Livelihood development

A practical guide to administering PIN livelihood development programs

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About the guide

This guide offers a comprehensive overview of the most typical **livelihood development** projects in which PIN is involved, both from a theoretical and practical viewpoint. This document is not full step-by-step guide on how to implement programs, but rather offers a basic introduction into the logic of various interventions. It demonstrates how, why and when certain interventions may be appropriate and when they are not.

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Chapter 1: Livelihood Development

- There is a distinction between humanitarian and development aid, which should dictate the strategy employed by NGOs, and aid agencies.
- Productive assets are those assets that can be used to produce income.
- The asset pentagon is a useful way of thinking about the capital that a person has.
- Well-designed livelihood interventions increase a person's productive assets in one or more categories of the asset pentagon.
- Poverty traps occur when individuals have very low levels of capital and must use all new income to cover their basic needs, preventing them from increasing their productive assets and sustaining higher incomes in the long term.

Reducing Poverty through Development Aid

Aid provided by non-governmental organizations (NGOs) or government agencies can generally be divided into two categories: humanitarian and development aid. The former category consists of short-term assistance given to populations that need certain goods and services, such as food and medicine for immediate consumption, for example during draughts, famines or during conflicts. Development aid, in contrast, has a longer time horizon, and properly designed development interventions address root causes of poverty, not only immediate needs. Development programs that are aimed at individuals (in contrast to programs that are focused on improving infrastructure or institutions) should address clients' long-term financial and physical well-being in a sustainable way.

Distinguishing between humanitarian and development aid is also important in evaluating the effectiveness of interventions. There may be little choice in deciding which type of humanitarian aid is necessary to prevent immediate loss of life: if people are dying of starvation after a natural disaster, the only goal is to provide food as quickly and efficiently as possible to those people who need it most. By contrast, there are many, many available options for delivering development aid. To decide which approach is best, a cost-benefit analysis of interventions is essential, as money better spent can increase future income streams. So, how do we determine which factors influence a person's ability to provide for herself and her family?

There are a number of obvious candidates: more educated individuals usually make more money, owning more tools can help a small entrepreneur and access to land is a prerequisite for farming. To this list, we might add a person's connections with family and neighbors, which allows her to access markets and provides a system of support to get her through rough times. These are examples of different types of capital: *human, physical, natural* and *social capital*, respectively. We can add *financial capital* (e.g. cash)

to this list. These are sometimes referred to collectively as the *asset pentagon* (See Figure 1.1).[1]

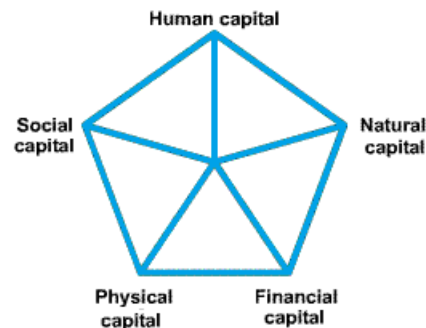

Figure 1.1

We can also dived a person's belongings into *productive* capital, or assets which are used to generate wealth, and *non-productive* capital, which individuals own and consume to increase well-being but do not generate capital. While the goal of long-term goal development aid is, in fact, to increase well-being, non-productive assets will only do so in the short-term.

Productive assets are used to generate income through income-generating activities (IGAs), which include running a small business, farming or producing goods at home as well as formal-sector employment.

In this manual, we will consider several approaches to livelihood development using this framework. Each approach is aimed at increasing at least one side of the asset pentagon, and should be assessed according to its ability to provide income-generating potential in the long-term.

Human capital

Human capital includes an individual's marketable skills and his ability to work. Formal education is often the most visible and easiest type of human capital to measure. This includes not only skills that are directly used in IGAs, but also learning how to plan ahead financially and to perform cost-benefit analyses. Vocational training programs similarly increase human capital by honing special skills that are directly linked to a particular IGA.

In addition to education, human capital includes health and nutrition, since sick and hungry individuals will be less productive. Looking at nutrition as a source of human capital means that allotment of food between household members is a strategic decision for many poor families, since it might make sense to allocate more food to individuals with a higher earning potential (see 'poverty traps', below).

Work experience also contributes to human capital as individuals "learn by doing." This effect will be very small, however, when individuals are performing tasks that require very little skill . At the same time, skills can deteriorate over time and when individuals

[1]Scoons, Ian (1998). "Sustainable Rural Livelihoods: A. Framework for Analysis," IDS Working Paper 72, Institute of Development Studies.

become older, their ability to work declines. This dynamic characteristic of human capital over a person's lifetime plays a large role in combating poverty, and explains why younger and older populations are particular vulnerable.

Physical capital

Physical capital includes the tools and supplies that are needed to produce goods or services to sell. A woman who cooks and sells food on the street, for example, will typically need a pan for cooking, a small charcoal stove to heat it and ingredients. All of these things count towards physical capital. We can further divide these into two categories: fixed and current assets. The former are items that the person or business owns for a longer period of time (like the pan and stove). The value of these items depreciates with time, but in the short-run, it is a sunk cost. Current assets—the ingredients in this case—need to be purchased more frequently and are used up in the production process.

Social capital

Economic transactions involve more than purely tangible incentives, and attitudes towards the well-being of others and willingness to follow social norms play a large role. In developing contexts, when formal institutions are weak— enforcing contracts through the legal system, for example, may be impossible—social capital plays a large role.

There are situations in which potential economic gains are left on the table because one party cannot reliably ensure that the other does what she has agreed to do. Imagine a group of farmers from a village who need to transport their produce to market in order to sell it. The main cost in doing so is transportation and if the group takes turns bringing the goods to town and split the cost of the journey, all will be better off. However, they need to trust that whoever sells the crops will be honest about the price she receives, since she could easily lie and say she received a lower price and pocket the difference. If the group does not sufficiently trust one another, the potential gains from cooperation may be lost. Increased social capital—trust in this case—can increase productivity by allowing people take advantage of these opportunities for cooperation.

Social networks also play a bigger role in providing security in markets with little access to formal insurance. Extended families and neighbors might step in and provide financial support, food or childcare in case an adult in a family falls ill. While this is the case in developed countries as well, it may mean the difference between life and death for poor families without other means of support.

