014 – 2020*. Dili.

- MaM, P. C. (24 de February de 2020). Interview with PNDS' Chief of Program Implementation Unit. (H. F. Ramirez, Entrevistador)
- Mansuri, G., & Rao, V. (2004). Community-based and-driven development: A critical review. *The World Bank Research Observer*, 19(1), 1-39.
- Mansuri, G., & Rao, V. (2007). *Update note on community-based and-driven development*. Washington DC: World Bank.
- Mansuri, G., & Rao, V. (2013). *Localizing development: Does participation work?* Washington D.C: The World Bank.
- MdC, F. V. (21 de February de 2020). Interview with Fahilebo's Village Chief. (H. F. Ramirez, Entrevistador)
- Ministry of Finance, T.-L. (2015). *Sensus Fo Fila Fali 2015 Suku Fahilebo*. Dili, Democratic Republic of Timor-Leste.
- MM, F. D. (24 de February de 2020). Interview with Former Deputy Team Leader Support Program to PNDS. (H. F. Ramirez, Entrevistador)
- MP, P. F. (17 de February de 2020). Interview with PNDS Finance Support Supervisor for Liquica. (H. F. Ramirez, Entrevistador)
- Muižarājs, M. (2018). Timor-Leste: A Nation of Resistance. En J. B. Alterman, & W. Todman, *Independence movements and their aftermath: self-determination and the struggle for success*. (págs. 53-80). Washington D.C.: Rowman & Littlefield.
- Muizarajs, M., Choudhury, P., Steffen, E., Koppers, A., Tajima, Y., & Beath, A. (2015). *Programa Nasional Dezenvolvimentu Suku Research and Evaluation Program: Omnibus Baseline Survey and Process Monitoring Report*. World Bank and Australian Government.
- Murray Li, T. (2006). *Neo-liberal strategies of government through community: The social development program of the World Bank in Indonesia*.
- Myint, A. P. (2019). *Community Driven Development and Peacebuilding*. Myanmar Institute of Politics and Public Policy.

- National Parliament, D. R.-L. (2011). *Timor-Leste Strategic Development Plan 2011 – 2030*. Dili: Available at: <http://timor-leste.gov.tl/wp-content/uploads/2011/07/Timor-Leste-Strategic-Plan-2011-20301.pdf>.
- Neate, N., & Noor, S. (2016). *Technical Evaluation of Infrastructure. National Program for Village Development (PNDS) Final Report*. Dili: Government of Australia. Aid Program.
- Neate, N., & Noor, S. (2017). *Third Technical Evaluation of Infrastructure. National Program for Village Development (PNDS)*. Dili: Australian Government. Aid Program.
- Ostrom, E., & Ahn, T. K. (2009). The meaning of social capital and its link to collective action. *Handbook of social capital: The troika of sociology, political science and economics*, 17-35.
- Otzen, T., & Manterola, C. (2017). Técnicas de Muestreo sobre una Población a Estudio. *International Journal of Morphology*, 35(1), 227-232.
- Parks, T., Schuler, N., Chua, J., Magno, C., Johnson, K., Domado, H., & McCarthy, P. (2013). *Community-Based Development in Conflict-Affected Areas of the Philippines*. Pasig City: The Asia Foundation.
- Peake, G. (2013). *Beloved Land: Stories, struggles, and secrets from Timor-Leste*. Scribe Publications.
- Platteau, J. P. (2004). Monitoring elite capture in community-driven development. *Development and change*, 35(2), 223-246.
- PNDS Support Program. (2018). *Survey on operations and maintenance of PNDS-built infrastructure. Study for the PNDS Support Program*. Dili, Timor-Leste.
- PNDS, P. N. (2016). *RELATÓRIU BADAQ KONA-BA AVALIASAUN TEKNIKU PROJETU ESTRADA, DRENAJEN no MORU SATAN RAI IHA FAHILEBO, LIQUICA*. Dili.

- PNDS, P. N. (November de 2018). *Levantamentu Operasaun & Manutensaun Munisípiu Liquica*. Dili, Timor-Leste.
- Pomeroy, J. (2016). *The Economic Impacts of PNDS Infrastructure Projects. National Program for Village Development. A study prepared for the Ministry of State Administration and the Ministry for Planning and Strategic Investment, Government of Timor Leste*. Dili.
- Pomeroy, J. (2018). *The Economic Impacts of PNDS Infrastructure Projects A study prepared for the Ministry of State Administration Government of Timor-Leste*. Dili.
- Popper, K. (1963). *Conjectures and Refutations*. London: Routledge and Keagan Paul.
- Puranik, A. (15 de 08 de 2018). *The Economic Times*. Obtenido de The India Times: <https://economictimes.indiatimes.com/magazines/panache/south-sudan-croatia-and-other-youngest-countries-in-the-world/brand-new-nations/slideshow/65404020.cms>
- Putnam, R. (1993). *Making Democracy Work*. Princeton, NJ: Princeton University Press.
- Putnam, R. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.
- Putnam, R. D., Leonardi, R., & Nanetti, R. Y. (1994). *Making democracy work: Civic traditions in modern Italy*. Princeton: Princeton university press.
- Rees, E. (2004). *Under Pressure FALINTIL–Forc,as De Defesa De Timor-Leste: Three Decades of Defence Force Development in Timor-Leste 1975–2004. Working Paper, no. 139*. Geneva: Geneva Centre for the Democratic Control of Armed Forces (DCAF).
- Sampieri, R. H., Collado, C. F., Lucio, P. B., Valencia, S. M., & Torres, C. P. (1998). *Metodología de la investigación (Vol. 6)*. México, DF: Mcgraw-hill.
- Scambray, J. (2009). Anatomy of a conflict: the 2006–2007 communal violence in East Timor. *Conflict, Security & Development*, 9:2, 265-288, DOI: 10.1080/14678800902925184.
- SC Res 1264, UN Doc S/RES/1264 (1999) (15 September 1999)

- SDS, P. E. (17 de February de 2020). Interview with PNDS Engineer Support Office. (H. F. Ramirez, Entrevistador)
- Sen, A. (1984). *Resources, Values and Development*. Oxford: Basil Blackwell.
- Sen, A. (1985). *Commodities and Capabilities*. Amsterdam: North-Holland.
- Sen, A. (1993). Capability and Well-being. En M. Nussbaum, & A. (. Sen, *The Quality of Life*. Oxford: Clarendon Press.
- Sen, A. (2003). Development as Capability Expansion. En S. e. Fukuda-Parr, *Readings in Human Development*. New Delhi and New York: Oxford University Press.
- Silva, R., & Ball, P. D. (2006). *The Profile of Human Rights Violations in Timor-Leste, 1974-1999*. . Benetech Initiative.
- Simonsen, S. G. (2006). The Authoritarian Temptation in East Timor: Nation-building and the Need for Inclusive Governance. *Asian Survey XLVI(4)*, , 575–596.
- Simpson, B. (2005). *A quarter century of US support for occupation*. *National Security Archive Briefing Book*, 28 November.
- Soares, D. B. (2003). *Branching from the trunk: East Timorese perceptions of nationalism in transition*. Diss. Australian National University.
- Stake, R. E. (2005). Case studies. En N. K. Denzin, & Y. S. Lincoln, *Handbook of Qualitative Research* (págs. 443-454, 3rd ed). Thousand Oaks, CA: Sage Publications.
- Stiglitz, J. E. (1989). Markets, market failures, and development. *The American Economic Review*, 79(2), 197-203.
- Tashakkori, A., & Teddlie, C. (. (2010). *Sage handbook of mixed methods in social & behavioral research*. Sage.
- The Guardian. (25 de February de 2020). *The Guargian*. "Timor-Leste prime minister offers resignation after political coalition collapses". Obtenido de <https://www.theguardian.com/world/2020/feb/25/timor-leste-prime-minister-offers-resignation-after-political-coalition-collapses>

- Thu, P. M. (2015). Displacement and Informal Repatriation in a Rural Timorese Village. En S. Ingram, L. Kent, & A. McWilliam, *A New Era? Timor-Leste after the UN* (págs. 251-263). ANU Press.
- Timor-Leste's Government. (02 de February de 2017). *Government of Timor-Leste, Democratic Republic of Timor-Leste*. Obtenido de <http://timor-leste.gov.tl/?p=17298&lang=en>
- Tocqueville, A. d. (2000). *Democracy in America: The Complete and Unabridged Volumes I and II*. New York: (Bantam Classics) Mass Market Paperback.
- Tracy, S. J. (2010). Qualitative quality: Eight “big-tent” criteria for excellent qualitative research. *Qualitative inquiry*, 16(10), 837-851.
- UNDP. (26 de 02 de 2020). *UNITED NATIONS DEVELOPMENT PROGRAMME Human Development reports*. Obtenido de <http://hdr.undp.org/en/countries/profiles/TLS>
- USAID. (October 2008). *Timor Leste Armed Violence Assessment, Issue Brief 01*. Geneva.
- van Domelen, J. (2007). *Reaching the Poor and Vulnerable: Targeting Strategies for Social Funds and Other Community–Driven Programs. Social Protection. Discussion Paper 0711*. Washington DC: World Bank.
- van Domelen, J. (2008). *Global Perspectives on Community–Driven Development. Paper presented at SDN Week*.
- Villatoro, P. (2017). Taller “Uso de encuestas de hogares para la medición de los Objetivos de Desarrollo Sostenible sobre pobreza y desigualdad” 10-11 agosto, 2017. (págs. 1-81). Ciudad de Panamá: CEPAL.
- Watt, J., & van den Berg, S. (1995). *Science, Research Methods For Communication Science*. Allyn & Bacon.
- White, H., Menon, R., & Waddington, H. (2018). *Community-driven development: Does it build social cohesion or infrastructure? A mixed-method evidence synthesis*. The International Initiative for Impact Evaluation (3ie) Working Paper 30.

