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Private sector development for poverty reduction

Opportunities and challenges for Norwegian development aid

Espen Villanger and Lars Ivar Oppedal Berge

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1. Introduction

Productive employment, especially access to jobs in the first place, is a main vehicle for poverty reduction and is the most important determinant of living standards around the world (World Bank 2013). The positive relationship between jobs and welfare is also in line with the views of the poor themselves – at least in most societies (Dalberg Global Development Advisors 2010). At the micro level, the direct relationship is obvious: moving from unemployment into employment can yield a wage that lifts the person above the poverty line, which is typically based on command over money (consider, e.g., the most used US$ 1.25 dollar a day poverty line).

At the macro level, having a high share of the workforce in salaried employment and jobs characterizes more developed countries with less poverty. The relationship between a higher value of production, job growth, and higher salaries on the one side, and lower poverty and higher welfare on the other side, is straightforward at this aggregate level. However, aggregated figures may conceal the trajectories of sub-groups; thus, any macro-analysis of job creation and welfare should also include a distributional analysis.

The GDP growth has been high in many developing countries during the last decade, and has been accompanied by relatively high rates of job creation (IMF 2013). Nevertheless, the level of job creation is not anywhere near what is needed for the transition of economies largely based on agricultural low-productivity farming to high-productivity economies where a substantial share of the workforce has jobs (Filmer and Fox 2014). McMillan, Rodrik, and Verduzco-Gallo (2013) show that such a structural transformation has largely been absent in sub-Saharan Africa and Latin America, despite very favorable trajectories in some Asian countries, including China and India.

Stimulating the economy to create productive employment and jobs is a key challenge for poverty reduction in most developing countries. The inherently difficult task of increasing the share of jobs is even more challenging due to demographics, especially in Africa (World Bank 2011 and 2013). In most African countries, the number of young people entering the urban labor market is many times larger than the number retiring. In Ethiopia, for example, entrants outnumber retirees by a factor of 10 (CSA 2010).

The direct relationship between material poverty and productive employment, together with past experiences of structural transformation in Asia, has spurred many analysts to recommend industrial policies that promote labor intensive manufacturing (Lin 2012). However, there has been a fierce debate in economics over what role governments, donors, and foreign aid can play in stimulating these changes.

Nevertheless, there is a broad consensus that economic growth generally benefits the poor segments of society and is necessary for making sustained progress on widespread poverty reduction (Dollar and Kraay 2002; Kraay 2006). Hence, while government intervention in the private sector to promote structural transformation has proven to be challenging and controversial, achieving income growth in sectors, sub-sectors, and even at the company level is likely to generate new employment that in turn can reduce poverty, either directly or through linkages to other parts of the economy. We take the literature on economic growth and poverty reduction as a starting point for developing a framework to explore the role of private sector development (PSD) in economic growth and poverty reduction. We conclude, importantly, that some types of growth are more conducive to poverty reduction than others.

This study is intended to be a tool for improving Norwegian development policy to reduce poverty through strategic support to the private sector in poor countries where Norway has a comparative advantage or can become an important player. The focus of this study is limited to the areas under the mandate of the Norwegian Agency for Development Cooperation (Norad) Section for Private Sector Development, which

excludes macro policies, direct investments (i.e., Norfund), and agriculture. Moreover, the study's focus on poverty reduction means that other motives for aid-financed private sector interventions are not included, such as the promoting Norway's own private sector, supporting the building of alliances, or achieving geopolitical goals.

Some donors use the private sector as a means to achieve other goals. The UK Department for International Development (DFID), for example, not only considers PSD as a development approach in its own right; it also considers it as a means of enabling the sustainable delivery of other activities, such as health and education, through partnership arrangements with the public sector (ICAI 2014). In these cases, the focus may be on the most efficient modes of delivering results, which is not necessarily related to the ability of the private sector to reduce poverty. We therefore do not include such models in our review.

This work aims to deliver an analysis in time to be relevant to ongoing internal discussions in the Norwegian aid administration regarding the future of Norwegian PSD aid. Therefore, the report focuses on some of the main instruments that are currently employed by the donor community or that have been suggested in the literature. Despite this narrow scope, the report still considers a large range of instruments. Our main focus is on labor market and industrial policies, support to micro, small, and medium enterprises (MSMEs), and the application of challenge funds. We also discuss the possibility of providing credit guarantees and matching grants, before turning to a discussion of how to use the natural resources extraction industry to create local economic activities beyond what is generated directly through discovery, extraction, and transfer processes.

In defining the aims of Norwegian PSD aid, it is important to avoid the trap of being excessively ambitious. Foreign aid programs often fail to reflect what could actually be achieved using prevailing private sector stimuli (ICAI 2014a). An important finding in the literature is that the factors that determine the degree of success of PSD projects are often outside of the donor's control (ICAI 2014a). Moreover, it is generally accepted that generating widespread, systemic change is beyond the ability of any single institution. Formal restrictions (such as those introduced through World Trade Organization (WTO) agreements) and informal restrictions can make it difficult for currently developing countries to apply industrial policies as easily as other countries have done in the past (see, e.g., Naudé 2010). Hence, it is important for Norway to keep its PSD interventions simple and align ambitions with what is achievable, taking into account the factors that cannot be controlled.

Moreover, Norwegian aid to PSD (as defined in this study) is minimal in relation to the resources and capital of the private sector in any developing country; only NOK 255 million Norwegian crowns (NOK) were allocated to Norad's Section for PSD for 2014. In addition, Norway is a small donor and only one of many actors on the PSD scene. Thus, Norwegian PSD aid should specialize in the niches where it can make a real difference in poverty reduction.

In maintaining realism with respect to what can be achieved, the literature points out that the complexity of PSD is magnified enormously in fragile and conflict-affected states (ICAI 2014a and 2014b). The private sector in these countries suffers from many challenges not faced by more peaceful countries, such as destroyed infrastructure, capital flight, fragmented markets, displaced populations, and fragile and risk averse governments. Hence, in addition to the usual factors that make PSD interventions challenging, PSD interventions are even less likely to achieve any impact in regions of conflict and fragility. To simplify, in conflict zones everything that is built or developed can be demolished in mere moments. Moreover, there is no evidence to support the view that PSD support contributes to stability in fragile states (Holmes, McCord, and Hagen-Zanker 2013). In short, there are sufficient indications for recommending that, as a general rule, Norwegian aid to PSD should not go to fragile and conflict affected states, if the aim is to create viable

businesses and investments that are sustainable in the long run. Of course, there might be exceptions from the rule, in particular, where supporting economic activities also can help lower tensions.

Keeping PSD interventions simple and focused on where they can make a difference does not imply that the funds should not be used strategically. On the contrary, scattered and isolated PSD projects without a strategy, whether they be random feasibility studies or support for training workers just because a company applied for such training, are not likely to impact poverty reduction. Using a counterfactual scenario to illustrate the issue, if a company has a good business idea, not financing a feasibility study will not hamper the move to investment. If the idea is good, the company will be able to finance the feasibility study irrespective of the PSD financing. Similarly, if a company needs to conduct in-house training of its workers in order to maximize productivity, it will do so irrespective of PSD funding. Accordingly, our focus is on how to use the PSD interventions strategically.

In order to focus strategically, it may be useful for a small donor to structure the discussion according to challenges at the macro, intermediate, and micro levels. Macro level interventions typically focus on national market imperfections and aim to influence nationwide policies, such as the general investment climate, financial markets, or macroeconomic policies. At the intermediate level, PSD interventions tend to focus on sector polices and programs to unleash the potential in particular markets, for example, tourism, labor-intensive manufacturing, finance, or agri-business value chains. Micro-level interventions target companies, entrepreneurs, workers, or other individuals directly, using programs typically aimed at supporting technology diffusion, entrepreneurship training, or industry-specific infrastructure development. Interestingly, the market imperfections in developing countries are typically discussed at the macro level, and the donor community engages in policy dialogues to help recipient countries reform their economies to remove these imperfections. This scene is dominated by the large donors like the World Bank, DFID, and the US Agency for International Development (USAID).

Even if the policy dialogue focuses on the macro level, there is a strategically important niche where small donors can influence the process, namely, by implementing projects in problem areas where market distortions play a role. These cases present a natural platform for discussing these problems with the government as part of making the project work. One such example is found in Ethiopia, where the World Bank Women Entrepreneurship Development Project explicitly stated that there was not to be any policy advice component under the program. During implementation, however, it became necessary to discuss with the government both the credit market imperfections and the roles of the private versus the public sector in entrepreneurship, in order to make the program work well. Similarly, an Independent Commission for Aid Impact (ICAI) review of a DFID microfinance program in Bangladesh found that the program provided access to finance to individual borrowers, while at the same time addressing issues of the regulatory environment and the capacity of the microfinance sector. Such combinations can have leverage well beyond the impacts of the project itself.

Before we turn to the methodology in the next section, a note on selecting recipient countries is warranted. Although PSD interventions should be focused on countries where they will have the highest impact on poverty reduction, this can be hard to determine in practice. Country specific circumstances will to a large extent determine what the opportunities are for Norwegian PSD aid, and identifying those requires country specific analyses addressing several questions.

Given Norway's policy of concentrating aid among a few recipients, prioritizing the poorest countries, and establishing "focus countries" (Det Kongelige Finansdepartement 2015), the first question is what the poverty challenges are in the selected countries. Secondly, one should ask whether PSD aid could be effective in addressing those poverty challenges in any of the selected countries. Then, given the Norwegian aid model (partner led), what is the recipient government's own agenda, and what does it consider to be the

role of donors? Moreover, what are other donors in that country already specializing in? Given these boundaries, Norad should consider the available niches open to Norwegian aid and assess whether it is possible to generate sufficient information to implement an effective policy.

In Ethiopia, for example, we found that DFID's portfolio has been carefully designed in the light of an analysis of the underlying causes of economic issues and DFID's strengths. Assessing which country to select for PSD aid should be conducted through similarly careful country case studies.

2. Methodology

In this study we apply economic theory to identify the potential role of foreign aid to PSD in reducing poverty. To a large extent, this relies on models of market imperfections, which are presented in section 3 below. This is then coupled with a review of the relevant literature on PSD, both empirical and theoretical, to identify best international practice in the areas under focus and to discuss what has worked and what has not. We also map the aid instruments used since 1998. We then use this analytical work to specify some areas and instruments where the strategic use of Norwegian aid to PSD could make a difference in poverty reduction – beyond the effects on the individual recipient in and of itself.