Migrant populations may have diminished social networks and thus may have less social capital. Certain groups might face discrimination and therefore have a harder time engaging in business. Development programs can address these problems by encouraging the formation of social capital by creating networks of relationships and strengthening community ties.

Natural Capital

In poor rural areas, land is usually a household's major form of capital. Even though the area of land that a person owns remains fixed, its productive potential is affected by the

environment and how resources are managed, soil nutrients, for example, are affected by crop rotation.

Ownership of natural capital is often legally precarious in developing countries, as villagers often have hereditary claims to land that are acknowledged by the community but difficult to transfer, use as collateral or defend in court if disputes arise.

Access to public land is also an important source of natural capital. In many poor countries, micro-entrepreneurs collect firewood or use wood from forests to make charcoal, collect products from public forests to sell, or graze livestock in public grasslands. Therefore, institutions that properly manage access public lands will affect the level of natural capital that people in the area have.

Water for irrigating crops can also be classified natural capital. Water management is a universally complicated issue which can have life-or-death implications for those who depend on growing food for subsistence.

Financial Capital

The value of money is obviously in its ability to procure other forms of assets. In developed markets, financial capital can be invested through financial intermediaries to generate income. With less developed financial markets, this is not possible, but financial capital allows individuals to save and borrow, to purchase physical capital, to pay for schooling (increasing human capital) and serves other functions important for income generation.

Complementarities

When it comes to productive assets, the whole is greater than the sum of the parts. When two assets are more useful—or only useful—together, they are said to be *complementary*. This is often the case with the capital necessary for IGAs. For example, if someone receives vocational carpentry training (human capital), this skill is unusable without tools and wood (physical capital), and *vice versa.* Failing to account for complementarities by focusing too heavily on one type of capital can be wasteful or even counterproductive. Thus, when evaluating a development program, it is important to consider not only the effects of the intervention on each dimension of the asset pentagon individually, but also to take into account complementarities between the different types of capital.

Poverty traps

The proverb goes that "if you give a man a fish, he eats for a day, but if you teach him to fish, he will eat for a lifetime." Viewed through the lens of the asset pentagon, "teaching a man to fish" is *human capital* development. We have considered livelihood development programs as ways of increasing human capital along with other types of productive capital, such as *physical capital*—the fishing rod and reel in this example—and access to *natural capital*—the river and the fish in it. In other words, increasing a person's level of *productive assets* allows him to generate more income in the future.

The "teach-a-man-to-fish" approach to poverty reduction is certainly a more sustainable approach than providing short-term assistance that improves well-being in the present but has no effect in the long term. However, in some cases, increasing well-being in the

short term is essential. Food is usually not considered to be a productive asset, but if they don't have enough of it, they won't be able to work effectively. This means that teaching a man to fish and giving him materials to do so is futile if he is too hungry to work. The same goes for other basic necessities like housing, clothing and health care (all of which affect a person's level of human capital). As long as basic needs are not being met, all fish caught will go towards these basic items, and all fish will either be consumed or sold to buy essential goods. This means that the individual will not be able to grow his business by saving money and investing it until his income exceeds the cost of meeting his basic needs.

To give another example, consider a woman who makes a living by selling vegetables on the street. Each morning she goes to a trader who gives her the vegetables on credit; at the end of the day she must return and pay him back with interest. Since she makes just enough money to meet her basic needs (food, clothes etc…), she cannot save money and invest it into the business by, say, buying vegetables in bulk at a lower price or paying for them in the morning to save money on interest. Any extra money she receives goes towards meeting basic needs as long as her total income is below a certain level. If she received a small cash or in-kind grant, this would also be used for food or other necessities. It might improve her well-being in the short-term, but it does nothing towards changing her long-term situation. However, if the cash grant were enough to cover basic needs for some period of time, then she could begin to accumulate capital from her business, which could be used to buy vegetables more cheaply. After crossing the threshold where she makes more money than it costs to survive, she can continually re-invest part of her profit into her business, which means her income will continue to increase with time. As long as her income stays at or below the costs of meeting basic needs, her income stagnates.

The term 'poverty trap' describes such a situation in which a person cannot raise herself out of poverty her level of assets is below a certain level, and all new income just goes towards meeting basic needs. She will not be able to accumulate capital to provide for a sustainable increase in income over the long term.[2]

Based on this logic, it might make sense to simply give certain poor individuals consumption goods through direct transfers (either conditional or unconditional) to move them past the threshold of income level at which all new capital is used to meet basic needs. After basic needs are met, they will have the ability to use new income to invest in IGAs.

[2] The term 'poverty trap' has been used both to describe the difficulty of households in accumulating wealth when they begin below a certain level, as well as on the macro scale to describe poor countries' difficulty in achieving growth from a low staring point.

Chapter 2: Microfinance

- It is more difficult for poor individuals to access cheap credit and reliable savings.
- In the absence of formal banking services, traditional credit arrangements are common.
- Microcredit is a very influential innovation that has helped banks to make small loans to clients in poor countries in a mutually beneficial way, however microcredit is not appropriate for everyone.
- More recent microfinance innovations have helped to meet more diverse financial needs of clients.

Saving and Borrowing in Poor Communities

Microfinance encompasses a variety of banking services that are offered to poor clients who might otherwise have trouble saving or borrowing. The most widely practiced form of microfinance is microcredit, which was made famous by Muhammad Yunus and the Grameen bank in Bangladesh who initially made loans to small groups of women. Today there are many microfinance institutions (MFIs) around the world that have adopted a diverse set of strategies in order to provide banking services to the poor. There have also been many studies evaluating the effectiveness of various approaches, providing a deeper understanding of the mechanisms at work.[3] Here, we review a few approaches to microfinance and very briefly cover some of relevant the theory and practical issues.

Access to credit and savings are important for a couple of reasons.