- Wong, S. (2012). *What have been the impacts of World Bank Community-Driven Development Programs? CDD impact evaluation review and operational and research implications*. Washington, DC: World Bank.
- Wong, S., & Guggenheim, S. (2005). Community-driven development: Decentralization's accountability challenge. *East Asia decentralizes: Making local government work*, 253-267.
- Wong, S., & Guggenheim, S. (2018). *Community-Driven Development. Myths and realities*. Policy Research Working Paper 8435. World Bank Group.
- World Bank. (2005). *The Effectiveness of World Bank Support for Community-Based and -Driven Development*. Operations Evaluation Department World Bank: Washington, D.C.
- World Bank. (2012). *Community -Based Development and infrastructure in Timor-Leste: past experiences & future opportunities*. World Bank.
- World Bank. (2013). *PNPM country-wide infrastructure technical evaluation*. Jakarta: World Bank.
- World Bank. (2018). *Timor-Leste Systematic Country Diagnostic: Pathways For A New Economy And Sustainable Livelihoods*. World Bank Group.
- World Bank, a. (2009). *Community Based Development and Infrastructure in Timor-Leste: Past Experiences and Future Opportunities*. Washington, D.C. Available at: <http://documents.worldbank.org/curated/en/972211468311990234/pdf/700400ESW0P1120n0Timor0LesteP112159.pdf>.
- Yin, R. (2017). *Case study research and applications: Design and methods*. Sage Publications.

Annexes

Annex 1. General brief on Timor-Leste's country context.

Timor-Leste is one of the youngest countries in the world (until 2019 it was the third-youngest after Kosovo and South Sudan (Puranik, 2018) and yet one which is highly unknown to the world. Timor-Leste used to be a Portuguese colony. The first Portuguese settlers arrived in the southeast Asian island in 1515, beginning border negotiations with the also colonial Dutch in 1851 and then taking control of the eastern part of it in 1945. In 1975 Portugal declares the formal withdrawal of the island and the Revolutionary Front for an Independent Timor-Leste (FRETILIN) unilaterally declares independence (Muižarājs, 2018). After only nine days of independence, Indonesia invaded East Timor, paving the way to the beginning of a 24-year civil war (Ibid). According to the declassified files of the United States' National Security Archive, the Secretary of State Henry Kissinger and President Gerald Ford gave the green light to Indonesia's invasion (Simpson, 2005). In the war aftermath, the installed foreigner-inundated Truth Commission for Timor-Leste (Comissão de Acolhimento, Verdade e Reconciliação de Timor Leste, CAVR) and Silva and Ball (2006) estimated that at least 102,800 Timorese civilians died in the 1974 to 1999 period. Of those, approximately 84,200 died of disease and famine, and 18,600 of these were killed or forcibly disappeared. Also, over 100,000 households were displaced (mostly internally) (CAVR, 2006).

Having FRETILIN and the Timorese National Resistance Council (CNRT) fighting internally for independence, in 1999 Portugal and Indonesia agreed to hold a popular consultation where the Timorese rejected special autonomy favoring by 78.5% separation from Indonesia⁶² and opening the door to independence (Muižarājs, 2018). The same year the United Nations Security Council (UNSC -1264) authorized the deployment of the International Force for East Timor (INTERFET). 12.600 troops and the United Nations

⁶² Notwithstanding the vote, the Truth Commission found that the decision was met with intimidation and forced displacement of by the Indonesian military and police deemed to be complicit in funding, supporting, and forming pro-integration militia groups as early as late 1998 (CAVR, 2006).

Transitional Administration in East Timor (UNTAET) exercised administrative authority until 2002 when the country gained independence. However, the conflict did not end without the Indonesian Military destroying 70% of existing infrastructure upon withdrawal and over half of the population being displaced⁶³ (CAVR, 2006; Achmad, 2003).

Confirming Crocker et al. (2007) argument⁶⁴, Timor-Leste fell back into conflict in 2006 when Timor-Leste Defense Force (F-FDTL) started violently clashing with the National Police of Timor-Leste (PNTL). Many studies have looked into the internal and structural tensions that predicted conflict-resumption. Soares (2003) pointed to the range of political, generational, historical, linguistic, geographic, and even ethnic divisions within Timor-Leste. USAID (2008), narrated how the crises would unfold, and who were the ones to be involved in it. Rees (2004) accurately focused on the tensions between the security forces due to the inconsistencies in their nature and creation, and their politicization as foreseeable sources of conflict.

Other studies have looked at the social dislocation (Gonzalez-Devant, 2008), the often blemished state-building project (Simonsen, 2006), and other factors that may have been key to unravel the 2006-2007 Crisis. While these pin-pointed factors turn to be catalysts, it was evident that the conflict revealed a wide range of dormant social grievances that were made visible during the conflict (Scambray, 2009), a salient one being the weak sense of national unity and fractured identity (Leach, 2008). Of any kind the causes, in 2006 in the wake crisis, the fifth UN peacekeeping operation was deployed with the main objective of reforming the security structure and develop the national security policy.

The crisis ended in 2008 with a failed coup attempt where the president at the time, José Ramos-Horta was shot and severely wounded. Less than two years after the firing on each other, and after police and military formed a joint command in pursuit of those responsible, the rebels came down to Dili to hand their weapons. The few that were convicted for the

⁶³ Since the perpetrators of the crimes have not been brought to justice, the repatriation of former pro-integration leaders and militia members is a politically sensitive topic that is most relevant at the local level where uneasiness is still present among victims and former pro-independence veterans (Thu, 2015).

⁶⁴ (Crocker, Hampson, & Aal, 2007) argue that so-called developing countries and war-torn societies have higher risks of violence, and that coupled with the presence of high unemployment, especially within the young, they become even more severe.

events of 2006 or 2008 were pardoned by the president and the members of the military (mostly from the western districts) that raised the problems within the army were paid US\$8500 each and told to return to civilian life (Peake, 2013). Peake (2013) argues that the situation exhibits very characteristic traits of Timorese society. On one hand, such a small place offers every place for political flexibilities and no room for moral absolutes; that is, hating someone is easy in the abstract but not so much when that person is a close friend from one of your closest and you are constantly in the same sphere. On the other hand, it would reflect how Timorese are used to buying off problems (including the obtained peace) using the state budget in a country that has one of the lowest tax bases and collection in the world. Hence, the generation of a rentier economy “in which the state generates its revenues not from taxing its citizens, but from selling off its own resource base” (Peake, 2013, pg. 172).

Thereafter, despite progress from recent years and vast foreign aid from the international community, the state has been confronted with multiple challenges that pose an unstable situation. Since independence, Timor-Leste has made great efforts in reconstructing itself after the war; Maternal Mortality Ratio (MMR) was one of the highest of the world at 506 maternal deaths per 100.000 live births in 2005, in 2010 this rate decreased to 317 and in 2015 even further to 215 deaths per 100.000 live births. In the same way, Timor-Leste has achieved remarkable progress in other maternal health indicators such as facility-based delivery, skilled birth attendance, and postnatal care utilization between 2010 and 2016 (GDS, TLMH, & ICF, 2018); the number of Timorese living in poverty fell from 50.4% in 2007 to 41.8% in 2014; the education participation is growing quickly, adult literacy rates risen from 38% in 2004 to 64% by 2014, and household heads with some level of schooling have risen from 50% in 2007 to 70% in 2014; moreover, the average GDP growth per year was 6.5% from 2007 to 2016 (World Bank, 2018).

In its efforts to reconstruct the country Timor-Leste has been one of the highest receivers of per-capita allocations of international aid in the world. So many donors, agencies, and international development organizations have signed Memorandum-of-Understandings with the government that the country had a total of 41 different agreements on different topics in the first half of 2011. While pointing at their existence and acknowledging specific projects

outcomes, Peake (2013) questions their appropriateness (based on their foundations in previous the Memorandum-of-Understanding), and their clarity which is reinforced by the Dili-based NGO La'õ Hamutuk that in words of the author “estimates that around 90% of development assistance never reaches the country, being mostly spent on salaries, overseas procurement, imported supplies, and overseas costs” (Peake, 2013, pg. 199).

Despite all the foreign aid, the country still presents major challenges in terms of the oil-dependent-economy, the still predominant poverty rates, and the lack of agricultural productivity among many others. The diversification of Timor's economy is certainly the biggest challenge wherein the oil sector generated 48% of the country's GDP, 97% of its exports, and 46% of its total imports by 2015 (EITI, 2015). Oil reserves are expected to run out by 2024 while trying to become a resource-state -without having resources- the Timorese elite seems not to be allocating big-oil-money in areas that would avoid permanent poverty (Peake, 2013). Furthermore, by 2018 Timor-Leste ranked 132 -out of 189- in the Human Development Index - 0,65, and poverty is widespread throughout the country, with a GDP per capita of \$USD 2759,50 a year (UNDP, 2020). The agricultural sector is not much brighter. The national strategic development plan 2011-2020 states that the majority of farmers cannot afford adequate fertilizers, pesticides, do not have access to finance, and lack the support and skills to innovate. Thus, subsistence farming is characterized by low productivity and low production rules in the sector (National Parliament, 2011). The situation is aggravated by the fact that around 75% of the population depends on agriculture as their livelihood (MAF-TL, 2012).