One important challenge to identifying best international practice – what works and what does not – is that there are considerable obstacles to identifying the impacts of interventions in the private sector beyond the standard problems with identifying and measuring impacts, attributions, and spillover effects. This challenge arises from the fact that it is difficult to trace the effects of an intervention that works through a market: the impact of an intervention targeted at one business may in turn indirectly affect other businesses in the same market, and these indirect effects may be large and almost impossible to identify. For example, supporting one business with cheap loans may help it increase its production and market shares and employ more people. These effects can be measured. But if this subsidy leads the other businesses in that market to scale down their production and fire workers, the net effect could be zero. Such crowding out effects, as well as their resulting effects on the overall market (i.e., general equilibrium effects), are often not possible to measure empirically because it is not possible to separate the effect of the subsidy from all the other events that influence these businesses.

Hence, the research literature on the impacts of various PSD instruments is often inconclusive. For the same reasons, few conclusions on effects can be drawn from less rigorous assessments often found in self-reporting and commissioned work. Such work may present strong statements about impacts, but the empirical and methodological foundations are usually too weak to support such conclusions (Villanger and Jerve 2009; Lloyd and Villanger 2014). Hence, it becomes particularly important to apply available tools that can substantiate that the desired effect of an intervention is actually also likely to happen in practice. Hence, in our approach, we therefore devote particular attention to such tools.

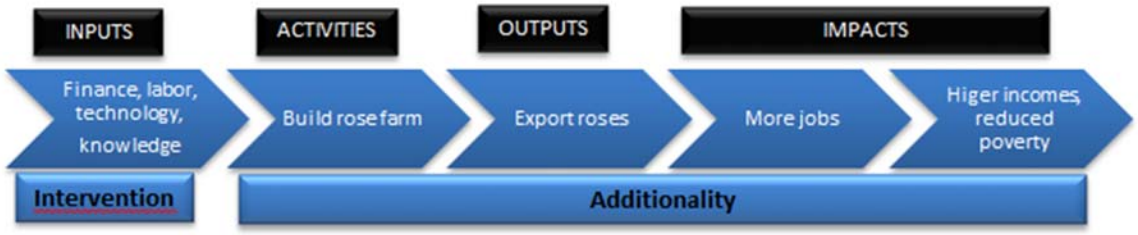
2.1 The results chain

The first tool that can support design of PSD interventions is the results chain. The results chain is a simple and useful model of how an intervention is intended to lead to specific effects. There is a large potential for using results chain mapping to identify concrete outputs from PSD interventions and their likely effects on poverty. Best international evaluation practice emphasizes the need for clearly describing and assessing the "intervention logic," which is an accurate representation of what is assumed and expected in the inputs, activities, outputs, and effects of a program (Lloyd and Villanger 2014). Developing a results chain is helpful to that end.

The results chain's basic structure is shown in figure 1 below, where we take as a starting point that an investor is interested in developing an exporting rose farm. In this simplified illustration, the aid financed PSD intervention can be along any of the inputs – support financing, training of workers, technology diffusion, or facilitating knowledge transfer (for example, about international markets). Assume that the PSD intervention is necessary for the investment to take place, so that the rose farm would not have been

established without the PSD intervention. As well, assume that production by this farm will not influence any other producers. In this case, the added benefit of the PSD intervention is evident at all steps of the results chain: the development of the farm is an activity that would otherwise not have taken place, the roses exported would otherwise not have been exported, and the employment generated comes in addition to what would otherwise have been the case. If the jobs generated are for poor people, poverty is reduced directly if those who get the jobs earn more than what they otherwise would have earned.

Figure 1. A simplified version of the elements of the results chain applied to an intervention



The direct effect on poverty hinges on the type and number of jobs created, as well as on who gets those jobs. Clearly, the relative labor intensity and the entry level qualifications and initial poverty of workers can have large impacts. Labor intensive production has a large impact on poverty and well-being if the workers hired used to be poor, and if the salaries paid increase their income substantially in relation to their alternative employment opportunities and the poverty line (Villanger, Getahun, and Solomon 2014). The labor standards of jobs are also important for well-being.

Note, however, the importance of identifying the assumptions behind the theory that the intervention will lead to poverty reduction. The key to the impact is that the investment would not have taken place without the intervention. Also, in a real-world market, as detailed above, one cannot take for granted that one company's production will not influence the production of other companies. In other words, if the intervention that helped establish a farm leads to the scaling down of other farms, the impact of the intervention will be a distortion of the market without any aggregated effects. The point here is, however, to identify the assumptions of the model and assess the reality of the relationship between the proposed intervention and poverty reduction. For example, if exports to the international market are not constrained by any factor (i.e., there are no domestic quotas or limits on transport), and if the price of roses is not affected by the new entrant, then it is more likely that there will be no crowding out effects. In this manner, each PSD intervention needs to be carefully scrutinized at the design stage.

Many other indirect effects of PSD projects can also affect poverty, for example, the resulting government tax that could be used favorably for the poor, upstream and downstream spinoffs, and supplier or construction activities. Aggregating all the direct and indirect value addition created by the intervention would provide an estimate of the intervention's contribution to GDP growth. Hence, the definition of GDP growth – increase in value added in the economy – implies that the discussion above regarding features of the intervention relates directly to the discussion about how different types of economic growth can

have different impacts on poverty reduction. For example, if the PSD intervention had resulted in the establishment of a diamond mine with only international staff and ownership and no local taxes were paid, then the growth from this intervention would be much less pro-poor than in our rose farm example. The very limited employment and poverty effects of enclave sectors, typically in resource extraction, are well-documented in poor countries (see, e.g., Jones and Tarp 2012 and 2013).

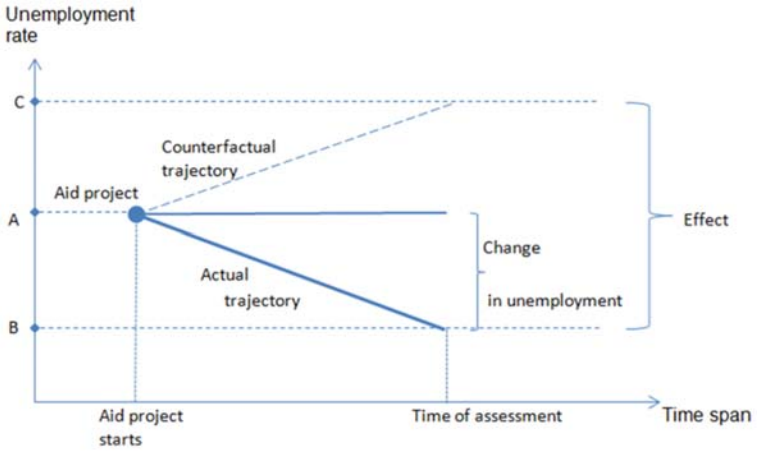
Elaborating the theoretical relationship between an intervention and poverty reduction will also facilitate the identification of which performance indicators are most important for documenting the intervention's degree of success. These indicators may in turn be those that are of most important for the empirical assessment of the effects and hence a detailed development of a results chain will also be helpful for ensuring the evaluability of the intervention.[1] Detailing the intervention logic will also guide the selection of variables, the data collection requirements, the timing of evaluation efforts, the identification of appropriate informants, and many other conceptual and procedural aspects of the empirical strategy. Hence, the application of the results chain may serve as an important tool in building the monitoring and evaluation framework.

2.2 Establishing a counterfactual

As illustrated above, assessing the effects of an intervention that works through a market is inherently difficult and deserves special attention. A proper evaluation of impacts requires the establishment of the counterfactual: what would the situation have been in the absence of the aid intervention? This is difficult to do in practice because the counterfactual is unobserved. For illustrative purposes, assume that the aid intervention leads to a large increase in employment in an area – in our example above it could be that helping the investor establish the rose farm led to a large number of others engaging in rose farming for export. Figure 2 illustrates the standard framework for assessing the effects of interventions in this setting (Ravallion 2009). Assume that at the time the aid project (the PSD intervention) starts the unemployment rate is A while at the time of assessment the unemployment rate has declined to B.

[1] "Evaluability" is the degree to which an intervention can be evaluated in a reliable and credible manner (i.e., availability and reliability of data). This includes whether there is clarity in the intent of an intervention to be evaluated (e.g., the existence of a theory of change or an intervention logic). Importantly, evaluability is not associated with any particular approach or method of evaluation (Norad 2014).

Figure 2. The effect of an aid financed PSD intervention



The above graph illustrates what the situation would have been without the intervention: unemployment would have increased to C during the period, due to other factors (for example, a financial crisis). Eventually, A less B is the change in unemployment as measured between the time the intervention started and the time of the assessment. But the effect of the intervention at the outcome level is C less B, that is, the difference between the observed state (B) and what it would have been without the intervention (that is, condition C). Obviously, the counterfactual could be very similar to the actual trajectory, which would be a case of a limited effect (impact) of the intervention in a stable environment. Understanding the relationship between the intervention and changes in measured indicators is not only important for developing a monitoring and evaluation (M&E) framework, but it is also important for clarifying how one expects the intervention to work. Further below, we highlight opportunities for using such a framework in practice, in particular, how doing so interrelates with ensuring the evaluability of proposed interventions and instruments.

The Norwegian state administration generally acknowledges that rigorous impact evaluation, as would be required to measure the effect indicated in figure 2, is often not feasible in practice (Norad 2014; SSØ 2007). At the same time, however, the likely impacts *can* be identified in several applications. Other donors, like DFID, practice a system where an impact evaluation is only carried out if the knowledge base regarding the likely impact of the intervention is thin (Lloyd and Villanger 2014).

2.3 Theory of change

It is generally acknowledged that a theory of change should be developed at the planning stage to facilitate the decision making process regarding what instruments should be applied in order to achieve the desired goals. Moreover, this is also required for evaluating the instrument. Evaluation needs to start by spelling out the theory of change at the outset of a project, since this is key to understanding the likely results of the intervention (Ravallion 2009; Rogers 2009). Hence, developing a theory of change is important to ensure an intervention's evaluability (Norad 2014).