- It allows entrepreneurs to purchase expensive items that require income from an extended period of time. While saving and borrowing might seem to be opposite activities, they both fulfill this purpose. A person can "save up" to buy a big-ticket item by putting away money and buying it at the end of the period. Alternatively, the purchase can be financed by "saving down": the item can be purchased with borrowed money at the beginning of the period then part of future income is saved to pay off the loan.[4] In the latter case, the borrower has the benefit of owning the item for a longer time, but will usually have to pay interest on the loan. Which option is optimal depends on the interest rate of the loan compared to the income generating potential of the purchase.[5]

- Another important function of saving and borrowing is insurance against unpredictable events. Having extra savings or the ability to borrow can provide

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[3] See Bauchet et al (2011) for a review of microfinance evaluations: Bauchet, J., Marshall, C., Starita, L., Thomas, J., and Yalouris, A. 2012. "Latest findings from randomized evaluations of microfinance.: Report 2. Access to Finance Forum, CGAP, Washington, DC, 2012. (http://www.microfinancegateway.org/gm/document-1.9.55766/FORUM2.pdf)

[4] Rutherford, Stuart. 1999. *The Poor and Their Money*. Oxford: Oxford University Press. (As cited in Bauchet et al 2011).

[5] It can also make sense to finance consumption by borrowing if the extra enjoyment the individual receives from having the goods for a longer time is greater than the interest paid on the loan. Since people usually value consumption in the present more than the in the future, this also affects the decision.

security in case someone from the household falls ill, a natural disaster strikes or business slows down.

- Both savings and borrowing allow households to smooth consumption over time—in other words to eat the same amount of food, buy the same amount of goods etc... whether they have higher or lower incomes than average. This might be done to compensate for higher seasonal income, or to "smooth out" consumption over an individual's life cycle. For example, given sufficient access to credit, a person might borrow when they are young, to finance education and start a family, then pay back those loans and start saving when in middle age, then use up those savings when they are older and have retired.[6]

While NGOs promoting saving and borrowing as part of livelihood development programs emphasize the purchase of productive assets, saving and borrowing also serve a legitimate function in financing the purchase of non-productive assets. Just as entrepreneurs might save up (or down) to buy equipment for their business, a family might save up for spending for a holiday or festival. While the argument can be made that this is not the best way for a household to spend its money, such events can be important for building social capital.

Banking services for poor individuals are difficult to provide for three main reasons.

1. Loans in small amounts may simply be too expensive for banks to process compared to the potential profit that may be charged through interest. This extends to savings as well, as the banks may need to charge administrative fees that are prohibitively expensive for many would-be clients.

2. It is difficult for poor households to provide collateral to guarantee loans. Even if they do have a house or land that could potentially be used to guarantee the loan, they might not have official ownership rights to the property and with a weak legal system, it may not be feasible for the bank to seize the property if the borrower defaults on the loan.

3. It is difficult for banks to acquire the necessary information to assess the riskiness of loans to poor borrowers, since they rarely have records proving reliable income and borrowing history. When the bank cannot distinguish between safe and risky borrowers, everyone will pay the same interest rate, which will be relatively high and relatively low for safe and risky borrowers, respectively. Since this makes loans more attractive for risky borrowers, more of them apply for loans. This creates a vicious cycle that drives up interest rates and prevents some potential entrepreneurs from getting loans.

Microfinance practices can mitigate these problems and make it easier for formal institutions to give loans to poor individuals.

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[6] deAghion, Beatriz Armendariz and Jonathan Morduch. 2005. *Economics of Microfinance,* Cambridge, MA: The MIT Press, pp.164-166.

In the absence of banking services, the poor often turn to other sources of credit. In the worst case, predatory moneylenders give out loans to individuals in need and charge them very high interest rates. Credit may also be interlinked to other markets when shop owners, employers or landlords make loans to their customers, employees or tenants. The loan or repayment will often be in-kind, with labor or assets used as collateral or as interest—especially in Muslim cultures where charging interest is taboo. A landlord, for example, might make a loan (in cash) to tenants. If the tenants are unable to pay, the landlord might have them work off the loan and use their rights to continue living in their home as collateral.[7] Traditional group credit arrangements can provide a cheaper source of financial capital than opportunistic loans.

Traditional credit and insurance arrangements

Rotating Savings and Credit Associations (ROSCAs) are a nearly universal institution in the developing world that allow members to save for large purchases without access to banks or any accounting skills and a precursor to formal MFIs.[8] ROSCAs are simple group arrangements in which each member brings a set amount of money to meetings. Members are ordered from first to last (usually by lottery), and at each session, the chosen member receives all of the contributions. The ROSCA will meet exactly as many times as there are members in the group, so that each person gets one large, lump-sum payment once. Over the life cycle of the ROSCA everyone contributes exactly this amount.

For example, twenty members might bring $1 each week to the ROSCA meeting for twenty weeks. Each week, one person, chosen at random, gets the whole pot of $20. Each member contributes exactly $20 over the time period, so there are no debts at the end of the cycle. This arrangement allows members to purchase large items without the risk of keeping cash in their homes and the frequent payments make it easier to resist the temptation to spend money on consumption.

A related institution is the Accumulated Savings and Credit Association (ASCA), in which members contribute a fixed sum at meetings and these funds are then lent to members who request loans (usually with interest). ASCAs have the advantage of being more flexible than ROSCAs. Members who wish to save for a longer period can do so and members who have a greater need for financial capital in the short run can borrow. The drawback, when compared to a ROSCA, is that ASCAs require accounting skills and a place to store money when it is not being loaned out.[9]

Since ROSCA members can derail the process by not showing up to contribute after they have had their turn to receive the pot, and members who take out loans from ASCAs can default, both require trust between members. One way in which cooperation is maintained is through repetition: if someone defaults on a loan or drops out of a ROSCA early, they can be excluded from further interactions with the group.[10]

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[7] Ray, Debraj *Development Economics,* Princeton University press,p.561
[8]Aghion and Murdoch p.58
[9]Ibid, pp.69-69.
[10] Ibid.

The same principle can be used to provide a crude form of life insurance, through arrangements called burial societies. Whenever a member of a household in a burial society dies, everyone from the group pays a small, fixed amount, and the combined funds pay for the funeral for the deceased person.

- When designing programs that expand access to credit, be aware of what options for credit are currently available, including ROSCAs and ASCAs.

Microcredit

Microcredit is the type of microfinance that has received the most attention since it was developed in the 1970's by the Grameen bank in Bangledesh. Under the Grameen model, loans are made to small groups of women, who are jointly liable for paying back the borrowed money. The loans are made sequentially, and if one woman doesn't pay back the money, then others in the group are responsible for doing so before anyone else from the group can borrow. Today, there are many variations on this basic model of lending. The focus is usually on women, since women have been found to have a lower rate of default, work better in groups and are more likely to spend money they make from subsequent income generating activities on their children.