[Annex 2. Interviewees](#)

Program Implementation Advisor Support program to PNDS

Former Deputy Team Leader Support Program to PNDS

PNDS Engineer Support Officer

PNDS Director

Xefe aldeia Tuhilo Kraik

Xefe aldeia Fatuneso.

Aldeia delegate to the CMT.

Technical sub-district support officers

Treasurer CMT

Fahilebo Village Chief

Vice Presidente CMT Fahilebo

Implementation Team Chief CMT Fahilebo

Mr. José Ramos Horta, Former president of Timor-Leste and Nobel Peace Prize winner

Head of Monitoring and Evaluation within PNDS Support Program of Australian Aid.

PNDS Chief of Program Implementation Unit

District Coordinator of PNDS in Liquica

PNDS Finance Support Supervisor for Liquica

Facilitador social post-administrativo

[Annex 3.](#)

Poverty reduction

Educational level

PNDS has not enforced any projects concerning education in Fahilebo so no direct effects can be attributed from the program's implementation to the community's educational level. However, this information was captured during data collection to look for unexpected results, control for respondents' answers, and characterize the chosen sample. Having that said, the survey found that in 2020, 28.1% of the surveyed people have not completed any formal education, 4.3% of them completed pre-school, 12.2% completed primary school, 17.3% junior high school, 30.2% high school, and 5.8% completed university level, and 2.2% do not know or refused to answer. A total of 30.4% of the respondents said they could read, and

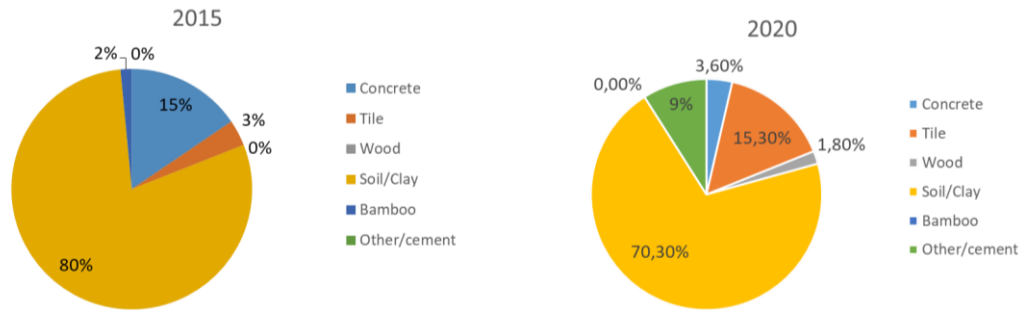
13% of these did it right, 17.3% were slow and 69.5% refused to answer. At the national level, according to the 2015 PNDS baseline out of the people that said they could read 40.7%, 31.4% did it right, 0.6% could not, 0.5% tried, 7.6% were slow and 58.6% refused to answer.

Practitioners highlighted that the low educational level has impacted PNDS projects' implementation. Since there are no identified changes derived from PNDS implementation, development practitioners from the PNDS Directorate down to the local level highlighted the low skill level and education level of Fahilebo's citizens. They expressed that challenges relate to the low literacy abilities of community's representatives to be able to read and follow instructions. Practitioners emphasized the lack of capacity within the CMTs and program's staff along the Country. As for the CMT, they expressed that is very difficult to do 'capacity building' and train other community members in a timely manner having 11 members in the CMT. As for program staff, at the beginning there was expressed difficulty to find qualified technical implementers.

Living conditions

To identify changes in Fahilebo's living conditions, the material of household floors, roofs, and external walls construction material were longitudinally tracked comparing 2015 to 2020 data. Concerning the material of Fahilebo's household floors, Graph 5 illustrates that according to this research the assessed period saw a great diversification of floor construction-materials between 2015 and 2020. Soil/clay floors saw a decrease of 9.7%, tile saw an increase of 12.3%, other materials, mostly cement saw an increase of 9%, and the longer-lasting material (concrete) saw a decrease of 11.4%. Thus, the material of Fahilebo's household floors in the 5 years saw little change.

Graph 5. Main floor construction material in Fahilebo's dwellings.

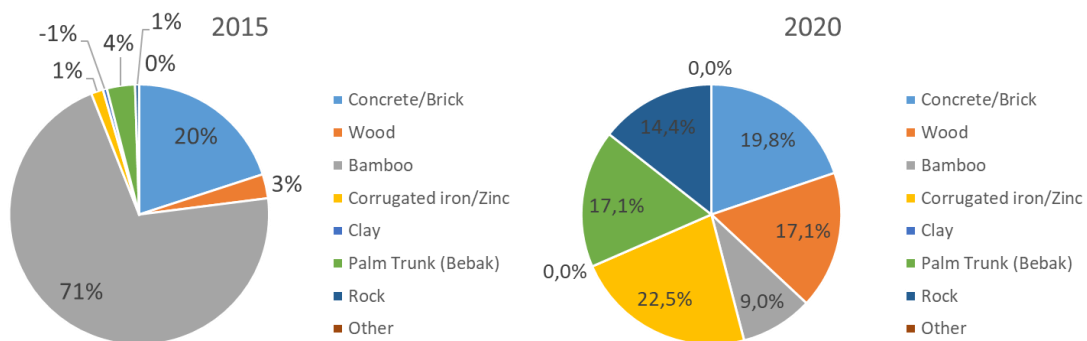


*The 2015 graph was made by the autor with information of the 2015 National Census and the 2020 out of the collected information for this research.

Roofing materials did not see major changes in the 5 years. While according to the Census in 2015, 95% of the household roofs were made out of corrugated iron/zinc while in 2020, 91.9% of the roofs were made out of the same material.

Graph 6 shows a great diversification of the main construction materials of Fahilebo's households external walls. Bamboo saw a massive drop as the predominant material from 71% to 9%. This study shows the overcome of this drop by the increase in the use of corrugated iron/zinc by 21.5%, rock 14.4%, wood by 14.1%, and a negative increase of palm trunk by 13.1%; concrete saw no major change. Thus, in the five years the construction material of the external walls of Fahilebo's dwellings saw a diversification and an overall improvement moving from Bamboo to long-lasting materials.

Graph 6. Main external-walls construction material in Fahilebo's dwellings



Hence, between 2015 and 2020 there were not significant in terms of roofing materials and household floors. In the contrary, the material of external walls saw a diversification moving to long-lasting materials. Not many reasons were provided to explain the specific mentioned

changes concerning living conditions. Although practitioners mentioned that the positive changes in it have been due to the road project, as community members can now bring construction materials such as sand and cement to build their houses (SdS, 2020). Accordingly, practitioners nor beneficiaries provided clear explanations as to how and if the construction of small-scale infrastructure impacted living conditions in Fahilebo between 2015 and 2020.

Electricity

Fahilebo has no electricity provided through a network. In 2020, the survey revealed that 92.8% of the households use solar panels as their source of light in their dwelling, followed by battery torches/flashlights with 5%. In 2015, 55% of the households used solar panels as their source of light, 18.5% candle/battery flashlights, and 16.5% Kerosene. Within the 5 years, the use of electricity reduced from 6% in 2015 to 0.7% in 2020 and currently network electricity is not yet provided. It is important to stress that no (PNDS) projects have been implemented to address electricity concerns, thus no direct effect from PNDS can be expected in this regard. Projects' beneficiaries manifested that the current priority in Fahilebo is electricity.

Social Capital

Trust

To quantitatively measure trust perception, the surveyed individuals were asked to agree or disagree if most people within Fahilebo can be trusted, if most people within the suco tries to take advantage of others, if most of the community is willing to help, and if the interviewee would trust a neighbor with money.

Asked about if most people in the village can be trusted, according to the 2015 PNDS Baseline, 95% of Fahilebo's citizens agreed, and at the national level 93% agreed. In 2020, 96.4% of the surveyed individuals agreed. Faced to the affirmation that one has to be alert because someone within the village would take advantage, according to the 2015 PNDS Baseline, 100% of Fahilebo's citizens agreed, and at the national level 86,8% agreed. In 2020, 74% of the surveyed individuals agreed. In contrast, when asked if most people in the village

are willing to help when you need it, according to the 2015 PNDS Baseline, 95.6% of Fahilebo's citizens agreed, and at the national level 94.7% agreed. In 2020, 92.8% of the surveyed individuals agreed. Finally, when faced to the supposition on having to trust a neighbor to send money to a relative, according to the 2015 PNDS Baseline, 47.8% of Fahilebo's citizens agreed, and at the national level 67.2% agreed. In 2020, 79.9% of the surveyed individuals agreed. Thus, at the village and national levels, trust saw only significant changes pointing to a reduction of the perception of community members taking advantage of others, and in an increase of trusting neighbors with money.