The conceptual approach to developing a theory of change is similar to that of elaborating a results chain, but it is usually much more comprehensive. Theories of change push thinking further and require a much deeper analysis and articulation of how an intervention aims to bring about change, the assumptions that are being made, and the influence of the wider context. Vogel (2012) describes a typical theory of change applied in development, which usually consists of the following elements:

- a detailed elaboration of the context that may influence the intervention, including social, political, and environmental issues;
- the current situation that the intervention is seeking to influence;
- a description of other actors that may influence the situation;
- an articulation of the long-term change that the initiative seeks to support and who it ultimately should benefit;
- the process of change that is supposed to lead to the desired long-term outcome;
- assumptions about how these changes might happen; and
- an analysis of whether the activities and outputs are appropriate for influencing change in the desired direction in this context.

The theory of change for a PSD intervention can thus be elaborated comprehensively. Here we provide a brief version. The typical starting point for a theory explaining the income differences between poor and rich countries concerns the accumulation of productive factors.[2] Formal models are elaborated with assumptions about the nature of physical capital, labor, human capital, natural resources, and technology, as well as how these factors are organized and combined to produce output. The low levels and growth of income per capita are then explained by a lack of accumulation of human capital for the work force, insufficient accumulation of capital, or an inefficient combination of these factors using the most productive technology. Typically, low domestic savings causes low levels of investment (i.e., the accumulation of physical capital is low), poor skills and education result in low value of workers in production (and hence low wages), and companies apply low-tech machinery with low production per unit of capital.

In such models, the relationship between economic growth and poverty reduction can be directly determined by the fact that the share of income accruing to individuals stems from either income from using their labor (i.e., wages) or income from owning capital (i.e., the rental price of capital or the interest rate). Since the poor usually do not own capital of substantial value, and since the poverty rate is defined by an income threshold, changes in the wage rate determine nearly all of the changes in the poverty rate. This implies that growth in some sectors can be more poverty reducing than growth in other sectors. A sector's poverty-reducing capacity is related to the degree to which it employs unskilled labor, since the poor can provide their labor as a production input (Loayza and Raddatz 2010).

The empirical literature confirms that characteristics of the sectors in terms of their production structure and utilization of unskilled labor influence how effective growth is in reducing poverty (ibid.). Sectors that use unskilled labor more intensively also tend to have stronger effects on poverty alleviation. Thus, agriculture is the most poverty-reducing sector, followed by construction and manufacturing; on the other hand, the mining and utilities sectors by themselves do not seem to help reduce poverty, since the labor employed by those sectors is usually more skilled. However, the literature also finds that a number of socioeconomic conditions influence the relationship between growth and poverty reduction. Typically, inequalities in the distribution of wealth and income, literacy rates, urbanization levels, and morbidity and mortality rates all

[2] For a rigorous presentation of such models and assumptions, see, e.g., Romer (1996).

influence the effect of economic growth on poverty reduction, since they determine the poor's ability to take advantage of opportunities (ibid.). Hence, both theoretically and empirically, there may not be a relationship between PSD in certain parts of the economy and poverty reduction.

A crucial question in this regard is *how* PSD interventions can influence poverty reduction. The basic model suggests that policy distortions that discourage labor employment or induce capital-biased firm dynamics may reduce the influence of growth on poverty. Removing biases against labor, whether policy-induced or not, may create opportunities for the poor in growing economic activities and, thus, help them move out of poverty.

In much of the literature on PSD, the rationale for aid intervention stems from market failures (see Harrison and Rodriguez-Clare 2010). Market failures such as externalities, the availability of public goods, and asymmetric information may all create a rationale for PSD intervention. We return to these in more detail in section 3 below.

Nevertheless, the foundation for a well-functioning private sector is competition, which by definition involves winners and losers. Some businesses innovate and expand, taking over market shares from others and creating jobs, while others stagnate, lose market shares, and have to lay off workers. Hence, PSD projects to improve productivity and the market efficiency may increase poverty among some sub-groups (those who become unemployed) while reducing poverty in other sub-groups (those who get jobs). Providing PSD aid thus constitutes a breach with standard development thinking where "everyone should be helped" (ICAI 2013). This can pose a risk to aid-funded PSD projects, since a properly designed project may be implemented incorrectly – for example, by subsidizing and "keeping alive" businesses that are not competitive. A crucial assumption for a PSD intervention to work is that the donor staff has the skill set and experience to develop, manage, and monitor the project (ICAI 2014, 19–20).

A key justification for aid to PSD is that one is trying to correct market failures. After all, if companies are currently optimally investing in an unconstrained way given the current market prices, and there are no market failures, what may happen if one introduces a PSD project? The likelihood of creating distortions is high. Providing subsidized loans, for example, will have both a price and an income effect on the recipients. The price effect is that recipients will take larger loans than they would have in the absence of the subsidy, and this could lead to a state where companies are lending more than the optimal amount. The income effect stems from the fact that cheaper loans imply that companies will have more resources after paying interest rates as compared to taking unsubsidized loans. This will result in additional profits for a company, which will lower the company's cost of taking over market shares and will cover for less efficient production or consumption/investments within the company. Clearly, the potential for market distortions and a waste of aid money is evident.

The PSD literature often suggests that the preferred approach for donors and governments is to target projects towards sectors, companies, products, or workers with a high potential for growth, that is, to pick the winners. However, that may not be a useful approach to selecting beneficiaries of PSD projects. Donors and governments should not be trying to pick the "gazelles" (i.e., the enterprises that will grow fastest), but rather should be seeking projects that will generate the greatest impact and the greatest positive spillovers on other companies, individuals, households, and the society at large.

In short, elaborating a theory of change for a PSD intervention is not straightforward, but, in fact, is very complex. For a concrete intervention in a concrete market, much detail needs to be elaborated about the functioning and composition of the actual market, what specific market imperfections are to be addressed, and how they can be solved. We return to these specifics in section 3 below.

2.4 Gender

Gender is a cross-cutting issue that should be included in the design of most development interventions. In addition to pure fairness considerations (that both sexes should have equal opportunities), additional reasons to include gender in PSD interventions stem mainly from the potential for creating higher impact projects. Women account for 60% of the world's working poor but own less than 10% of the world's property. Hence, women's ability to access finance for investment purposes is limited as compared to men, since collateral is almost always required for getting a loan. Coupled with the lower educational attainment, higher illiteracy rates, lower participation in entrepreneurship and business ownership, and cultural barriers that prevent women from becoming entrepreneurs, this creates a large untapped potential: if entrepreneurial abilities are equally distributed across gender from birth, then preventing women from utilizing their entrepreneurial skills is likely to create a huge loss.

In addition, the literature discussed above clearly indicates that focusing on segments with a high concentration of poor may be most effective for poverty reduction. This suggest a strong rationale for including gender perspectives and ensuring that women participation in PSD projects in order to maximize success rates and income generation. Ensuring female participation will in theory lead to higher economic growth (and, hence, higher poverty reduction), as well as to a higher effect of economic growth on poverty reduction. Moreover, discriminatory practices at workplaces, in regulations, and in the home stifle women's entrepreneurial drive and add to this argument.

For Norwegian PSD aid that aims to directly reduce poverty, there is an additional argument for why gender should be included: it is more effective in terms of poverty reduction to help women earn more income than it is to help men, since the effects on children's education and nutrition is stronger when income accrues to the wife as compared to if income accrues to the husband (Thomas 1990 and 1994; Hoddinott and Haddad 1995; Duflo 2003). In that sense, promoting gender equality can also increase growth rates in the longer run – across generations – and can improve welfare levels in communities. An appropriate analysis of the gender features of a PSD intervention that are most likely to be useful in reducing poverty should be conducted at the stage where the theory of change is elaborated, since there are many different ways gender can be relevant in different types of interventions.

3. Market failure and rationales for PSD instruments

An important insight from economic theory is that a market economy with no market failures will efficiently use resources. The theory also establishes that if the efficient use of resources does not result in what is considered a fair distribution, a reallocation of endowments can help achieve both a fair distribution and an efficient use of resources. However, in practice, it is difficult to redistribute endowments without any costs. In addition, many markets are far from perfect. This is particularly the case in developing countries, where market failures are rampant (Rodrik 2008).

In this section we focus on the efficient use of resources and discuss five of the most relevant sources of market failure that can be addressed by interventions that can generate positive effects on the economy. We focus on market imperfections in the context of PSD and how these may be solved by various interventions in the context of a small, open developing country where it is not possible to influence world market prices. In the end of the section, we will also discuss the limits of economic policies.

3.1 Public goods provision

Public goods are characterized by two main features. First, they are non-rival in consumption. This means that one person's consumption of the good does not influence another person's consumption of the good. Second, public goods are public in the sense that it is not possible, or at least it is very costly, to prevent someone from using them. Typical examples of public goods include a nation's military defense, general knowledge, and the absence of contagious diseases.

The cost of producing public goods is not related to usage. Hence, if the price of a public good should have been determined by the standard efficient solution (where it equals the marginal cost of production), then it would equal zero. In that case, it would obviously not be in the interest of anyone in the market to supply the good, since that person would not get paid.

In practice, public goods may have capacity constraints, that is, they may be considered "public" under some circumstances but "private" under other circumstances. For example, consider a bridge in a poor village. So long as traffic remains low, a person crossing the bridge does not prevent others from using the bridge. Hence it is non-rival. If it is relatively costly to require payment for using the bridge, one can argue that the bridge is a public good when the traffic is low. But then consider the case where the bridge is used well above its capacity constraint. If the bridge is congested, and some users are prevented from using it, the bridge is more similar to a private good.

Modern theory on economic growth is particularly concerned with technology and institutions, and both are important in discussions about public goods in developing countries. However, given the mandate of this report, we will not focus on institutions, but only on knowledge and technology. Both technology and knowledge are usually non-rival in consumption. When someone has developed new knowledge – for example, finding out that lending against cash flows can be a substitute for collateral in business lending – this knowledge can be used by other banks without any additional costs. Knowing that competitors will also benefit, any individual firm may have insufficient incentive to develop the knowledge or technology in the first place. This is a clear argument for the government (or donors) to take responsibility for developing and testing out new knowledge and (by a similar rationale) supporting technology development and diffusion.