Group lending operates on a few different levels. Firstly, when groups form, potential members usually know one another and are able to assess the riskiness of potential borrowers much better than a bank would be able to do so (see point 3 in the introduction to this section). This usually means that safe borrowers will wish to form groups with other safe borrowers, forcing risky borrowers to form groups of their own. This will prevent the riskiest borrowers from taking loans at all, since no one will allow them in their group. It also means that risky borrowers will pay more on average, since they will be forced to pay back loans for their riskier group members.

Since group members are usually from the same community, this arrangement also allows for better monitoring. This leads to very high repayment rates, which makes it possible for banks to make profitable loans to poor people at reasonable interest rates.

Group lending has some downsides, though. Potentially profitable clients might be discouraged from joining if they are forced to take on risk from other clients. Furthermore, group meetings are time consuming.

Individual or joint liability?

In an experiment run with lending centers in the Philippines, Xavier Gine and Dean Karlan (2006) find that repayment rates for lending centers that were converted from group liability (everyone in the group is responsible for paying back the loan) to individual liability (each person is only responsible for the money that she personally borrows) did not have lower repayment rates, which suggests that joint liability is not the primary mechanism through which group lending actually works. It may be the case, however, that meeting in groups does, in fact, play an essential role. Group meetings

may increase change behavior by helping members to control temptation[11] and increasing social capital between members.[12]

While microcredit is certainly one of the most innovative approaches to combating poverty in the past few decades, a degree of caution is necessary. Borrowing can be very productive for some clients, but it requires that they are able to make good use of the money (there is a complementarily with human capital). Banerjee et al (2010), in a study of microfinance in India, find that microfinance does indeed lead to increased profits for certain types of clients: those who already own small businesses or are likely to start them. For other clients who are not likely to start businesses, borrowed funds are more likely to be used on consumption than invested in income generating activities.

One of the attractive features of microfinance is that it pays for itself. However, as development economist Jonathan Morduch points out, when discussing whether loans should pay for themselves or be subsidized, free isn't always better:

> *"When diners go to a restaurant, they have the option of drinking water or purchasing a beverage. The water is free and adequate, but most diners also buy wine, beer, or soft drinks to complement their meal. To them, the zero-cost option is not always the one that leads to the greatest satisfaction, and the same logic holds here. When funding is available, subsidizing credit beats the zero-cost option as long as benefits outweigh costs."*[13]

We can apply the same logic to microcredit in general. It's great that micro-finance can help people while and costs little. Loans may make sense in some cases, but are not a solution for all individuals, and may only work in conjunction with human capital investment.

Microsavings

While microfinance has been centered on loans for most of its history, some more recent innovations have made it easier for the poor to save. Both saving and borrowing serve a similar purpose in financing large purchases, whether it be for large consumption items or for productive assets.

Ideally, households seek to keep their consumption steady over time. That means that in times when income is higher than normal, it makes sense to save, and when income is lower, one can either dip into savings or even borrow money.

Microsavings schemes might simply provide an easy way for low-income individuals to put their money in banks. This is often difficult for poor individuals because the costs of opening a bank account are too high to make it worthwhile.

There are several problems with the alternative, simply leaving money at home:

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[11] Bauer, Michal; Julie Chytilova and Jonathan Murdoch. 2012. "Behavioral Foundations of Microcredit: Experimental and Survey Evidence from Rural India," *American Economic Review*, 102(2): 1118-1139.

[12] Feigenberg, Benjamin; Erica Field and Rohini Pande. 2011. "Does Group Lending Increase Social Capital? Evidence from a Field Experiment in India" Mimeo, February 2011. (http://www.economics.harvard.edu/faculty/field/files/Social_Capital_feb10_ef_rp.pdf)

[13] Murdoch, Jonathan. 2000. "The Microfinance Schism," *World Development,* 28(4), pp.617-629.

- When inflation is high, the value of the money decreases with time if the money is not earning interest.
- Leaving money at home increases the chances that household members well give into temptation and spend the money. This is particularly problematic for women who have little power to stop their husbands for spending money on temptation goods.
- Family members and other members of the community often depend on one another for insurance in times of need. This can be a useful institution when formal insurance is not available, however, it can also make saving money riskier, since there is a chance that money will end up used for other people in the community.[14]

Micro-savings interventions might directly intermediate between clients and banks, they might facilitate savings group similar to traditional arrangements like ROSCAs or ASCAs, or fund the creation and training of Self-Help Groups, in which women work together to pool savings, which are deposited in a joint bank account, and may be loaned to group members or used as social insurance for the group.

PIN Self help groups in Ethiopia

PIN funds self-help groups in Ethiopia, which are essentially ASCAs that include human-capital development and social support for members. Self-help groups started as a grass-roots approach to securing microcredit loans for women living in India and Bangladesh, but African SHGs have mostly concentrated on savings generated by members. Self-help groups receive small business and financial planning training.[15] The groups often use a portion their funds as an insurance mechanism to pay for health care or costs associated with the death of a family member and group meetings serve as a platform for discussing financial and social problems. While they receive training from the NGO, they do not receive any direct financial support and are designed to eventually operate self-sufficiently without any outside support at all.

A survey of self-help groups funded by PIN carried out by one of the authors in November 2012 demonstrated that members who borrowed money from their groups were more likely to run small businesses and be engaged in the labor market.[16] Around a third of the members, however, were not engaged in any IGAs at all. These members used the SHG as a safe method of saving money to smooth consumption or finance large purchases.

[14]Aghion and Murdoch p.59-60
[15] See the Self-Help Group Approach manual developed by Kindernothilfe: http://www.self-help-approach.com/doc/SHG_Manual.pdf
[16] See the evaluation report Analysis of the Self-Help Group Approach in Ethiopia: Results from Qualitative Evaluation. Levely, Ian. 2013.

One of the main lessons from this study is that financial needs of women in the groups differed, even though the groups had been created to be as homogenous as possible. This lesson applies generally to all microfinance interventions. [17]

Community self-finance schemes that build on traditional ROSCAs are becoming more wide-spread and are advantageous in their ability to provide both cheap credit and secure savings in a way that is both flexible and sustainable.[18]

Key reading

Aghion,Morduch (2005). Economics of Microfinance.The MIT Press. Cambridge, MA.