Development practitioners manifested that PNDS implementation increased trust within communities primarily in men to manage resources and finances, and in women to be representatives within village councils⁶⁵. In this way, practitioners argued that the training that beneficiaries have received encouraged them and gave them the capabilities to run for village positions (MM, 2020). These asseverations match the Asia Foundation PNDS monitoring that found that close to 90% of the surveyed CMT members believed that their PNDS experience gave them community support for their election in village council positions, as well as the majority of non-CMT members also argued that former CMT members had an advantage when running for election (Asia Foundation, 2017). For instance, the current CMT's treasurer expressed to have learnt from the projects implemented in 2015 and to use the knowledge within the current PNDS projects. CMT members stressed that on one hand they have to be nice to the community to gain their willingness and their work for project implementation but on the other hand, they asseverated that usually operations and maintenance work brings uneasiness within Fahilebo impacting community's trust. This happens when the work is supposed to be done by a team not by one person (which it is often the case) and it is accentuated by the fact of not having a mechanism to resolve these small disputes.

As a result, the 5-year period saw a change in two out of the four indicators used to measure trust. However, the reasons provided by practitioners and beneficiaries were not directly

⁶⁵ Even though this finding would draw attention to a possible gender bias arising from the practitioners, they highlighted this as women usually do not exercise representation roles and they noted that individuals were not very confident managing resources and finances which are roles traditionally exercised by men as women have been relegated to domestic chores and the private sphere.

pointing to PNDS implementation to explain the increase of trust in neighbors with money, and the reduction of the perception that community members would take advantage of others. Also, this research recognizes that there are many different external and individual factors impacting trust within community members. Thus, these results cannot be attributed to PNDS implementation, instead trust depends on multiple variables and causality cannot be argued.

Collective action

Looking at cooperation experiences in Fahilebo, collective action was measured by the involvement of its community. In 2020, 68.5% of Fahilebo's citizens affirmed to have been involved in community construction in the past 5 years. Respondents were asked to specify their involvement. 64.9% of them did not remember which project they had been involved with, 24.3% stressed involvement in a PNDS project, and 19.8% were involved in another project in the years 2015: 7.2%; 2016: 4.5%; 2017: 7.2%; 2018: 6.3%; and 2019: 19.8%⁶⁶. Most people-70.5%, had no involvement within PNDS projects, but out of those that had 21.6% engaged in physical labor. 8.1% of the few PNDS-involved engaged for a year or more, 7.2% for a few weeks, 6.3% for few months, and 6.3% also for only one month. 37.8% of their involvement had no monetary compensation, and 17.1% were remunerated. Accordingly, without being possible longitudinally comparison, community's involvement in construction projects and within PNDS projects in Fahilebo has been low, short, and predominantly not remunerated.

Community's leaders and CMT members explained Fahilebo's low PNDS involvement primarily to its voluntarily, low and sometimes non remunerated character, investing their free time on PNDS projects (ADC, 2020; LDS, 2020; MP, 2020) and in a much less extent to its lack of motivation to work (AnC, 2020). However, community leaders and practitioners highlighted Fahilebo's community mild character and tendency to cooperate. It was said that Fahilebo's citizens accept instructions, which is positive when they cannot interpret the provided drawings for project construction, being easy to work with them, unlike in other regions (FG, 2020; EB, 2020; SdS, 2020; AR, 2020). Community leaders also highlighted that PNDS has brought "life" to Fahilebo making community's public life is more active (MdC, 2020), confirming what the theory on participatory development argues.

⁶⁶ The percentages were calculated out of the total of households.

Concerning current projects, beneficiaries and practitioners pointed to the lack of issues about their implementation other than minor problems that are solved by the village chief (EB, 2020; AnC, 2020; AC, 2020; JA, 2020; JS, 2020). Practitioners mentioned that issues revolve around financial issues when purchasing materials and matching them with the bill of purchases (JA, 2020; JS, 2020). The latter matches the findings of the Asia Foundation (2017;a) monitoring that points out a lack of detailed information on community contribution, information and formal documents about land donated to the project, amount of time labored by volunteer groups, and details of local materials gathered and provided. As with Fahilebo, it finds that collaboration usually begins well but decreases after projects are implemented, drawing attention to challenges such as the distances from the village office to people's houses, community members' demands for *per diems* to enforce PNDS duties (Asia Foundation(a), 2017).

Groups and networks

To quantitatively measure this social capital proxy, participation in the village chief election, and conflict level perception were longitudinally assessed⁶⁷. In terms of the election of the Village Chief, according to the 2015 PNDS Baseline, 100% of Fahilebo's citizens affirmed to have voted, and at the national level 96.5% participated. In 2020, 97.1% of the surveyed individuals voted. In 2015, 30.4% of Fahilebo's citizens stressed that conflict never happens in their village, 65.2% said it happens sometimes, and 4.3% affirmed it happens often. At the national level these figures were: 42.1% never, 50.8% sometimes, 3.3% often. In 2020, the surveyed household affirmed that conflict happens: 89.2% never, 10.1% sometimes, often 0%. Finally, when asked to compare the level of conflict to last year, according to the 2015 PNDS Baseline, nobody of Fahilebo's citizens said that conflict increased, 8.6% affirmed that it stayed the same, and 60.8% of them stressed that it decreased. At the national level these figures were: 2.8% increased, 7.5% stayed the same, 43.3% decreased. In 2020, the

⁶⁷ It is important to highlight that at the Timorese village level the 'public sphere' lies predominantly within religious activities, and community leaders' elections. For instance, practitioners recounted the importance of religious ceremonies/traditions and religious activities and how it leads to delays in project implementation i.e. burials take from 3 days to a full week (SdS, 2020).

surveyed households asseverated that conflict increased 0.7%, stayed the same 95%, and decreased 4.3%.

There were no specific reasons given by practitioners or beneficiaries to explain the mentioned changes. However, on one hand beneficiaries stressed that concerning PNDS implementation lack of conflict is explained by the agreements to avoid inter-hamlet conflict. The village council and the community agreed that project allocation would alternate every year in an hamlet rotating process. The same was agreed for PNDS' work, in which different people work on projects every day for 2 months (ADC, 2020; JDS, 2020; EB, 2020). Beneficiaries also manifested that the community keeps on matching projects' functioning with the CMT members that were involved in it, even though projects need to be managed by the community as a whole (LDS, 2020). On the other hand, practitioners' reasons contributing to understand conflict dynamics within Fahilebo related to the way PNDS became a way for communities to learn to channel conflict of interests to the village chief/council (MaM, 2020).

Hence, comparing to the more reliable information at the national level between 2015 and 2020 participation in the village election had no significant change, and conflict level perception saw a significant decrease. Compared to the year before the surveys were enforced the interviewees perceived that conflict stayed the same which demonstrates a significant increase in the amount of citizens that thought conflict stayed the same. Conflict perception findings do not seem to correlate or complement each other, impacting the credibility of the data and pointing to a lack of interviewees' consistency. Also, practitioners' and beneficiaries' reasons were not aimed at explaining the identified longitudinal changes hampering the attribution of these results to PNDS implementation. Finally, this research acknowledges that many external factors are impacting these changes blocking causality. Consequently, the findings concerning groups and networks cannot be attributed to PNDS and are considered to be null.

Future PNDS implementation

In the opinion of Fahilebo's citizens if the government were to fund 3 projects/programs, 97.1% of them chose electricity as their first choice, 63.3% chose water and sanitation as

their second, and 60.4% chose roads and transportation as their third choice. Compared to the 2015 PNDS baseline electricity (39.1%) was first choice, roads and transportation was second (30.4%), and education was third (13%). Thus, further PNDS implementation should concentrate in at least electricity and roads and transportation.

Annex 4. PNDS' performance in light of its particular design

As the literature review showed, it is argued that CDD delivers some of its purported outcomes depending on the projects'/programs' design and the particular country's context. This paper learns from this lesson and incorporated this section to provide the reasons that the program's beneficiaries and development practitioners offered to account for PNDS effects in poverty reduction and social capital not only in Fahlilebo but in its national implementation.

Even though the national context seems to be a perfect breeding ground for CDD, the preceding community-based development projects shed uneven results⁶⁸. Since then CDD has been implemented in Timor-Leste through PNDS. As mentioned in the introduction, PNDS hands out grants to local communities to build small-scale infrastructure. The Ministry of State Administration is responsible for training teams, general intervention, and implementation program regime⁶⁹.

⁶⁸ The first of these projects was the *Community Empowerment and Local Development Program* that had the purpose of both testing decentralization programming models and enhancing state-citizen links. It faced challenges such as community engagement, village chiefs being overburdened and poorly trained, demand-side accountability, and poor local information dissemination. However, the program achieved to raise debate and advocacy (World Bank, 2012). The second of these projects was the *Community Water Supply and Sanitation Program* that reached US\$ 1.78 Billion with the aim to “contribute to the improvement of health in target communities through increased access to clean water and sanitation services and increased environmental health awareness” (World Bank, 2012:25). It built 85 water management groups benefitting about 10.000 households. While there has been an overall success in achieving its aim, success has been unevenly distributed (World Bank, 2012). Based on this Butterworth and Dale (2011) concluded that development efforts must be community-driven and community-owned.

⁶⁹ To do so, the Ministry has a Technical Secretary with administrative, and operational units, also being supported by the Director-General of local development of the Ministry. At the municipality and administrative post level, the decree-law 08 of 26/06/2013 disposes of technical support, evaluation, monitoring, and inspection units. At the village level, the decree-law creates the Planning and Accountability Committee, the Program Implementation Team, the Operations, and Maintenance Team, and the Training Team.