Through PSD aid, a donor may support various forms of knowledge building, skills enhancement, and training, including potentially more specialized knowledge transfers, especially in cases where the country lacks crucial capabilities within important sectors. However, while using knowledge is a public good, the spread of that knowledge may be costly, especially where institutions for spreading knowledge (such as universities, research institutes, vocational schools, polytechnic colleges, and other educational institutions) do not exist or do not function well. If such well-functioning institutions are already in place, spreading additional knowledge and diffusing technology may be cheaper. With a limited budget, donors will have to assess which public good will yield the highest social return and prioritize accordingly.[3]

With this in mind, a donor may consider supporting knowledge-based activities with a high fixed cost and low or zero marginal costs, such spreading knowledge through the above mentioned educational institutions. To some extent, large private enterprises may solve the problem themselves by establishing their own in-house training. However, the free-rider problem suggests that these companies will be reluctant to incur the cost of training their own workers, at least if the costs are high: once workers are trained, they may move to other companies that did not incur costs training their own workers. This reduces each company's incentive to train its own workers, results in too low a supply of trained workers, and is a good example of a market imperfection where PSD interventions may reduce inefficiencies.

Innovation theory also highlights how the efficiency gains of other institutions can be used as vehicles for the spread of knowledge. Institutions such as industrial parks can bring together many companies that have similar interests and can share knowledge and learn from each other. Another example with the same rationale, but less demanding in terms of technical and financial requirements, is support to "clusters" in order to support learning and knowledge networks. Supporting such agglomeration effects is, in principle, an area where PSD interventions can reduce market failure. Nevertheless, facilitating learning between companies will also reduce the incentives for each company to innovate: once one company has developed a new idea, its neighbors will copy it, reducing the innovator's profits. This illustrates how difficult it is in practice to design appropriate interventions.

3.2 Externalities

Another main rationale for government intervention in the markets arises from externalities. To put it simply, an externality is an effect of someone's consumption or production on someone else's consumption or production where this effect is not accounted for in the market. A classic example of a positive externality is a honey producing company. When keeping bees for producing honey, this company does not take into account that surrounding farmers get much better fruit and flower harvests due to the high pollination caused by the bees. The externality (that the beekeeping affects fruit production) is a market imperfection: if the market were functioning perfectly, the fruit farmers would pay the beekeeper to have more bees in their area in order to maximize fruit production. Hence, the supply of bees is below the efficient level.

A parallel argument explains negative externalities. If an industrial plant is free to pollute a river so that all the fish die, there is a negative effect of the company's production that is not reflected in its balance sheets. In a functioning market, the costs of depleting the fish should have been borne by the company and the pollution is thus a negative externality. If private ownership were clearly defined, the party suffering from the loss of fish would be able to reap benefits from this externality themselves. In other words, the owner of the river and the polluting company would come to an agreement about the degree and cost of the pollution

[3] Other types of public goods may be physical infrastructure (e.g., roads, ports), law enforcement institutions, and property rights.

and how much should be compensated for the death of the fish. In a famous article from 1960, Ronald Coase stated that

> . . . in the absence of transaction and bargaining cost, affected parties to an externality will agree on an allocation of resources that is both Pareto optimal and independent of any prior assignment of property rights.

In our first example, the beekeepers and the farmers should have to come together to find a solution where the farmers paid the beekeeper a sufficient amount to have an optimal number of bees in their area.

Nevertheless, how relevant is Coase's argument for practical policy, where transaction costs may be high (particularly in cases where many companies are involved)? And how possible is it to allocate gains and burdens fairly? In some cases, we find that different actors join forces and solve common challenges and promote welfare, such as when branches of an organization promote common knowledge production. Still, it is often difficult for companies to find solutions that avoid freeriding or the under- or over-provision of goods with external effects. These may be opportunities for government or donor interventions, especially when the externalities are large. The theoretical framework suggests a simple solution to this type of market failure: the production or consumption of goods with negative externalities should be taxed, while the consumption or production of goods with positive externalities should be subsidized.

Knowledge and technology production may also be viewed as goods creating positive externalities, since knowledge is non-rival (and thus often difficult to prevent others from using). Hence, when an entrepreneur in a poor country discovers by experimentation that a technology from rich countries works well in his own country, she and her company may only capture part of the value the new production creates. Soon after other entrepreneurs see what she is doing, they will follow and her individual profit will be reduced. Hence, entrepreneurs may not see it as worthwhile to adopt new technologies, and we may expect the market to produce and apply too little new knowledge or innovative technology. This may be particularly true for innovation, diffusion, and knowledge enhancement that the companies themselves have the least incentives to conduct. This is one reason why governments subsidize elementary research, without immediate commercial value; the more firm-specific the knowledge in question is, the higher the probability is that the firms themselves will solve the problem.[4]

Closely related is the issue of industrial agglomeration. Similar economic activities often concentrate in particular areas, for example, shops in city centers or similar industries in the same region. While these firms may be competitors, they often benefit from each other's existence; they may share infrastructure, attract similar investors, and attract highly skilled employees who may function as "knowledge-bees" by spreading knowledge around when changing jobs. More firms in one sector may also lead to more upstream and downstream firms, making inputs cheaper (if, for example, the competition between firms supplying inputs improves). In addition, as mentioned above, many firms in one location may also be able to work together to solve public goods challenges.

For these reasons, the profitability of one firm in a particular geographical region may be a function of the number of other firms in the sector in that region. It may be that PSD policies should generally not attempt to determine the location where particular factor-markets or natural resources will be important or attempt to cluster industries geographically. Nevertheless, in some cases active policies may make it more attractive for knowledge intensive companies to locate in the same region as other, similar companies in order to benefit from co-location, that is, to enjoy positive learning externalities from each other. In developing

[4] Krugman (1991) and Porter (1990) both discuss the importance of industrial agglomeration.

countries, “knowledge intensive” may have a different meaning than in developed countries. For example, rose farming (as discussed in box 1 below) may be viewed as a low skill activity in the Netherlands, while in the Ethiopian or Kenyan setting firms in this industry may substantially improve workers’ human capital, widely defined.

3.3 Asymmetric information

A third mechanism that may create market failures – or even cause markets not to emerge at all – is asymmetric information. A good example to illustrate the consequences of asymmetric information is found in finance. Borrowers can be of two types, those who are honest and will do their best to repay and those who are not honest and will try to swindle the bank if possible. The bank prefers only to lend to the first type, but information about the honesty rests with the borrower and is not shared with the bank (as both types will claim to be honest).

Asymmetric information can give rise to large market failures, especially through adverse selection (Akerlof 1970). For example, if high risk people are more likely to buy insurance, the price of insurance will increase for all if the insurance company does not have information about which people are high risk. This will mean that the insurance market will end up insuring only high risk people, since low risk people will not be willing to pay the high price. Asymmetric information can also give rise to moral hazard, for example, if people do not take preventive measures to reduce risk of damage because they are insured and hence do not need to cover the costs anyway.

Moreover, asymmetric information is often present in working relationships. For example, an entrepreneur would like to only hire workers who are committed to working hard. However, workers’ commitment is not observable – it is information that only the worker herself possesses. Moreover, it can often be difficult for the entrepreneur to find out about such commitment, even after the workers have started to work.

In modeling such relationships, this could be characterized as a principal-agent problem where the agent has more information about his productivity and effort than the principal. This implies that fixed payment contracts may create poor incentives. Signaling and screening are two solutions to the asymmetric information problem (Spence 1973; Stiglitz 1975). Signaling provides credible information to the other party, that is, you can provide a credible signal that you are of a particular type, for example low risk, hard-working, or clever. Screening is a way for the under-informed party to induce the other party to reveal its true self.

Even though markets with asymmetric information can function satisfactorily, many important transactions, and even whole markets, may never develop, especially in poor countries. Moreover, the underdevelopment of markets, or absent markets, is particularly difficult for policy makers to address: if the markets do not exist, there will be no visible signs of them, which means that the government itself will have information challenges.

The literature suggests that the role of asymmetric information can be particularly important in explaining the underdevelopment of financial markets. A necessary condition for a financial market to allocate resources efficiently to the best projects is that investors must have the same information as business owners. For instance, if business owners have more knowledge about a potential product than investors, the market may never develop – or it may develop somewhere else. This can be linked to the discussion about

externalities: if there are no investors who are able to see the potential in a new product or business, the entrepreneurs who develop such innovations will most likely relocate.

In development, investors often lack information about country specific circumstances. Incorrect perceptions, or generalizations – typically around the lack of security – are other examples where asymmetric information can lead to missed opportunities for companies in developed countries to explore profitable opportunities in poor countries. Moreover, from the other side, information about export markets and how to get connected to business in developed countries is often a black box for local investors in developing countries.

Another form of asymmetric information is related to limited liability and microcredit. Micro-entrepreneurs, as other entrepreneurs, have private information about their own abilities and intentions. This makes it difficult for traditional banks to lend to them, since they have limited collateral (e.g., because they are poor, because property rights are non-existent, or because documentation of their ownership is not formalized). The invention of group lending with joint liability has at least partly solved this information problem by replacing financial capital with social capital as collateral and making group members each other's principals.

3.4 Imperfect competition

A fourth mechanism that may cause market failure is imperfect competition, that is, where one or a few players can dominate the market and set prices well above marginal costs. Typical examples are monopolies, where large public or private companies are protected in such a way that there is no competition in the product market. In that case, production is lower than what it would be in a competitive market, and product prices are higher. In some cases, there might exist a so-called "natural monopoly" if the fixed costs for entering a market are very high and the marginal cost very low, creating disincentives for competitors to enter the market.[5] In such cases, strict government regulation may be a better solution than breaking up these firms, which may lead to inefficient production.

In PSD, the importance of competition needs to be a cornerstone to ensure the efficient allocation of resources. Moreover, it is important to have the market structure in mind when analyzing the potential for PSD interventions. For example, it may be that the market structure, with its lack of competition, leads to the under-provision of knowledge, even in cases where one does not observe public goods or externalities.