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[17] See Banerjee, Abhijit; Esther Duflo; Rachel Glennerster and Cynthia Kinnan, 2010. "The Miracle of Microfinance? Evidence from a Randomized Evaluation," MIT working paper, June 2010.

[18] For example, Oxfam is running a similar scheme in Mali: http://www.oxfamamerica.org/articles/issues/community-finance/background

Appendix to Chapter 2: Information Asymmetry

Information asymmetry occurs when one party to a financial transaction has information about their own risks that the other party does not. For example, a small businessperson knows more about the likely success or failure of her project than does the bank giving the loan. This is a problem present in financial markets in the developed world as well, but is particularly problematic in settings with weak formal institutions. Banks in Europe, for example, can view clients' credit history, which includes previous loans, employment history and outstanding debt. With more information on borrowers, loans can be tailored to match the perceived riskiness of each individual client, with less reliable clients paying higher interest to cover the greater risk of default. Such records are rarely accessible in developing countries however.

In the absence of information on the riskiness of clients, bank charges everyone the same interest rate, based on the average default rate of the population as a whole. This rate will be higher than what the bank would ideally charge low-risk clients, but lower than what it would ideally charge high-risk clients.

The real problem lies in the asymmetric part of information asymmetry: when borrowers have information about themselves that the bank does not. For risky borrowers who know they are less likely to pay back the loan, this makes the loan a more attractive deal, but a worse offer for safe borrowers. The result is a vicious cycle in which more risky borrowers apply for loans than safe ones, which leads to more defaults and thus higher and higher interest rates and subsequently even riskier borrowers. This problem is called *adverse selection*.

Another type of information asymmetry occurs when the bank cannot determine with certainty whether a business venture has been successful or not and does not know whether a borrower is able pay back the loan. This makes it possible for *all* borrowers, both successful and not, to claim that they are unable to pay back the loan. The effect is higher interest rates for everyone. Similarly, when the bank is unable to observe which clients are using loans effectively to grow their business and which clients use the money for other purposes, this lowers all borrowers' incentive to put effort the business venture. This is called *Moral Hazard.*

Chapter 3: Active Labor Market Policies

- Formal and informational education programs that teach numeracy and literacy increase earning potential for micro-entrepreneurs and laborers.
- Vocational programs are a common type of intervention that target job skills for specific types of work.
- Cash for Work (CFW) is most often a humanitarian intervention, in which cash is quickly injected into an economy affected by some shock, through paying target populations for construction or reconstruction of damaged infrastructure.
- The approach is suitable in cases when the community would not be able to overcome the consequences of the shock by its own means, otherwise dependency on assistance money may arise.
- CFW will not target the most vulnerable, who may not be able to engage in manual labor.

Education and Training

Schooling is the most basic way in which human capital is increased. Even for manual labor, numeracy and literacy are extremely important. For example, micro-entrepreneurs who do not know how to keep proper records will be unable to identify which income generating activities are most profitable. Literacy has broad implications for economic as well as political engagement.

This leads to the obvious conclusion that money invested in education is well spent. As far as livelihood development for adults already past school age, literacy and numeracy are typically treated as crosscutting issues and programs focus on developing a specific skill set that can be applied to a particular income-generating activity. Such vocational training programs might resemble formal, classroom education, or may consist of seminars given to members of microfinance or self-help groups. Apprenticeship programs pair trainees with more someone with more someone with more experience in the field so that the beginner can 'learn by doing'.

While vocational training has been a popular approach in both developed and developing countries alike, results have been mixed.[19] There are a couple of common pitfalls that explain many of failures.

Firstly, vocational training programs should prepare participants for jobs that actually exist. If macro-economic conditions are such that finding employment in, say, construction is extremely difficult, then training carpenters is unlikely to have a significant effect. This can be particularly problematic when vocational training is offered based on the demands of participants. While it is ideally preferable to train individuals for the career that they wish to enter, expectations can be unrealistic. If it is

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[19]See Betcherman, Gordon; Martin Godfrey; Susana Puerto; Friederike Rother and Antoneta Stavreska. 2007. "A Review of Interventions to Support Young Workers: Findings of the Youth Employment Inventory," The World Bank, Social Protection Unit, Discussion Paper No. 0715

a large scale program, then the market can be flooded with new trainees, which drives down wages for both the new entrants and those already the profession.

Secondly, complementarities with all types of capital from the asset pentagon affect the success of vocational training. This includes existing human capital: material taught in the training may depend on previously acquired knowledge or skills. Particularly when the goal is to prepare students to begin their own small businesses, fixed and current assets might be necessary to make use of the skills developed through the program. Again, taking the example of carpentry, graduates of the training program will typically need to be provided with tools and possible materials or cash for procuring materials in order to make be successful.

A potential problem with this last approach—providing training along with physical or financial capital—is that it can attract individuals who have no intention of entering the market, but rather are plan on selling the tools or taking the cash for some other purpose.

Education programs take up substantially more of participants' time, and this should be included in the cost-benefit analysis. The value of the intervention is equal to the present value[20] of the difference between future income with and without the training (i.e. the effect of the program), minus the cost of the training (the cost that an NGO or government agency pays in the case of a livelihood development intervention), minus the income that would have been made during the time the individual was completing the training.

Changing professions can have effects on families and communities that go beyond income. If individuals are trained for a skill that is more profitable in another area, vocational training programs will encourage migration. Carpenters may find it more profitable to migrate to larger towns or cities were returns to their human capital will be greater. While this does not necessarily outweigh the economic gain from higher income, it is necessary to take potential social effects, such as this into consideration when designing a program.

Cash for Work

Cash for Work (CFW) programs are usually implemented in post-conflict or disaster-affected areas with the intention of quickly pumping cash into the economy, as well as improving infrastructure such as roads, irrigation systems, farmland terraces, flood or landslide barriers, or forest management. We cover CFWs here because this is a common approach used by PIN, and because CFW programs have an effect on individuals' livelihoods. In the terminology of the asset pentagon, CFW programs help to increase the of individuals' financial capital, and possibly increase human capital as well if workers gain experience by working. This is in addition to the benefits to enjoyed by the community as a whole. However, in some cases, CFW programs can negatively affect social capital if the project is poorly planned.