On paper, PNDS is geared into a larger plan to enforce structural change at the local level. Decree-law 04 of 15/02/2012 foresees PNDS as part of the *Integrated District Development Plan* which regulates the execution of state projects on district and sub-district level. The decree-law foresees the creation of the District Investment Plan in which PNDS needs to be harmonized with the Local Development Program and the Decentralization Development Program at the district and sub-district levels. PNDS is meant to be implemented in 452 villages.

The ‘menu’ offered to communities to be built or refurbished (later projects) is supported by teams of trained facilitators at the sub-district and district level⁷⁰. At the villages, the annual project cycle begins with information sessions with village and sub-district governments followed by training and the election of planning and implementation committees. Then, facilitators assist villages to discuss, rank and develop infrastructure project proposals based on the community’s prioritized needs. After the project selection and approval, the community contract is given access to state funds based on a contract. According to the mentoring and supervision, village teams plan construction, procure materials, and hire local laborers having two accountability meetings. Operations and maintenance plans are agreed upon finalization of the works (Australian Government, 2017).

Beneficiaries’ and practitioners’ reasons for PNDS’ success were varied and diverse. The first one relies on its most theologically tacit one, its success in building small-scale infrastructure. Communities within PNDS’s cycle 1 achieved to build 1014 projects on a participatory basis as shown by Chart 5. Practitioners also pointed out the fact the construction in itself and the magnitude/amount throughout Timor-Leste shows that communities can implement and be responsible for their development projects, something that was somehow unexpected by the government (MM, 2020; AR, 2020). In Fahilebo, it was stressed that unlike other development initiatives such as the integrated village development program PNDS has worked remarkably well, only pointing to the need to

⁷⁰ The menu is likely to include local bridges, irrigation canals, kindergartens, and sports facilities, health posts, school extensions, water systems, motorcycle paths, market places, and so on.

reduce the CMT as not everyone works (CDA, 2020; MM, 2020). As expected, PNDS proved to be effective in building small-scale infrastructure.

Chart 4. Cycle 1 PNDS built projects

Municipality	Sectors of infrastructure works						
	Agriculture, food security and livelihoods	Water supply and sanitation	Roads, bridges and flood control	Education, culture and sports	Health	Other	Total
Aileu	1	25	27	3	2	14	72
Ainaro		12	14	2		9	37
Baucau	4	29	21	12	11	38	115
Bobonaro	2	41	38	1		13	95
Covalima	5	38	24	3		6	76
Dili	1	35	37	2	4	10	89
Ermera	3	73	15	5	2	46	144
Lautem	1	35	16	6	1	13	72
Liquica	2	22	11	4	2	16	57
Manatuto	2	30	29	7	5	16	89
Manufahi	1	29	15	2		9	56
Oecussi	5	10	12	3	1	3	34
Viqueque	2	31	14	9	4	18	78
Total	29	410	273	59	32	211	1,014

Source: (PNDS Support Program, 2018:1)

Another set of reasons for PNDS' success focused on the national budget accolade. In its start, Timor-Leste's Government decided to fund entirely PNDS and not rely on loans from the World Bank which implied to have public servants running the program instead of external consultants, and a merit-based selection system for training official positions. Beneficiaries and practitioners highlighted national-budget funding as a difference and an achievement in itself (MM, 2020; AR, 2020; DG, 2020; MaM, 2020). Because of it, PNDS set off a training-program created around 400 job opportunities, a massive call for applicants to get training and become public servants; an opportunity rarely seen in a country that depends on state expenditure with low rates of the skilled workforce⁷¹. Thus, the high amount

⁷¹ However, it was mentioned that this outcome came as a by-product, as PNDS was not designed to be a labor-creation program, although often communities use the money and do the manual work to avoid having to spend great shares of the budget in external contracts (LS, 2020).

of built small-scale infrastructure, national-budget funding, and a merit-based selection system to public servants running the program proved to be reasons for PNDS' success.

Another novelty was that according to practitioners, PNDS was the first program in Timor to implement direct public transfers from the treasury straight to the community, so 'the money is not changing hands' diminishing the risk for corruption or mishandling (MM, 2020). Beneficiaries confirmed stressing that the existence of different books to consolidate operational and construction expenses in the provided forms eases controlling the project's money (LDS, 2020). Practitioners also highlighted PNDS' model of ownership and demand-driven projects by local communities as results derived from the communities' work and priorities (MaM, 2020). This model enriched communities' skills in priority setting, project planning, and implementation, resulting in the mentioned CMT members' selection within village councils (AR, 2020). Hence, PNDS' (CDD) model of ownership and demand-driven projects, direct public transfers, and local financial accountability have meant leading success causes.

Relating to national-budgeting, it was manifested that even though relying on it has some risks, communities still receive most of the expected allocations. The risks of using the national budget affect the communities' learning process as funding is not regular, hence not being able to continue that process nor use the acquired knowledge in yearly projects (LS, 2020). It was also stressed that Timor-Leste's highly volatile political situation⁷² has directly impacted the country's development increasing the risk for corruption and unnecessary/unjustified state spending at the general level with spillover effects (as the national economy is greatly dependent on government spending; JRH, 2020). However, even if there have never been \$US 23 million PNDS allocations due to the budget instability, practitioners asseverated that communities still receive a great share of money from PNDS (MM, 2020). Thus, even though national-budget-reliance implies risks in terms of

⁷² Despite ranked first in South-East-Asia in the 2016 Democracy Index (Timor-Leste's Government, 2017), in its short independent life Timor-Leste has struggled to reach consensus over the state's budget. Currently, the government's revised budget for 2020 failed to pass Timorese parliament notwithstanding the governing alliance having a majority (Leach, 2020), leading the Prime Minister's to present his resignation (The Guardian, 2020), and the country's first president to return as Prime Minister (Aljazeera, 2020). The government's rejecting its budget was widely blamed for economic shrinkage in 2017 and 2018.

communities' learning process, budget allocations complications, and negative impacts from the highly volatile political situation, direct public transfers have always guaranteed projects' funding.

Practitioners highlighted that the wide PNDS indicative menu has served to channel donors' money into projects' funding, and on par with good results it has also facilitated its continuity through governmental changes (MM, 2020; DG, 2020; MaM, 2020). Timor-Leste has been one of the highest receivers of per-capita allocations of international aid in the world. Only in the first half of 2011, the country had a total of 41 different Memorandum-of-Understandings (MoUs) with a high number of donors, agencies, and international development organizations⁷³. In that way, it was argued that much of donors' funds have been funneled by PNDS' menu according to the particular interests/agendas pursued by donors (LS, 2020). PNDS' apolitical character and a lack of PNDS staff political meddling in correlation with its good results were highlighted to be features guaranteeing its continuity, as governmental agendas are an easy match to PNDS' wide menu. Even though PNDS' staff was stressed to be technical to avoid 'program's politicization', program's legal regulations and reforms depend on politicians' will, which can be a double-edged sword (MM, 2020; DG, 2020; MaM, 2020). In brief, PNDS' achievements have also emanated from its apolitical character and its wide indicative menu.

On the contrary, the program's challenges stressed by beneficiaries and practitioners revolved around operation and maintenance issues, as well as the interaction between the program and Timor-Leste's state at the local level. Revealed extensively was the aforementioned challenge of addressing projects' operation and maintenance complications (LS, 2020; MM, 2020; DG, 2020; MdC, 2020; EB, 2020; LDS, 2020; JA, 2020; JS, 2020; CDA, 2020). Budget allocation from the national government in correlation with the rainy season was also mentioned to result in projects' delays, pushing practitioners to demand

⁷³ While pointing at their existence and acknowledging specific projects outcomes, Peake (2013) questions their appropriateness (based on their foundations in previous MoUs), and their clarity which is reinforced by the Dili-based NGO La'o Hamutuk that "estimates that around 90% of development assistance never reaches the country, being mostly spent on salaries, overseas procurement, imported supplies, and overseas costs" (Peake, 2013:199).

‘more commitment’ at the national level to increase the program’s funds (MaM, 2020). 12-month cycle payments have also proven to be problematic as often project implementation takes longer, which brings complications for monthly payments. Also mentioned as a challenge was the need for a closer alignment between village councils regarding decentralization efforts (LS, 2020). Serving as a vehicle to decentralization and being mostly a centrally implemented program, the funds are spent with little dialogue between the central level and the administrative-post level which limits the room for maneuver at the local and regional levels (Ibid). Consequently, PNDS’ challenges mainly concern operation and maintenance, and the interaction between PNDS and the municipal and administrative-post governments.

To respond to these challenges, the program has enforced efforts to tackle its shortcomings. One of these efforts has been the enforcement of the PNDS Management and Information System (PNDS-MIS) in alliance with the Australian Aid Support Program to specifically identify weaknesses in project implementation and address these flaws by advising training teams to implement recommendations. The program owns a strong system to monitor social-component-activities, physical progress of projects, and finance concerns searching for data accuracy and completeness. However, issues happening within projects are not always introduced into the MIS⁷⁴. Nevertheless, there are identified patterns of data reporting and project monitoring that points to differences between municipalities and show different levels of diligence in data reporting⁷⁵ (LS, 2020). Besides, the program is wary of flaws identified by this paper, and reforms concerning the implementation of an output-based incentive payment and the CMT’s reduction are pending for parliament’s approval. In this way, PNDS has put forward a strong tracking-flaws monitoring system and it is working on reforming the CMT and on implementing an output-based incentive payment as efforts to tackle its challenges.