3.5 Coordination failure

The possibility of coordination failure is related to the mechanisms of public goods, externalities, and asymmetric information. Such problems may be particularly important in countries with poorer information flows and underdeveloped institutions, where the private sector has fewer common meeting places to discuss common challenges. One interesting case is that of Ethiopian rose farms. One farm did not have the ability

[5] An example would be the case of providing public utilities. The fixed cost of installing water pipes or electrical lines is very high, and it would be extremely costly (and lead to few marginal profits) for a competitor firm to set up its own pipes or lines.

to ensure refrigerated air transport (that is, hiring a plane with refrigeration was too costly for that company), which made it difficult for the company to start exporting roses. As box 1 below describes, government action to ensure this transport made it feasible for a large number of farms to start production for export. Similarly, investors may agree that a common location for all exporters of shoes may be a good idea (to ensure knowledge spread, common infrastructure, and so on), but may find it difficult to credibly agree on where to locate. In such cases, the government or a donor may play a coordination role that can trigger investments.

3.6 Policy failure

Policy failure is the flip side of the market failure coin. While identifying market failures may be easy in theory, it is often difficult in practice, because there is a lot of "noisy" information to process. For example, interest groups have incentives to overstate the challenges in their own sectors in order to trigger support. In particular, old, established industries that are on the decline due to lack of technological innovation (to caricature, producers of landline telephones, typewriters, or mechanical calculators) or for other reasons may have strong interests in preserving their positions and may develop a strong lobby to that end.

Moreover, governments have a wide array of interests and motives blended into most policymaking issues. Hence, in PSD there is no reason to assume that causing general growth in income or employment, securing efficiency, or fostering new innovations are even among the main objectives for government interventions. Attempts to solve market failures may therefore lead to policy failures, in particular, when information is scarce and decision making processes are not transparent. This can, in turn, be used strategically by different agents to promote their own agendas under the pretense of removing market failures. When developing PSD policies, donors need to keep this in mind and develop robust, general policies that minimize the risks of policy failure. A good starting point is to select countries with governments that have a proven track record in implementing conducive industrial policies and that have shown a strong commitment to working along the PSD lines of interest to the donor. Having the same aims is also important, especially if poverty reduction is not among the main objectives of the recipient government's PSD policies.

Identifying likely market failures does not imply that governments or donors should intervene. As emphasized in the introduction, this is a controversial field in economics. As Pack and Saggi (2006) argue, there can be enormous difficulties with fixing market imperfections and implementing industrial policies – in addition to the challenges of rent seeking. In particular, they argue, policymakers have to be extraordinarily knowledgeable in order to implement the correct measures to address market failures properly, and they have to be very accurately informed about a range of complex questions, understand their relevance, and be able to assess subtle differences that may be important in practice.

4. Norwegian PSD: A brief overview

This section briefly describes the trends in Norwegian aid to PSD under the Norad Section for PSD. Unfortunately, the Norad database contains little detailed information about the nature of its projects. Hence a more thorough assessment of current and previous aid allocations would have necessitated a review of project documentation. This is beyond the scope of the present study.

Table 1 below provides an overview of the main budget posts in 2014, based on the current budget of this section. It shows that the total budget for PSD-related activities in 2014 was 255 million Norwegian crowns (MNOK). The largest part of this was to go to industry and trade related measures (195 MNOK, budget code 0161.70), while 50 MNOK was to go to environmental and renewable energy related measures (code 0166.74). All subcategories include to a differing degree the magnitude of the projects involved. Below we provide some examples of disbursements under some of the main categories.

Table 1. Overview of main budget posts (2014) in 1000 NOK

Chapter-post / Agr. no.	Title	Budget	Prognosis disburs.	Committed disburs.		Disbursed
0151.72.111	Nasjonale tiltak Afghanistan/Pakistan -hydrogeology	10 000	5 454	5 454		5 066
0151.72	Bistand til Afghanistan og Pakistan	10 000	5 454	5 454		5 066
0161.70.112	BMMP (Business match making)	22 400	15 786	15 786		14 859
0161.70.113	Pilot production and feasibility studies	24 236	11 876	10 211		3 816
0161.70.114	Environmental related	9 900	9 085	9 085		5 750
0161.70.116	Mainly training of local employees in different projects	11 300	13 442	9 634		2 753
0161.70.117	Styring av institusjoner og rammeverk	2 200				
0161.70.118	Import fra utviklingsland (NORADS potensielle liability)		1 000			
0161.70.119	Oppgavepliktige ytelser	2 100				
0161.70.212	Grunnlagsinvesteringer- (to 1 project- macademianuts)	364	364	364		218
0161.70.213	Blandede kreditter -(training and capacity buding)	22 000	4 518	4 518		
0161.70.310	Rammevilkår for investeringer - (diverse til NHO, ILO og andre NGOs)	60 543	88 037	61 478		40 095
0161.70.312	Rammevilkår for handel (diverse til UNIDO, WCO og andre ift handel)	40 500	45 072	45 072		20 798
0161.70	Nærings- og handelstiltak, kan overføres	195 543	189 180	156 148		88 290
0166.74.112	CDM - deforestations	1 200	1 324	1 324		541
0166.74.113	Rammevilkår for energi (diverse, både NGO og private)	30 000	27 096	27 096		18 118
0166.74.115	Forundersøkelser energy - særleg ift hydropow er, også etanol, solar,	18 800	10 801	8 301		1 192
0166.74	Miljø og bærekraftig utvikling mv., Fornybar energi	50 000	39 221	36 721		19 851
Total		**255 543**	**233 855**	**198 323**		**113 207**

Of the industry and trade related measures, around 100 MNOK was to go to projects related to general conditions for trade and investments, which is mostly support to NGOs and to institutions such as the United Nations Industrial Development Organization (UNIDO), the World Customs Organization (WCO), the International Labor Organization (ILO), and the Næringslivets Hovedorganisasjon (NHO). For instance, in one project, 7 MNOK was to go to WCO to support to capacity building in customs administrations. Likewise, ILO was to receive 4.5 MNOK for its program on entrepreneurship development and small and medium enterprise (SME) support in Myanmar.

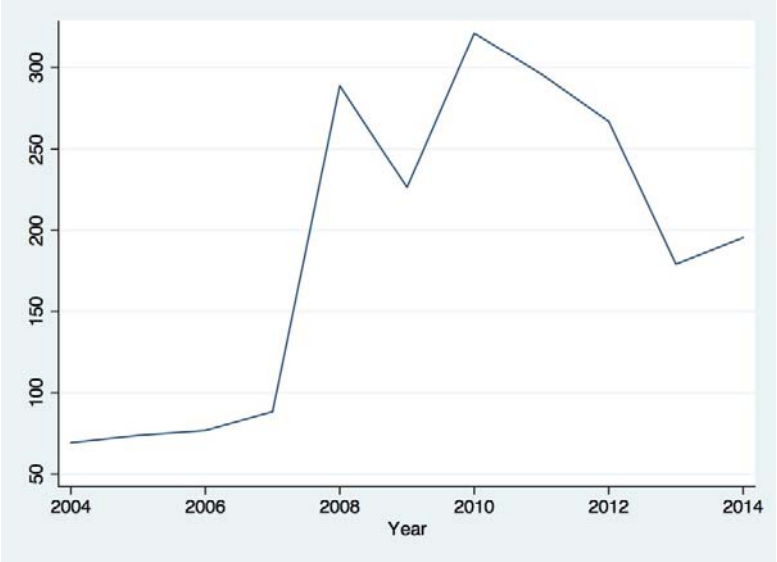
Furthermore, we note that around 45 MNOK was to go to support to established businesses, the biggest part to feasibility studies (24 MNOK), but also substantial amounts to health, environment, and safety (9 MNOK), as well as to training of local employees in the businesses (11 MNOK). Examples include support of 0.2 MNOK to Polinor AS for doing a feasibility study of media printing in Sri Lanka, 0.3 MNOK to Rogaland Kurs og Komptansesenter for doing a feasibility study in South Africa, and 0.4 MNOK to Agronova AS for a pilot production in Sri Lanka (converting organic waste into fertilizer). We also note that several of the projects were to support training of local employees, such as a 0.3 MNOK allocation to Laboremus (Uganda) and a 0.3 MNOK allocation to Norsk Dekor (Sri Lanka).

Moreover, around 22 MNOK was to go to business matchmaking projects, based on a program outsourced to Innovation Norway that helps connect Norwegian companies with potential partners in developing countries. The aim is to stimulate development through facilitating the transfer of knowledge, capital, and technology from Norway to the partner countries. In other words, if a Norwegian firm is interested in doing business in countries eligible for business matchmaking support and needs a business partner, Innovation Norway can assist it in the search process. If the search process is successful, Innovation Norway and/or Norad may provide additional support, for example, to finance further pre-studies or training. One example of this facilitative role is how Maritim Montering received a grant of support in 2008 to search for a partner in India to assist in ship production by producing ship interiors. Today, the Indian partner employs more than 150 people (Norad 2015).

In addition, 30 MNOK under the budget post for environmental and renewable energy (0166.74.113), was to go to general conditions (*rammeverk*) related to energy, such as a 9 MNOK grant to the Rural Electrification Program in Laos. Another 30 MNOK was to go to pre-studies within energy. One firm receiving support is Brighterlite Norway AS, which received 1 MNOK for a pilot study on solar energy in Kenya. Another firm is Differ AS, which received 0.9 MNOK for a study on the energy efficiency of improved cook stoves in Senegal.

The use of such relatively small direct instruments seems to have increased in parallel with the recent renewed interest in fostering PSD. Figure 3 below provides the recent trends in total disbursements under the Norad Section for PSD, and we can see a relatively high increase from 2007 towards a higher current level of disbursement.

Figure 3. 2008 disbursements, in MNOK, on budget post 161.70



We also note, however, the decline from the peak year in 2010 in disbursements for budget post 161.70. Nevertheless, since 2008 the average annual disbursement appears to have stayed at about MNOK 260, which is several times more than the disbursements from 2004 to 2007.

Figure 4 below shows the recent trends in disbursements to different agreement partners. While most categories (of course) have upward trends, we note in particular that disbursements to multilateral institutions, such as ILO, UNIDO or WCO, have increased substantially, while disbursements to governments in developing countries have been more volatile.