[20] Present value discounts future income to account for the interest that could be made if that person invested the money elsewhere.

The main benefit of direct cash transfer is the freedom it gives to beneficiaries to use the money for their most pressing needs with little paternalism involved – i.e. it is not the NGO that decides what is the need of that particular individual, rather it is the individual herself. Another advantage of CFW interventions is that it can be implemented far more quickly and with fewer delays than work for food or other in-kind distribution schemes.

While, cash for work was originally introduced as a supplementary to in-kind distribution, it has gained popularity because it allows for more flexibility for beneficiaries. For example, some assets donated to beneficiaries have been sold (below the purchasing prices) to get money for more pressing needs such as healthcare related costs or debt repayment. In other words, cash is more efficient because beneficiaries know better than donors what they need.

The main benefits of CFW are the following:

- *CFW is quick to implement.*
- *CFW is easily administered.*
- *CFW may help to prevent indebtedness or reduce debt burden.* Participants in CFW are regularly paid and hence have no pressing need to borrow money for purchase of necessities after a disaster. This helps them to overcome a typical problem of indebtedness that may arise in such situation.

Yet you should not forget about the possible negative side of CFW. These are the issues that need to be taken into account and dealt with for successful CFW programming:

- *There is scope for corruption.* Unless you introduce a proper monitoring system, the money that is distributed may easily be stolen or the intended project may not be finished as planned. The corruption may be prevented by:
    1. Selecting a project that is in general interest of the entire community – this should result in higher workers' effort and possible willingness of communal punishment for shirking.
    2. Increased awareness of workers and community leaders about the conditions of the program.
    3. Frequent visits to the working areas and anonymous interviews with the workers.

- *CFW might create dependency or mismatched expectations.* You need to be very careful in explaining the communities that the assistance you provide will not be available forever and that it will not be repeated regularly. Once you create expectations of delivering the same program, say, every year during the lean season, the community might soon lose its traditional coping mechanisms that may be very hard to recover.
- *CFW might crowd out other work opportunities if poorly timed.* Imagine that you plan a CFW after spring floods in a rural mountainous area. The timing of your CFW coincides with the time of sowing which requires casual labor. Especially if the wage of the CFW is above the price paid by the landlords, the landlords may experience a shortage of labor-force. Your project would not only result in the area being less food security, but would also be wasteful, as the beneficiaries

could have worked on the field instead and the CFW could have been introduced in a time when there is shortage of jobs.

- *CFW intervention is unable to provide aid to the most vulnerable.* The elderly, the injured or the disabled are unable to work. You should consider alternative solutions such as unconditional cash transfers for this part of the population.
- *CFW may entice people way from their livelihood activities unless wages are reasonably set.*In order to minimize market distortion you need to make sure that the wage rates for unskilled labor are lower than the regular market rates. This is important as you want to attract the poorest and most disadvantaged individuals who do not have alternative coping strategies. A general rule is 10%-20% lower than the regular market rate.

In some contexts, the payment may be delivered to individual workers using mobile electronic payment systems such as mPesa or mPaisa. This system of payment mitigates the risk of theft and also reduces the security risk to the staff that would otherwise have to transport substantial amounts of cash into the field.

Key reading

A complex manual for CFW programming can be found here:

Mercy Corps (2007): Guide to Cash-for-Work Programming, available online at http://reliefweb.int/report/world/guide-cash-work-programming.

The guide provides hints on the determining the appropriateness of a CFW intervention in a particular situation, entire project management, including sample implementation plans and plans for termination of a CFW, plus it also provides you with sample documents for monitoring, questionnaires and more.

Chapter 4: Agriculture

- Farmer Field Schools are a special kind of vocational training aimed at improvement of agricultural techniques using experimental demonstration plots.
- The main benefit of FFS approach is the spillover of knowledge on the entire community, which is expected to learn from direct beneficiaries.
- The activities taught during the course should be tailor-made for each community in terms of availability and accessibility of necessary productive assets even when the project is finished. This might be trickier than it seems.
- Selection of a proper IGA for a particular area and of proper beneficiaries. Farmer's cooperatives facilitate social cohesion and build trust necessary for small-scale cooperation which can benefit communities in rural areas.

Farmer field schools

A Farmer Field School (FFS) is a training program provided to groups of farmers with an aim to improve the quality of agriculture in the targeted area, be it due to increased productivity, use of improved techniques, reduced environmental harm or other issues related to agriculture.

A group of farmers selected from targeted communities are trained through an agricultural cycle in using of different farming methods on an demonstration plot. An NGO-trained community facilitator teaches classes every week. The facilitator also receives thorough guidance from agricultural specialists who are responsible for coordinating multiple FFSs at once. Since the approach is simply a special kind of vocational training, similar to other types of human capital development discussed in Chapter 3.

To show the differences in agricultural output given different methods (e.g. fertilizer, plowing, weeding etc.), the group might establish multiple fields next to each other to allow for harvest comparison. Also, new plants may be introduced in the area for testing.

Training is related to the seasonal cycle of the practice being investigated such as land preparation, cropping, harvesting, post-harvest conservation, storage and so on.

Operating one FFS may cost from $150 to $1300 per year excluding the training of the facilitators. It is difficult to say if this approach is cost effective and as we will discuss later, this is a missing piece of evidence that might be provided by conducting an impact evaluations and proper cost/benefits analysis comparing this approach to other methods of improvement of agricultural techniques in rural areas.[21]

In terms of the asset pentagon terminology, FFSs mainly enhance the human capital of the trained farmers and possibly, through spillover effects, of the entire community as

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[21] Braun, Jiggins, Röling, van den Berg, Snijders (2006). A Global Survey and Review of Farmer Field School Experiences. ILRI report.

we will show later. The project, however, requires an initial endowment of physical, financial and natural capital. If these are lacking, the project may not be sustainable, as we will also discuss. The requirements in term of human capital are very low; hence, the project is suitable also for uneducated individuals.