⁷⁴ For instance, labor within PNDS projects is one of the areas that are not very well captured within the PNDS-MIS. Often data is incomplete particularly when it comes to projects’ proposals and concrete number of beneficiaries and their characteristics (i.e. disabled people) which makes it difficult to evaluate projects’ benefits based on population (LS, 2020).

⁷⁵ When there is no data in the MIS it is usually because it was either not collected, so it did not make it in the administrative course or, that it was collected but the data is waiting to be introduced into the PNDS-MIS (LS, 2020).

As expressed mostly by practitioners, PNDS has brought learned lessons relating mostly to the importance of communities' dynamics and CDD projects' contribution to other welfare outcomes than small-scale infrastructure. On the one hand, practitioners insisted that the particular culture and context of every village influences community's participation, highlighting the importance of identifying the particularities of communities' dynamics to enhance PNDS' impact (MP, 2020). In a comprehensive review on monitoring reports, the Asia Foundation (2017) also found that "every community will be different in terms of social dynamics, geography, and capacity, and that rules will be interpreted (or not applied) differently by different people" (Asia Foundation, 2017:5). In this way, triangulation with secondary sources confirmed the importance of context and communities' dynamics to the program's performance.

On the other hand, another learned lesson concerns CDD projects'/programs' capability to contribute to other welfare outcomes not strictly related to small-scale infrastructure projects. Practitioners mentioned that PNDS' implementation brings indirect effects i.e. in health, where mortality rates decreased in some villages or income generation as projects' implementation links communities' products to different markets. Despite accepting CCD's contribution to other effects different than infrastructure, it was recounted that these indirect effects have come as by-products, thus their presence cannot be taken for granted. Conversely, they depend on projects'/programs' design, the width of their scope, and how they interact and relate with local governments. Also, it was mentioned that in Timor-Leste these effects are tied to budget allocation, and being the villages' allocation uncertain projects' effects are unpredictable (MP, 2020; LS, 2020). Consequently, as shown by this paper and mentioned by practitioners, CCD projects/programs can contribute to other outcomes beyond although these effects cannot be taken for granted and instead they depend on a myriad of factors.

A recurrent subject in the data collection process concerning capacity building, elucidated different discourses from the program's beneficiaries and development practitioners, evidencing a blurry understanding of it. Beneficiaries reported having gained practical

knowledge in project monitoring, management, implementation, operational control, teamwork skills (JDS, 2020; LDS, 2020), procedures to build water pipes/tap and water systems (AnC, 2020; JDS, 2020; AC, 2020), managing projects' budgets (LDS, 2020), and many of the aforementioned skills. Although arguing a technical, financial, and social capacity improvement due to PNDS, practitioners emphasized in a still highly visible lack of capacity within the CMT, program's staff (DG, 2020; MaM, 2020; MP, 2020; CDA, 2020; AR, 2020), local leaders (MP, 2020), and general lack of skills/education in planning, budgeting, and operations (JRH, 2020). For instance, they exposed the difficulty to find qualified technical implementation officers in the program's set off, also evidencing small-quantity misuse of money allocation due to ignorance (DG, 2020). Hence, despite agreeing in a capacity improvement due to PNDS implementation, the first round of primary sources triangulation found that practitioners' appreciations differed to beneficiaries' in the way the latter argued an evident lack of capacity.

The second round of triangulation between primary sources' findings and secondary sources found mixed results. The Asia Foundation monitoring found significant outcomes concerning the capacity of village council members. In one hand, 82% of the village chiefs and 66% of hamlets chiefs reported having learned new skills such as: preparing financial reports, preparing a bill of quantity, opening a bank account, obtaining quotes from tradesmen, conflict management, public speaking, and technical skills i.e. mixing cement. On the other hand, the study shed light on required skills: computer skills, technical skills in monitoring, training in project and budget management, training in coordination, communication, and community mobilization, technical skills including welding, carpentry, layering concrete, writing proposals, and administration (Asia Foundation, 2017). Naturally, the study found truth in both appreciations while accurately pointing to the areas/aspects of capacity improvement and shortages.

Notwithstanding the direction nor the magnitude of the strengths and weaknesses of local communities' under PNDS implementation, this research revealed an unclear/vague understanding/definition about capacity building illustrated by practitioners' appreciations. Some defined it as having leaders that know how to lead, and individuals that have practical

skills to raise a country's economic performance (JRH, 2020), as information sharing and project management/implementation (AR, 2020), and others as qualification/training of communities and PNDS' staff (DG, 2020). Concerning capacity building, practitioners highlighted issues in terms of communication with local governments (who also struggle to understand how the program works and their role in it), and between the CMT and the village councils nationally. However, interviewed CMT and community members showed a good understanding of PNDS' functioning, their roles, and the procedures to follow in each of their roles. Thus, the obtained differing definitions of capacity were never accurate nor specific. If there is no clear/concrete definition its measurement, and actions to a focused improvement will be hindered.

Annex 5. Findings of the second triangulation round with secondary sources

To guarantee the reliability of the information and leverage from the strengths of mixed methods, this research's findings in terms of poverty reduction and social capital were triangulated not only between primary sources but also with secondary sources as the following paragraphs show.

Several evaluations and reviews have been put forward to track PNDS' effects, most of them have positive results in their findings. In its first four years of implementation, PNDS has built "547 water supply and sanitation projects; 440 roads, bridges, and flood control projects; 91 education, culture, and sports projects; 46 health projects; 38 agriculture and livelihoods projects; and 212 projects in other sectors" (Cardno, 2017:v) without having the funding that was stipulated in the 2013 decree-law. PNDS has also invested in human capital by having local dwellers involved in the projects' cycle. The involvement within PNDS at the village level meant for 384 men and 184 women of 291 villages (65% of the total of villages) to get elected in a village council position in the 2016 local elections (Cardno, 2017). For the mid-term review of the PNDS support program, it was stressed that the program is on target to meet the goal of 3500 built projects by 2020 and is meeting the gender targets having 40% of women's participation in community management committees (ibid., 2016).

One of the central challenges of successful implementation has been identified in the area of operations and maintenance. It was found that in the majority of cases operation and maintenance are not done often enough, excepting minor works. Although Decree-Law 08 of 2013 and Decree-Law 04 of 2004 declare villages and hamlets responsible to perform operation and maintenance on water systems and projects, it has been noted that communities are in need of assistance and advice to perform their responsibilities that often exceed their capacity (PNDS Support Program, 2018).

Poverty Reduction

The underlying reasons that development practitioners gave for PNDS effects in poverty reduction were tied to its effects in mainly water access, territorial interconnection, the quality of built-infrastructure, and its value for money (DG, 2020; MM, 2020; LS, 2020; AR, 2020). They highlighted PNDS visible effects in time-saving capacity in water collection, the derived benefits from having water at home, and the benefits from roads interconnectivity, i.e. improvement of women's and children's situation because they are the ones who have to collect water, health-related benefits, cattle rearing effectiveness, increase in agricultural productivity, improved market access, household-income enhancement, etc (DG, 2020; MM, 2020). They also stressed the program's ability to meet the 8-year-targets that were set for implementation (DG, 2020).

Practitioners also stressed that poverty reduction effects revolve around the quality of built-infrastructure (AR, 2020; LS, 2020; MM, 2020; SdS, 2020). These testimonies from practitioners match the PNDS operations and maintenance study. It found that out of the 970 projects assessed around Timor-Leste 83% of them were classified as being functional and in good condition, highlighting that while operations and maintenance are not happening often enough, the quality of the built-small-scale-infrastructure is high⁷⁶ (PNDS Support Program, 2018).

⁷⁶ At the municipal level, the study found that out of the 54 assessed projects in Liquiça, 77% obtained the mentioned qualification (PNDS, 2018). Due to good, visible PNDS effects and services provision, it was expressed that PNDS has improved the credibility of local governments (AR, 2020). Mentioned flaws in infrastructure quality were related to procurement process delays (DG, 2020), lack of sufficient community's skills, and regular visit/monitoring from the government (AR, 2020).

Independent quality of infrastructure audits have also rated PNDS projects at the national level highly positive. Technical evaluations of 2016 and 2017 were launched to assess the quality of infrastructure randomly sampled. In 2016 a total of 56 subprojects were evaluated compared to 65 in 2017. In 2016, 80% of the technical components of the structures were built in accordance with the plans and specifications set out in the community project proposals and PNDS Technical Construction Standards; in 2017, this percentage slightly fell to 78%. In 2016, 83% of the sub-projects were assessed to be good or excellent ‘fitness for purpose’, whereas in 2017 this rose to 93%; 91% of the sub-projects were assessed as being good or excellent regarding the construction’s environmental impact in 2016 whereas in 2017 it rose to 94%. According to both evaluations, during PNDS phases II and III technical facilitators visited village sub-project sites in an average of at least once a week (Neate & Noor, 2016; 2017). Hence, technical independent evaluations have assessed the quality of PNDS projects to be highly positive.