Figure 4: 2008 disbursements, in MNOK, on budget post 161.70, by implementing partner

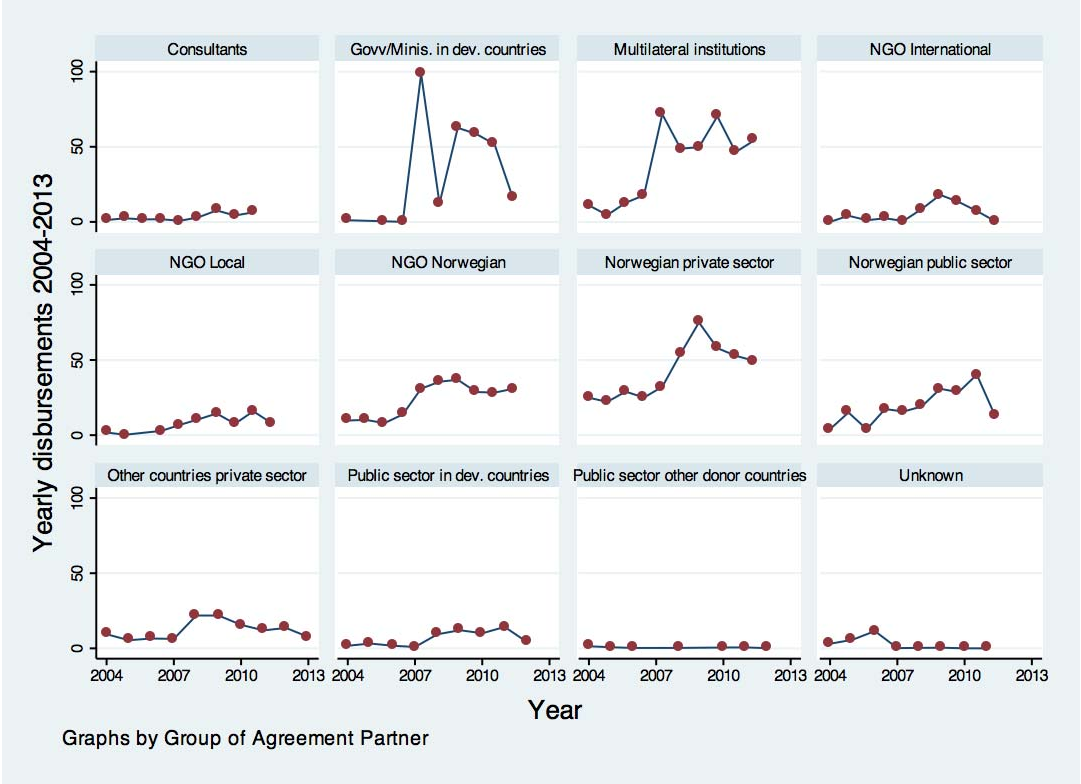
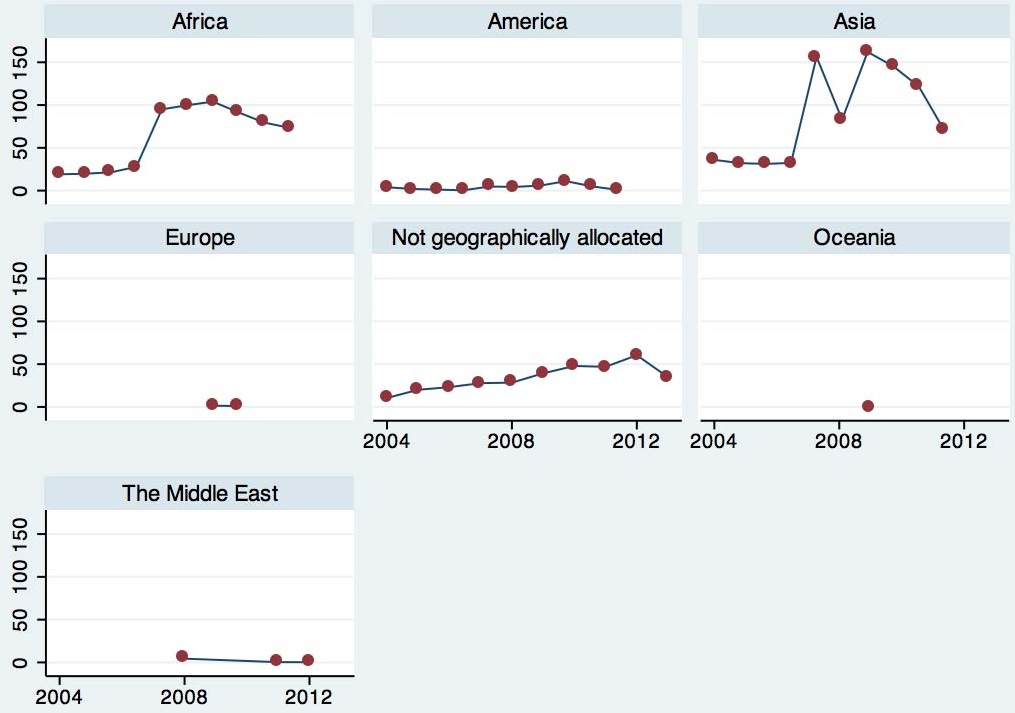


Figure 5 below provides the regional distribution of the disbursements. This shows that while disbursements to projects in Asia were higher than disbursements to Africa for some years, these regions received more or less the same during recent years. We also note the small share of disbursements to other regions.

Figure 5. 2008 disbursements, in MNOK, on budget post 161.70, by region



5. PSD instruments

5.1 Labour market policies

The main – and often the sole – asset of the poor is their labor (Fields 2011). Labor market interventions to increase the value and return to this asset are therefore important to poverty reduction. Active labor market policy has been and still is an important part of the Norwegian strategy to use employment as a means to support individuals to help themselves – as an alternative to unemployment benefits and social benefits for those who struggle to get a job. Conceptually, such instruments fit well with the theory of change for our study. Moreover, there is much institutionalized experience in Norwegian ministries and directorates with applying these instruments in the Norwegian labor market. This experience is also based on a cooperative tradition in Norway involving business associations, labor unions, and the government to solve labor market imperfections.

Almeida, Behrman, and Robalino (2012) provide a good overview of market imperfections in the labor market. Active labor market instruments take the starting point that the private market is not able to solve the free rider problem arising from the fact that within-firm training is costly for an individual firm and may not be worthwhile if another firm poaches the trained employee (poaching externalities). Workers may also be less interested in investing in their own training if employers have market power and are able to keep wages down (bargaining externalities). Moreover, coordination failures may exist if companies are not investing in a way that generates high-productivity jobs because there are no skilled workers, and workers do not invest in skills because there are no jobs (innovation and vacancy externalities). Credit market imperfections can lead to inabilities in financing investments in human capital for both the individual worker and the company. Finally, short-sightedness may lead to underinvestment in training, since the costs are borne today while the benefits will only be earned in the future.

These market failures thus lead to a less than optimal level of human capital in the market. Even within-firm training is lower than the efficient level. Moreover, in poor countries technical and vocational educational training often does not providing students with necessary skills, and the quality of general education is also low. A typical labor market program focused on PSD will thus enhance the skills of the participants to meet the requirements of the private sector demand.

What can the evidence tell us about the effectiveness of such policies? In programs to enhance employability there will usually be strong self-selection effects: people who are more eager and likely to get a job even without the program are also more likely to participate in the program. Hence, one may observe that participants in labor market programs get jobs after attending the program, but this may not be a result of the program if they would have gotten the job anyway. This makes evaluation difficult, and the likelihood of incorrect inference is high if based on a before-and-after assessment of participants only. Fortunately, for labor market policies there is quite rigorous evidence on likely impacts; most of this is summarized by Card, Kluve, and Weber (2010). They conducted a meta-analysis of recent rigorous evaluations of such policies, using evidence from 199 programs analyzed in 97 studies completed between 1995 and 2007 (albeit in developed countries).

One key issue for such studies is timing: When will the expected impacts materialize? How long after participation will the effect occur? Will it be a lasting effect, or will it fade out over time? In practice, evaluators must choose one and sometimes two points in time for the assessment. In Card, Kluve, and

Weber's (2010) meta-analysis, around half of the studies applied a short-term perspective that estimated impacts both one year and two years after the program was completed. About a quarter of the studies they examined had longer-term impact estimates about three years after completion of the program. They found that the longer-term effects were larger than what had been estimated in the short-term and that many programs with insignificant or even negative impacts after only one year had significantly positive impact estimates after two or three years. Hence, it seems to be important not to draw too firm conclusions from short-term studies that do not find any impact, as the effects seem to materialize over a longer time horizon.

They categorized the programs according to an array of features – the type and duration of the program, the characteristics of the participants, and the evaluation methodology. Large differences in duration, participant characteristics, and evaluation methodology all influenced the likelihood of achieving positive results from the program. They found that subsidized public sector employment programs had the least favorable impact estimates. Job search assistance programs had relatively favorable short-run impacts. Classroom and on-the-job training programs, on the other hand, tended to show better outcomes in the medium-run than the short-run. Interestingly, there were no large or systematic differences by gender – men and women tended to do equally well in such programs. In addition, programs for youth were less likely to yield positive impacts than untargeted programs, a finding that mirrored earlier literature reviews. All in all, there was substantial evidence in favor of active labor market programs enhancing the employability of job seekers through what they called "services and sanctions": measures to increase job search efficiency (such as counseling, monitoring, and job search assistance) combined with sanctions for those who did not comply with the program (Kluve 2010).

However, there is reason to believe that helping a jobseeker search for a job will not create more jobs. If the program is successful in helping a person to find – and get – a job, this may come at the expense of another eligible person (who would otherwise have gotten that job in the absence of the program). Some evidence is surfacing that this is in fact the case and that the net effect, taking into account those who are not in the program, can be very small (Crépon et al. 2012). Hence, in countries where a large portion of the work force is searching for a job, we cannot recommend services and sanctions as part of an active labor market policy.

When it comes to skills enhancement through basic training, only modest positive results were found in evaluations of the European programs (see Kluve 2010). However, given the different segments targeted for skills enhancement, one could expect higher impacts in poor countries where a larger share of high ability people are typically in training programs, as opposed to in the European setting where most high ability people are already employed. The World Bank has produced a comprehensive report with detailed guidance on appropriate approaches to training policies for workers to reduce the mismatch between what industries require and what is available in the labor market (Almeida, Behrman, and Robalino 2012). The report contains a detailed description of the specific market imperfections and proposed policy interventions and instruments. In case active labor market policies and instruments to enhance human capital in the labor market is of interest in Norwegian PSD aid, the report provides a good starting point for an in-depth inquiry of the most useful instruments that would apply under different country-specific circumstances.