- *Where?* FFSs are very popular in many countries, mainly in Africa and Asia. The approach, however, is suitable for any region with low levels of education and high reliance of the population on agricultural output.
- *When?* The project should begin with trained facilitators ready to begin instruction in communities when crops are sown. At the same time the groups need to be selected, experimental plot has to be available and the necessary tools, seeds and teaching materials have to be distributed in the communities. The project usually lasts for one agricultural season.
- *How?* It is crucial to have a very good understanding of commonly used agricultural techniques in the area so that the farmers will learn techniques not already in practice The training should be applicable in the local setting and the technology used should be locally available and not prohibitively expensive. A quality *baseline study* is an important prerequisite for the successful implementation of the project.
- *Who?* The FFS approach is not only beneficial for direct participants, but also heavily relies on possible spillover effects on the entire community. As such, the participants should be respected members of the community, so that others will be willing to learn adopt the new methods they use. It is also worth mentioning, that the target beneficiaries should not be landless or *too* poor–in both cases, individuals will lack the necessary capital (either land, money for seeds or tools) to make use of the training provided. You should reflect this when selecting beneficiaries – even if you let the communities decide, you may still have some say.

There is very little evidence on the long-term impacts of FFSs on agricultural output. This is due to lack of quality data that do not allow for a proper impact evaluation of the projects and hence the results of various attempts that aim to evaluate the project fail to deliver clear results.

Are FFSs effective? There is some evidence of longer-term improvement in agricultural output, but rather limited to a population of middle-income farmers. The effect is most significant for women from this category. Interestingly, the effect of the program on the poorest farmers is sometimes found to be even negative. The reason might be that the poorest overspend on tools, which might be inefficient for their small plots: remember that a bag of fertilizer is usually sold in a bag of 50kg and is not divisible, unless a group of farmers decides to share it. Also, the quality of the land of the poorer is usually of lower quality. You should take all these factors into account when designing the program. The baseline survey should help you in recognizing these possible caveats.[22]

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[22]van den Berg (2004). IPM Farmer Field Schools: A synthesis of 25 impact evaluations. IPM Global.
Davis et al. (2010). Impact of Farmer Field Schools on Agricultural Productivity and Poverty in East Africa.IFPRI Discussion paper no. 992.

There are a few more things which should be taken into account when setting up a FFS project:

Timing is crucial: A FFS must start with the beginning of an agricultural season and last at least until the harvest. In case of drought or other natural catastrophe, one cannot expect the results to materialize and if funds allow, the course should be repeated.

Techniques presented need to be in accord with local needs: There might not be a one-size-fits-all approach. Especially in larger scale interventions across diverse areas, local training might concentrate on techniques for planting the main crops grown in each area, or different methods of farming used (e.g. rice vs. maize or river basin vs. dry mountainous regions). You should take this into account when conducting a baseline survey and design the intervention accordingly.

Tools and seeds that are used during the course need to be available locally and at affordable prices: Unless this is the case, the farmers are unlikely to continue using these tools in the future, and any benefits from the program will not be sustained in the long-term.

Why do farmers not use fertilizers?

Esther Duflo and coauthors find that farmers, despite being shown all the benefits of fertilizers using an experimental teaching approach typical for a FFS, still did not use fertilizer in the following years.[23] This is puzzling since farmers clearly understood and had seen the benefits of fertilizer use.

A follow-up study found that the main reason preventing fertilizer use is that farmers typically spend all of the money they earn from the year's harvest before the beginning of the next sowing season. The researchers came up with the idea of providing vouchers for the delivery of fertilizer for the next agricultural season, which could be bought by the farmers at the time when they have money— at harvest time They found that farmers were much more likely to purchase the vouchers than the fertilizer directly.[24] Such simple innovations may improve the effectiveness of your projects greatly and the fact that the project seems to be a failure at a first glance might just be a similar challenge for you to face.

Key reading

Feder et al. (2003). Sending farmers back to school: The impact of Farmer Field Schools in Indonesia. Review of Agricultural Economics.

[23]Duflo, Kremer, Robinson (2008). How high are rates of return to fertilizer? Evidence from field experiments in Kenya.The American Economic Review.

[24]Duflo, Kremer, Robinson (2011). Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya. American Economic Review.

For more details about FFS approach and for detailed guidance through program planning and implementation, refer to FAO and GIZ's SustainNET EA (2010). Technical Manual for farmers and Field Extension Service Providers: Farmer Field School Approach. Sustainable Agriculture Information Initiative, Nairobi. Available online at: http://www.fao.org/ag/ca/CA-Publications/Farmer_Field_School_Approach.pdf

In-kind donations

One of PIN's strategies in delivering development assistance is the In-Kind-donation program ("Real gift"). This involves donations of animals, productive assets, improved seeds or fertilizers to the targeted population. While these assets are linked to income generation, it is important to note here that a large portion of this income is directly consumed by families, rather than sold for cash. The strategy relies heavily on the assumption that the target population is unable to purchase these productive assets by their own means and that a small boost in productive capital endowment will result in improved economic situation of these individuals. (See 'poverty traps' in Chapter 1).

Select proper IGAs. The selection of income generating activities appropriate for the setting is the most important part of the design of the program. This means that conducting a needs assessment survey is crucial. The activity must satisfy the following conditions to be a sustainable solution:

- There must be a demand for the output produced by the activity or the activity is able to fill the gap in some basic needs of the family (maybe substitute some good that would otherwise have to be purchased). If individuals plan on selling outputs from the IGA, there must be a feasible way for them to get their goods to market for sale.
- The inputs necessary for operating the IGA are locally available or accessible and their cost (including transport) does not exceed the benefits that are necessary for operation.
- This cost/benefit analysis should be short term, so that no long-term investment is necessary to reap benefits in a distant future. Remember, the population is cash constrained, which was also the reason why you started thinking about implementing the in-kind donation in the first place. In an example of fertilizer use in the previous part on Farmer Field Schools, we discussed why farmers did not use fertilizer even if they learned about their possible benefits. They had no money anymore when they needed to buy the fertilizer at the time of sowing.
- Take seasonality into account. The two conditions above must be satisfied through all seasons – especially so in terms of keeping animals (see the box below for a case study).

When considering the introduction of a new IGA in the area, think first very carefully why it has not been present in the area before in the first place. Is it really suitable and able to prosper? Would there be demand for the product of the IGA? Aren't there some cultural constraints?