In addition, practitioners’ arguments were backed up by beneficiaries’ assessments compiled in the 2016 CMT’s Secretary report which outlined a lack of routine maintenance or periodic maintenance despite having received training twice (PNDS, 2016). The 2016 project consisted of the construction of an entrance-bridge, drainage, and a retaining wall⁷⁷. The revision of the project done by the Ministry of Municipal Public Works found that the project indeed needed regular maintenance as it had construction flaws⁷⁸. Despite the need for more regular maintenance, a direct positive effect in poverty reduction can be extracted from PNDS’ high-quality small-scale infrastructure in Fahilebo.

Social Capital

⁷⁷ It was planned with a target volume of 2000 meters, but according to information in the field, this project was revised to build a 3-unit bridge and a 300-meter long stone channel.

⁷⁸ The revision of the project done by the Ministry of Municipal Public Works, found that: i. the concrete mixture did not meet PNDS specifications, so the compressive strength of concrete was lower than standardized; ii. one of the bridges has a fairly sharp transition and if left unchecked it was stated a risk of rapid scours disturbing the stability of the bridge; iii. After the project’s completion in April 2016, cracks on one of the bridge’s wings were found, needing decline monitoring; iv. even though the size of the masonry channel met PNDS standards, the concrete cast channel did not; v. the built channel was not equipped with steps to slow down the flow of water accelerating damage to the channel floor; vi. the slope of the channel’s face was not tilted towards the channel; vii. the channel’s face position towards the road is higher than the road surface so that the water from the face of the road is inundated and cannot flow toward the channel; and viii. The final drainage of water at each end of the channel is discharged towards the cliff but no directional excavation was made so that the water flow spreads and further damages the cliff (PNDS, 2016).

Summed up to the findings mentioned in this section, project beneficiaries stressed that even though the selection of projects is partly done bearing in mind the amount of the grants and what can be built with the given money, the community's participation has been essential to identify the prioritized needs of the community (MdC, 2020; EB, 2020; ADC, 2020). This also matches the highly positive (more than 50% of the sampled households) assessment that Fahilebo's villagers portrayed about the community's participation. Partners also explained the success of PNDS projects due to the lack of implementation issues (apart from delays in the transportation of construction materials) and to the fact that the grant-money gets spent entirely without coming back to the central government (LDS, 2020). Finally, practitioners argued that the training that beneficiaries have received encouraged them and gave them the capabilities to run for village positions (MM, 2020).

These results were contrasted with the wide qualitative and quantitative monitoring chaired by the Asia Foundation (2017), which found that while nearly every respondent thought it could be improved, it also found that all respondents reported a positive experience out of PNDS implementation.

“Overall, responses indicate that PNDS has made a profound impact, both directly and indirectly on a number of levels in the process of delivering vital infrastructure to a local level through a community-driven development approach. The program is clearly highly popular with the community, and there was both a demand and expectation that PNDS be continued and expanded” (Asia Foundation, 2017:4)

The findings of this research also match the conclusions of the Asia Foundation regarding the challenges of PNDS implementation. As this research found, they identified the challenges to relate mainly with delays of construction materials arriving from Dili, getting the land for projects' implementation, lack of-small incentives for the size of the covered area, broadening community's attitude to voluntarism, infrequent assistance from/miscommunication with PNDS's technical team, the time-consuming bureaucracy, and the lack of active participation from all CMT members. Nonetheless, overall respondents/beneficiaries expressed satisfaction and positive experiences.

Furthermore, the mentioned positive results in PNDS' phases were matched and confirmed with the monitoring done by the Asia Foundation and the local NGOs Luta Hamutuk and

Belun which found PNDS broadly successful in its purposes (Asia Foundation, 2016). In terms of socialization and elections, they stress that PNDS succeeded in facilitating the election of competent women and men, though finding the requirement of having meetings at hamlet and village levels unworkable. Regarding the determination of priorities and planning, the organization highlights that useful projects were identified, and workable plans were built; however technical staff was difficult to contact at times. Concerning community mobilization and implementation, the groups that were formed in the socialization projects often changed to be replaced by semi-professional skilled workers. Generally, project-completion was set but community participation goals were not fully met. Finally, they stress that accountability meetings successfully took place in most villages and that maintenance proved to be the weakest link of the cycle marked by lack of clarity in terms of responsibility, resources, and staff (Asia Foundation, 2016).

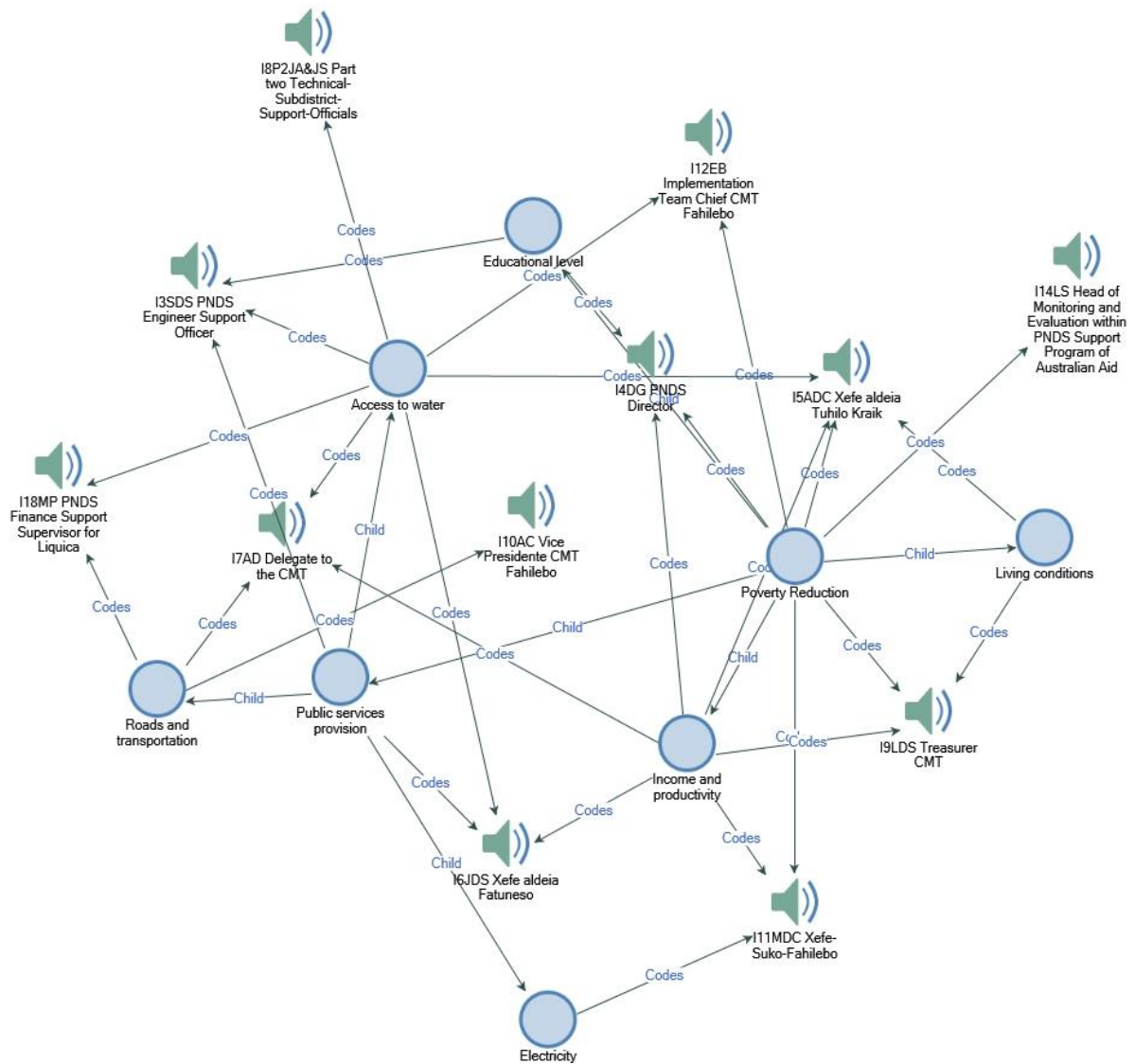
As shown by the qualitative data, PNDS learned capabilities led to enriching Fahilebo's public life as it created new leaderships. According to the Asia Foundation (2017), close to 90% of the surveyed CMT members believed that their PNDS experience gave them community support for their election in village council positions, as well as the majority of non-CMT members also argued that former CMT members had an advantage when running for election.

These findings are confirmed by the Asia Foundation (2017). In its PNDS qualitative and quantitative monitoring that found all interviewed women affirmed that their participation within PNDS' CMT increased their status and respect within their communities, being endorsed by the fact that close to 95% of respondents believed that women's involvement in PNDS improved the position of women in their communities. In addition, the respondents of the qualitative interviews stressed that PNDS implementation was very inclusive, achieving maximum representation (Asia Foundation, 2017). Thus, this research finds that PNDS has included and guaranteed women's participation between 2015 and 2020 strengthening their roles within Fahilebo's public sphere.