The next category of instruments takes the human capital and education of the work force as a given and tries instead to develop economic activities that are suited to the existing labor force.

5.2 Industrial policy

Industrial policy is often associated with large national programs that put enormous resources into developing special economic zones to solve market failures arising from coordination problems or the externality of across-firm learning. For example, a failure to invest in infrastructure such as roads, electricity, and ports can be explained by these market failures. However, industrial policy instruments usually entail very large investments, and there is thus a limited role for small donations like the Norwegian PSD aid that is the focus of our study. Large donors – especially the World Bank, USAID, and DFID – are heavily involved in providing such aid, as are Norfund and similar investment funds. However, an important part of industrial policy involves strategic considerations and search processes where Norwegian PSD aid may play an important role. Moreover, the literature on industrial policy offers useful insight into principles for sound aid to PSD that can be applied to the other instruments discussed here.

Industrial policy aims to stimulate specific economic activities and to promote structural change. Thus, it is not necessarily about industry per se.[6] Moreover, a heated debate over industrial policy instruments stems from the difficulty of assessing evidence on the impact of these instruments. There are never any good counterfactuals available. For example, although the heavy-handed industrial policies of South Korea have been considered a success, it is difficult to attribute the country's economic growth and development to those policies, as it might well have fared similarly with much lighter state involvement in this area. Perhaps South Korea would have progressed even more with fewer industrial policies, or perhaps much worse. Rigorous empirical evidence on the impacts and effectiveness of industrial policies is scarce (Harrison and Rodriguez-Clare 2010). Nevertheless, much can be inferred from different countries' experiences in conjunction with the existing research (Rodrik 2008).

The discussion about industrial policy centers around structural change: in order to develop economically, and perhaps also along other dimensions, a country must produce new goods with new technologies and transfer resources from traditional activities to modern ones (Rodrik 2007). The first transformation in developing countries is hence often referred to as a move out of subsistence agriculture and into manufacturing, since labor and capital movement into industry yields much higher productivity and wages as compared to traditional agriculture. This structural change results in higher incomes, higher shares of employment in manufacturing, and lower poverty.

The empirically observed relationship between material poverty, on the one hand, and productive employment and structural transformation, on the other – particularly the recent experience in many Asian countries – has spurred many analysts to recommend industrial policies to remove the obstacles against capital moving to labor intensive manufacturing (Lin 2012). It is frequently argued that countries such as South Korea, Taiwan, and China have developed by implementing policies that overcame the market obstacles their investors faced in modern tradable industries (see Rodrik 1995, 1996). However, there has been a fierce debate in economics over what role governments, donors, and foreign aid have in stimulating these changes, particularly in picking winners and giving incentives or subsidies to sectors with high potential.

Rodrik (2008) argues that there is a strong case for applying industrial policies, since the market failures in the relevant markets (credit, labor, products, and knowledge; see section 3 above) are well documented. His

[6] There could be misunderstandings in relation to the meaning of industrial policy: the Norwegian word "industry" usually means "manufacturing," while in the debate discussed here "industrial policies" are policies to stimulate specific economic activities and promote structural change. Hence, policies regarding manufacturing, agriculture, and services may all be part of this framework.

position is that the argument against applying industrial policies concerns practical difficulties with implementation rather than conceptual foundations: it is all about how to do it, not about whether it should be done.

Others argue that sector specific support discriminates against other sectors and distorts the efficient allocation of labor and capital. They argue that support should be horizontal – that it should not favor any one sector but be open to all. Rodrik (2008) counters this by arguing that, in practice, even general and horizontal policies lead to favoring specific sub-groups and can lead to ineffective allocations. For example, if research and development (R&D) are subsidized because of spillover effects, companies that are more involved in R&D are favored over companies who, by their nature, are not and could not be involved in R&D.

Arguments against industrial policy have several dimensions. The first dimension is in identification: governments are not able to identify the sector or sub-sector where there is a potential gain from implementing such policies. They also cannot identify the market failure or constraint that prevents the private sector from reaping benefits without government intervention (Pack and Saggi 2006). Second, industrial policy is an invitation to corruption and rent seeking. Providing public support to private firms leads to an environment where the private sector is used to interacting with the government in a way that may lead to subsidies and support, which in turn opens the door for the private sector to request and extract benefits that distort competition and transfer rents to politically-connected entities. So goes the argument: entrepreneurs and businessmen spend their time in the capital asking for favors, rather than looking for ways to expand market shares, reduce costs, and increase profit and employment. Nevertheless, one could argue that the type of industrial policies that might work in one context may not be efficient in another context due to such political constraints. And even in countries with weak institutions, the risk of rent seeking can be reduced by having more general and transparent policies.

Hausman and Rodrik (2005) proposes several concrete interventions, some of which are suited for smaller donors or for limited geographical and sectoral areas. One proposal is to establish a co-financing facility to subsidize the costs of "self-discovery." They argue against the view that economic growth will ignite once a proper institutional framework is in place in a country, price distortion is eliminated, and sound economic policies are implemented. Even if those conditions are satisfied, there may not be growth unless entrepreneurs in the country know or can find out which investments would be profitable to undertake, that is, there is sufficient self-discovery.

Since self-discovery is costly for entrepreneurs, and the benefits of actually discovering a profitable opportunity will accrue also to the other entrepreneurs in the country, a typical market failure situation arises. But if the discovery, in turn, leads to more innovation and growth in the country, the benefits may accrue to even larger groups of people through job creation and rising incomes.

Hausman and Rodrik propose that, basically, the government (with support of donors) can initiate "contests" where private sector entrepreneurs bid for public support by proposing potential investments in substantially new activities that have the potential to provide learning spillovers. The support could take many forms, although they recommend that such a scheme would typically co-finance feasibility studies aimed at discovering "new" (for the country) economic activities.

Conceptually, however, many types of "prizes" could arise under such a contest. These could take the form of public goods and hence be of use to others (in contrast, a feasibility study would typically be regarded as private information). In order to structure such support and maintain a strategic role for the contests and prizes, as opposed to financing feasibility studies and company support on an ad hoc basis, a programmatic

approach should be applied with resources on the donor side to ensure strategic use of the support. This could be structured as strategic fund specializing in such contests; we return to this in section 5.7 below.

Importantly, identifying new business activities should be a process of self-discovery and ongoing learning in which private companies themselves conduct the searches and assessments. In exports, for example, Hausmann and Rodrik (2003) define "self-discovery" as the process of establishing the cost structure of an economy for the production of goods that are already available in the world market. To be successful, policies need to focus on specific activities; the analysis of general factor endowments and a comparative advantage approach is too broad to be useful for practical policies, since hundreds or even thousands of products may be included in such an approach.

Box 1. Promoting sub-sectors based on entrepreneurial experimentation: The case of the rose industry

Commercial horticulture farming in Ethiopia has grown tremendously in a short period of time, fueled by international capital inflows and access to the global flower market. At the time of takeoff, in 2002, only three commercial flower farms were in operation, one international and two domestically owned. Investment increased exponentially over the years – from 10 farms in 2004 to 67 in 2007 (Gebreeyesus and Sonobe 2012). Recent figures show that this growth has continued: there are now more than 100 horticulture farms producing for export, and they employ around 180,000 people (EHPEA 2013). Today Ethiopia is the second largest flower exporter in Africa, and the fourth largest non-EU exporter to the EU market. The sector has become important to the overall Ethiopian economy and is now among the three top export commodities for the country, earning 34% of the foreign exchange (CSA 2013).

How did this happen? The takeoff did not occur until the government introduced an industry specific support policy in 2003. Before that, a few local investors had started commercial rose farming in the mid-1990, but ceased after a short period of production. The first horticulture farm that was sustained over time was the Dutch-owned Golden Rose, which was established in 1999. It was soon accompanied by a couple of locally owned rose farms, but the level of production was low and there was little interest in the sector, either from investors or from the government. Nevertheless, the role of these few private companies in discovering the profitability of the sector and starting it up was a necessary condition for the sector's expansion (Gebreeyesus and Iizuka 2011).

How the Ethiopian government contributed to unleashing the potential of the horticulture sector is well documented, as is the sector's enormous effects on poverty (mainly from salaried employment at the farm for the poor) (Gebreyyesus and Iizuka 2011; Villanger, Getahun, and Solomon 2014). The government strongly backed the industry's expansion in the initial phase due to its potential for generating the foreign exchange that was crucial for the nation's development agenda. The 2003 policy to attract investors to the sector included measures to improve the main bottlenecks to the horticulture industry. For example, the policy reformed logistics, coordinated air freight, introduced tax holidays, facilitated access to finance, and specified a land policy that included leasing arrangements with guarantees to the security of investments.

One example of a market failure that the government addressed was transport. A key obstacle was that no single farm company could alone obtain refrigerated air freight. The government took the role of a coordinator and induced Ethiopian Airlines to lease cargo planes. This was a typical coordination failure: since no single company found it profitable to invest in refrigerated air transport, the service was unavailable, and this unavailability prevented the establishment of rose farms. Once the government made the investment to ensure such freight, there was a boom in investments in the sector.

The process of discovery requires entrepreneurial experimentation, such as was the case with the Ethiopian horticulture industry. However, experimentation can be costly and involves large risks, particularly because a trial-and-error approach will necessarily lead to some failures and economic losses for the entrepreneurs. In fact, this approach may result in more failures than successes, which in turn could discourage experimentation by future entrepreneurs. Hence, the government's strategy should be to stimulate the discovery process and ensure that any potential for profitable activity is explored (Hausmann and Rodrik 2006), especially in the case of products that are associated with higher productivity levels (Hausmann, Hwang, and Rodrik 2007). Here donors can play an important role by helping to cover the costs of entrepreneurial experimentation and thereby helping to strategically generate knowledge.