How many beneficiaries to serve in which area? Once you decide to start the in-kind distribution and its type, you need to start thinking about the optimal number of donation packages to distribute and how to select the beneficiaries. The selection of beneficiaries, though, should have bothered you already in the first steps, when you decided to do the in-kind donations in the first place – you should do this with particular group of beneficiaries on your mind.

The selection of beneficiaries should:

- Minimize conflict within the community (participatory selection of the most suitable candidates given some constraints from your side may be the best solution)
- Minimize conflict across communities (take non-participating communities and their perception of the intervention into account, be diplomatic)
- Not deform or crowd-out existing businesses in the area (imagine that delivery of 1000 of chicken into the area from outside might temporarily shut down the local business and possibly even discourage local small-business investment). You should consider local purchases despite higher costs.
- Not result in oversaturation of the market, in other words the project should not generate so many new entrepreneurs that the resulting competition drives down prices too much(in some cases this might be dangerous not only in terms of deforming local markets, but also in environmental damages as in case of overgrazing by goats or similar)
- Deliver sustainable results in the future (the capital for the IGA should make it possible for beneficiaries to generate income for a long time)..

In-kind donations vs. cash transfer. A current trend in development assistance is to provide conditional or unconditional cash transfers rather than in-kind transfers. Donation of money is possibly less paternalistic and might be more efficient as well, as individuals might better understand their own needs, as detailed in Chapter 3. Furthermore, if the beneficiary wanted to sell the donated asset, she would not be able to recover the purchasing value of the good.

There are, however, two arguments why in-kind donations might be better than cash transfers:

- First, the in-kind donation is usually accompanied by training of improved use of the activity. As such, the project enhances not only the physical capital, but also the human capital required for that particular activity when thinking in the asset pentagon terminology (see Chapter 3). Cash transfers only enhance the financial capital. But cash transfers might also be accompanied by trainings, for example in business development, but cannot be so specialized as in case of specific IGAs.
- Second, the money donated as cash would otherwise be spent on short-term consumption. There is some evidence from that short-term consumption indeed increases, but small increase in long-term consumption has also been reported in some cases. This is especially true for the cash transfers conditional on children going to school (e.g. PROGRESA in Mexico). We have already discussed in Chapter 2 that not everybody is an entrepreneur and hence the money is not always used for productive purposes. On the other hand, the in-kind distribution only pushes these people into being an entrepreneur almost literally whether they like it or not.

Poultry distribution in Zari

PIN distributed poultry in Afghan rural area of Zari. The program was part of a larger scale livelihoods improvement intervention in the area. It consisted of distribution of a package including poultry, fodder for the first three months, construction material for a chicken houses, and a shared gas-powered incubator. The program also included extensive trainings and complementarities such as introduction of veterinary services in the area.

Despite being very complex and well thought-through, the main problem with this program turned out to be the harsh winter. The beneficiaries were not used to keeping chicken over the winter and hence kept only little fodder of poor nutritional quality for them (mostly grain). With little food, the chicken laid no eggs and hence they were seen rather as a burden at the time when the beneficiaries had themselves little to eat. The cash-constrained villagers rather sold or ate most of their chicken during the winter and the expected benefits from the IGA did not materialize at last.

Farmers' cooperatives

As we have discussed, individuals in poor rural areas might be cash-constrained and hence do not have enough resources to purchase productive assets required for successful business innovation, which prevents them from moving (see "Poverty Traps" in Chapter 1). Yet some of these productive assets might be shared. People who are willing to join cooperatives can pool their money to buy expensive productive assets. In such cases, even large investments into, say, a tractor can be made.

While cooperatives have many benefits, some efforts at aggressively encouraging people into cooperatives through the provision of incentives—such as providing microcredit loans to registered cooperatives (as is the case in Angola)—might not be as successful. This may be the case because such attempts at creating cooperatives fail to create the trust between members which is necessary for them to function. Farmers' Cooperatives strengthen the social capital side of the asset pentagon. A lack of trust is one of the main reasons that people stick to small-scale agriculture in most developing countries, rather than working together on more efficient, large-scale ventures. This might also be a reason for inefficient business structures such as small-scale sales of vegetables where many women from the same village sit next to a road and sell the very same product.

Trust building is a very complex issue. One way of increasing trust may be to simply interact regularly and to observe trustworthiness in others. This was the case in one of the authors' observations in Ethiopia, where participants of self-help groups formed a joint restaurant business. Through continued cooperation in a self-help group, these women were able to trust each other enough to jointly invest in a business. .

Establishing cooperatives might be especially tricky in resettled communities or in urban areas, where social ties are weakest.[25] Hence promoting social cohesion should always be a first step in establishment of cooperatives.

Further problems may arise when some members join cooperatives later, after large investments have already been made. Hence, people might be tempted to join cooperatives only after large investments have already been made. While knowing this, farmers may be hesitant to join the cooperatives in the first place, creating a coordination problem: all will be better off after joining the cooperative, but since it is most advantageous to join at a later date, no one wants to be the first to join.

A similar problem arises when people who are already members of the cooperative decide on the amount to investment. Those who plan to stay longer are obviously tempted to make larger investment, while those planning to quit soon would be hesitant. This may result in either under-provision or over-provision of investment.

Basic accounting is required for cooperatives to function properly in most cases. And basic skills for administering the collective, such as record keeping and designing an organizational structure. This often requires courses on accounting techniques and record-keeping from sponsoring NGOs.

As such, establishing cooperatives in more remote areas with few literate residents may prove especially challenging. For example, the system of cooperatives as recommended by the International Labor Organization (ILO) is too problematic for introduction in many remote rural areas, in which PIN is usually present. A more appropriate solution, may be to support social cohesion more generally, which may lead to establishment of small-scale cooperatives or group-run businesses.

Key reading

For further reading on agricultural cooperatives in developing countries and related problems, solutions and implementation advice, refer to Trewin (2004): Cooperatives: Issues and trends in developing countries. AusAID. Available online at: http://aciar.gov.au/files/node/530/tr53.pdf

[25]You might want to read Barr (2003): Trust and expected trustworthiness: Experimental evidence from Zimbabwean villages. The Economic Journal.

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Livelihood development: A practical guide to administering PIN livelihood development programs

Vojtěch Bartoš and Ian Levely