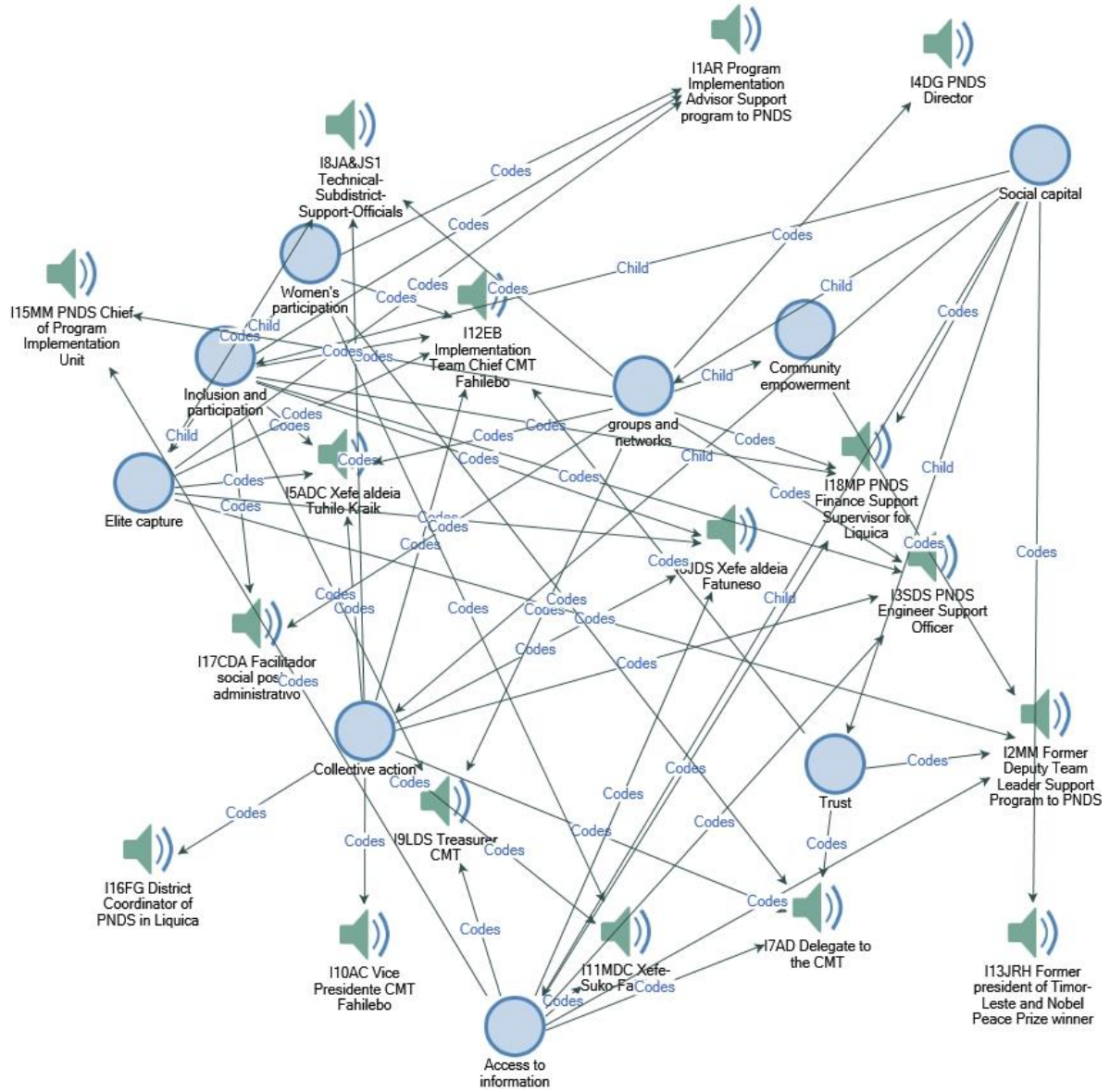
According to this research's triangulated findings, it can be concluded that the better incentives and information at the community level highlighted by the theoretical framework were proven effective in identifying the real needs of Fahilebo's population and enhance PNDS implementation. In consequence, PNDS' process (in all its phases) has had a positive effect in increasing the community's participation, enhancing Fahilebo's civic sphere, achieving community mobilization, and strengthening inclusion and women's roles at the local and national levels. Further research needs to be conducted in terms of elite capture within PNDS.

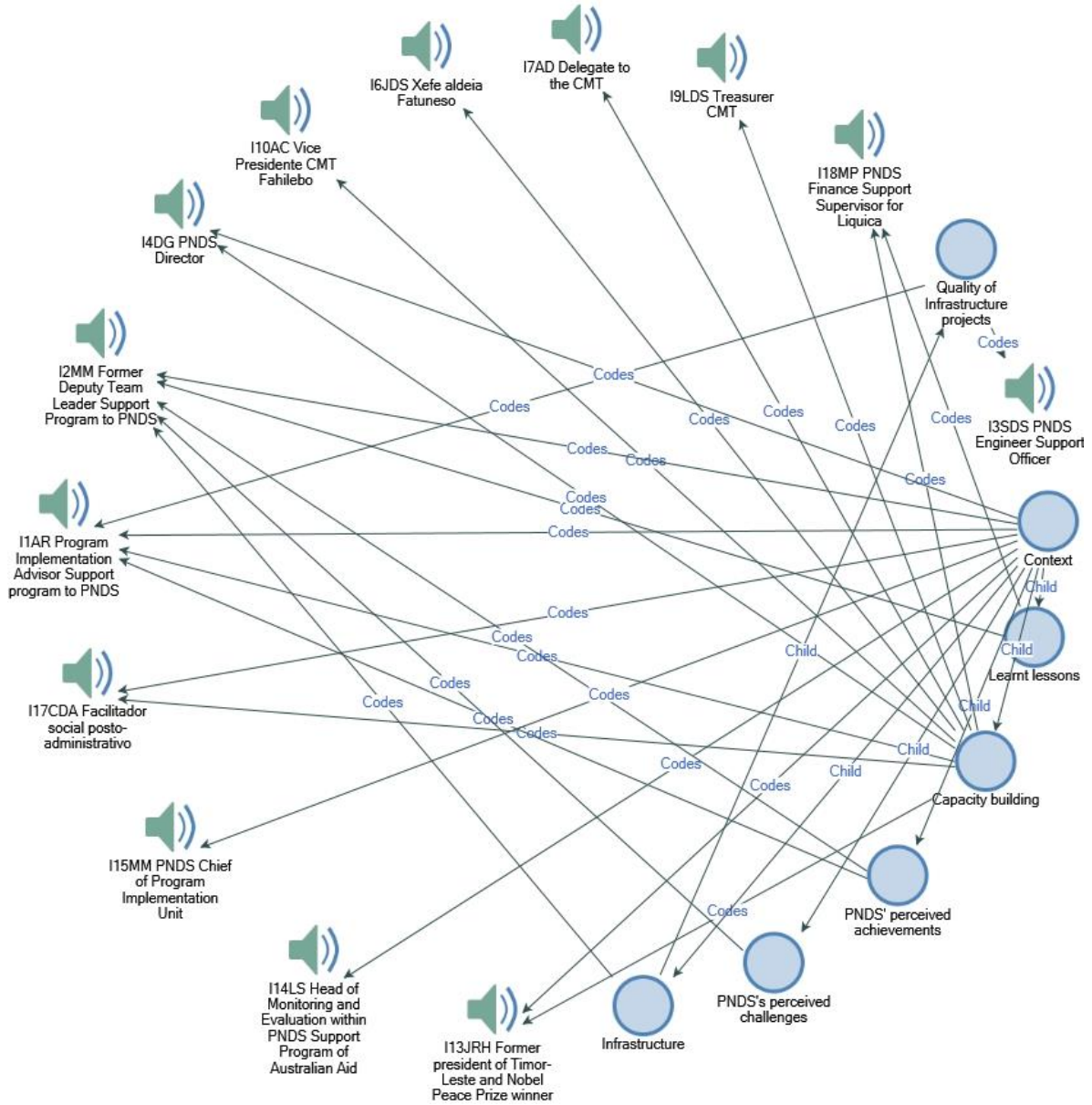
Annex 6. NVivo node illustrations

NVivo Poverty Reduction Node Illustration



NVivo Social Capital Node Illustration





Code Structure

Thesis qualitative analysis

12/05/2020 9:29 p. m.

Hierarchical Name	Nickname
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Node

Nodes

Nodes\\Context

Nodes\\Context\\Capacity building

Nodes\\Context\\Infrastructure

Nodes\\Context\\Infrastructure\\Quality of Infrastructure projects

Nodes\\Context\\Learnt lessons

Nodes\\Context\\PNDS' perceived achievements

Nodes\\Context\\PNDS's perceived challenges

Nodes\\Poverty Reduction

Nodes\\Poverty Reduction\\Educational level

Nodes\\Poverty Reduction\\Income and productivity

Nodes\\Poverty Reduction\\Living conditions

Nodes\\Poverty Reduction\\Public services provision

Nodes\\Poverty Reduction\\Public services provision\\Access to water

Nodes\\Poverty Reduction\\Public services provision\\Electricity

Nodes\\Poverty Reduction\\Public services provision\\Roads and transportation

Nodes\\Social capital

Nodes\\Social capital\\Access to information

Nodes\\Social capital\\Collective action

Nodes\\Social capital\\groups and networks

Nodes\\Social capital\\groups and networks\\Community empowerment

Nodes\\Social capital\\Inclusion and participation

Nodes\\Social capital\\Inclusion and participation\\Elite capture

Nodes\\Social capital\\Inclusion and participation\\Women's participation

Nodes\\Social capital\\Trust