The instruments currently in use that can be applied under the industrial policy heading range from trade policies, export processing zones, foreign direct investment strategies, and exchange rate management to micro interventions at the subsector level (such as was highlighted for the rose farm industry in Ethiopia, box 1 above). The key for Norwegian aid to PSD is to provide strategic support. For example, the potential for rose farm production in Ethiopia was first confirmed by one of the initial entrants (Golden Rose) after it hired a consultant to do a feasibility study. More broadly, the World Bank initiated a wide study based on comparative advantage models to analyze the profitability of various products in Ethiopia, Vietnam, China, Tanzania, and Zambia (Dinh et al. 2012). The report diagnoses constraints in five manufacturing subsectors in Ethiopia (apparel, leather products, agribusiness, wood products, and metal) and proposes policy reforms to address these constraints, based on the successes of other countries. For Norway, one strategy could be to tap into these broader efforts and finance some components, or to initiate broad studies in themselves.

Given the importance of government support to ignite industrial growth under this framework, it would be useful to institutionalize a close relationship between governments and the private sector. Hausman and Rodrik (2005) recommend establishing or strengthening existing forums where businesses and sectoral associations come into close and regular dialogue with the government. This is important for the strategic aspect of supporting discovery: once companies have identified obstacles to profitable investment, the government and donors need to be involved in helping to remove these obstacles and facilitate expansion, as illustrated in the Ethiopian case presented in box 1.

Such a strategy is very different from the current Norwegian approach of supporting feasibility studies, pilot production, and business matching. The difference is apparent both in how guides to grant schemes are internally documented and in how the programs are carried out in practice (Norad 1998; Odegard, Mogen, and Kaya 2013). Currently, Norwegian PSD programs provides a subsidy to Norwegian companies for establishing joint ventures with companies in relatively advanced developing countries (in 2010, main recipients included South Africa, India, Vietnam, and Sri Lanka). The aim has been to foster the transfer of technology and exchange of management and business skills between the companies. Any Norwegian company that applies for support and satisfies some minimum requirements will receive this type of support. However, the available evidence suggests that these programs have negligible impacts on employment and poverty (Devfin Advisors 2010a and 2010b).

Nevertheless, some similarities exist between current Norwegian PSD aid and the idea of strategic discovery; these similarities could help facilitate the transformation of the current practice into a coherent strategic approach with the potential for impacts beyond the direct recipients of aid. However, the knowledge to assess each relevant market and distinguish innovative opportunities from others must be outsourced from Norad, perhaps to private consulting firms that actually do feasibility studies and market analysis on a commercial basis. On the other hand, the function of compiling evidence on obstacles identified through these feasibility studies should rest with the institution that handles those applications. In addition, there needs to be a strong commitment and interest in this type of aid from the recipient

government's own side. If not, it is not likely that the government will take the necessary actions to remove the barriers identified and, hence, the whole strategy will be at risk. We return to the organization of such a program in section 5.7 below.

Finally, an important takeaway from this literature is that the specific market failures that provided a rationale for industrial policy interventions are country specific; thus, a careful analysis is required in each case (Rodrik 2010). The argument is convincing that most developing countries should have an industrial policy in order to stimulate structural transformation and move out of poverty. Hence, for the purpose of this paper, the cart should not be put before the horse. The selection of countries in which Norway contributes to industrial policies – as well as the actual instruments used – should depend on what market imperfections hinder private sector expansion. Moreover, it is important that no requirements expressly or implicitly favor Norwegian companies in such a scheme. In contrast to how Norwegian PSD aid has previously been designed (see Norad 1998), the implementation of aid support for industry policy should be open to all companies interested in exploration and search activities. The recipient country's own entrepreneurs may very well be those who are best placed to identify profitable opportunities in their own country.

Nevertheless, we point out a candidate where Norway could initiate the proposed strategic PSD approach outlined here – Ethiopia. A crucial condition is in place in the country: the government would be an eager partner to remove barriers to private sector investment when identified. Moreover, because of the positive experiences of present industry expansion, as well as the presence of large donors that can address the large-scale challenges (e.g., infrastructure and investment climate), there are likely to be large opportunities for Norway to play a strategic role in the country. Finally, Ethiopia is one of six stable developing countries that has been chosen as a main partner in Norwegian development aid.

5.3 Micro and small enterprise development

Job creation is crucial for structural transformation and large-scale poverty reduction. The evidence is conclusive: job creation can account for much of the reduction in extreme poverty witnessed during the last decades (World Bank 2013). However, given the long-term horizon in which structural transformation takes place, this section explores what the PSD framework can achieve in terms of poverty reduction in the shorter term.

The literature finds that, on average, firm size and wage levels are strongly and positively related – larger companies pay higher wages (El Badaoui, Strobi, and Walsh 2010). In addition, those who find their living in the micro and small enterprise (MSE) sector have a high likelihood of being poor. Moreover, a large share of the work force in developing countries finds a living in the MSE sector. Taken together, this can have important implications for policies aiming to use PSD as an instrument in poverty reduction, since stimulating the growth of MSEs directly reaches a large segment of the poor. But is that likely to be an effective poverty reducing instrument?

Conceptually, growth in the MSE sector can reduce poverty along two main dimensions. First, if one is able to create more MSEs, this will create employment for more poor people, moving some out of unemployment and reducing underemployment for others. Second, growth within existing MSEs can increase wages for those who are already employed in those companies – something that not only contributes to lifting current employees above the poverty line but also may induce the MSEs to hire more workers.

Unfortunately, however, very few MSEs actually do grow their businesses; most of them employ only themselves on a permanent basis without any income growth (Nichter and Goldmark 2009). Moreover, a large fraction of the employment created in this segment is very low-paid, is temporary in nature, and provides fewer paid working hours than desired by workers. The sector is characterized by having few entry barriers, so competition is fierce and margins are low. This point is illustrated by observing such markets, for example, the myriad of small shops that sell almost identical goods in some cities. There does not seem to be a compelling argument for using public funds to create even more of these enterprises.

DFID has taken a novel approach that seems to be promising. It has used PSD funding to reduce poverty in specific segments through market development and has received much attention and positive assessments (ICAI 2014a). One such success story is Katalyst M4P, which works directly with the poor to enhance their outcomes in the market and includes a process for searching for new and profitable opportunities that is similar to what we propose as a more general instrument in the previous section (5.2). The approach is elaborated in box 2 below. The Katalyst approach has become an important benchmark for new programs, and DFID is preparing for a roll-out of new interventions for poverty reduction schemes using the same concept in Kenya, Nigeria, Mozambique, Nepal, Bangladesh, and the Occupied Palestinian Territories.

Box 2. Improving competitiveness of the poor: Katalyst

KATALYST is a five-year project jointly funded by DFID, SDC (Swiss Development Cooperation), Sida, and CIDA, implemented by Swisscontact and GIZ and working with the Ministry of Commerce of Bangladesh. Donor funding totals £13.9 million over 5 years. The objective is to impact on poverty alleviation by improving the competitiveness of selected sectors in the economy. It aims to enhance enhance competitiveness by developing business services markets that improve MSMEs' access to knowledge, information, and skills vital for growth. It also works to improve the enabling environment so that MSMEs reduce costs and risks in setting-up and running businesses.

Poverty reduction. Entrepreneurs buy inputs, shop around for information, and visit trained retailers from whom they get advice on what inputs to use. Katalyst works on improving access to these markets and public services for the poor who are or seek to become entrepreneurs. The benefits for entrepreneurs can include better prices, higher sales, better yields, or lower risk of crop failure. In manufacturing sectors, like plastics and machine maintenance, the training of machine operators also leads to safer working conditions.

Market development. Katalyst staff initiate interventions by undertaking analyses to identify sectors with the greatest potential to benefit the poor (generally agricultural, small-scale industrial, and service sectors), to ascertain the constraints faced by the poor, and to brainstorm ways to tackle them. They then broker cost-sharing partnerships between private companies and facilitators to set up initiatives to tackle these constraints. When the need arises (for example, where regulations hinder market development), Katalyst staff also act as intermediaries between companies and local government. After staff began to gather knowledge about what works in practice, their focus shifted from innovation and analysis towards outreach, replication, and dissemination of approaches, so that they could benefit as many as possible.

There are three sets of targets that Katalyst phase II aims to contribute to at the outcome/impact level:

1) Jobs: It aims to help create more than 550,000 jobs for poor men and women.

2) Income: The initial target is to support a 5% increase in the small enterprise sector's contribution to GDP and to increase the accumulated net income of farmers and small businesses by GB£ 185 million.

3) Outreach: The program hopes to increase productivity in 2.3 million enterprises and commercial farms.

In addition to these impact level goals, Katalyst phase II was designed to support several output level objectives:

- to introduce up to 80 new services and support 15,000 new service providers;
- to help ensure that, of these 80 new services, at least 70% will continue to be delivered and 5,000 will show a sustainable change in performance, innovation, capacity, relationships, and/or investments;
- to facilitate 4.1 million farmers and small businesses in using these services and/or experiencing changes in their business practices (e.g., skills, technology, and/or social responsibility);
- to promote at least 10 advocacy initiatives and public private partnership models for improved public service delivery; and
- to communicate its approaches and lessons learned to key stakeholders (including public bodies, private sector representatives, donors, and their projects).

Poverty reduction along the second dimension specified above – to foster within-enterprise growth – seems more promising than general attempts to make the number of MSEs grow. An important research finding is that MSE operators are very different with respect to background, abilities, motivations, and attitudes, and some will actually achieve impressive growth rates both in terms of employment and income (de Mel, McKenzie, and Woodruff 2009b; Nichter and Goldmark 2009; Günther and Launov 2012). Moreover, a key

issue that has received little attention in PSD aid is that the impacts of support programs can be different for different types of entrepreneurs, something that is important for program design.

If market imperfections differ for microenterprise sub-groups, then interventions should differ accordingly. To exemplify, giving grants to microenterprises randomly drawn from a list of all microenterprises in a geographical area, as de Mel, McKenzie, and Woodruff (2008 and 2009a) and Fafchamps et al. (2011) did, will likely result in lower impacts than giving grants only to those microenterprises that are credit constrained. Box 3 below summarizes the latest research on microbusiness and points out that general programs may not be the most effective tool.

Box 3. The poor are not credit-constrained entrepreneurs

Microenterprises are an important source of employment. Developing such enterprises is a key policy concern in most countries, in particular, in developing countries where they employ more than half of the labor force (Hipple 2010; de Mel, McKenzie, and Woodruff 2008). Lack of access to financial capital has received much attention from donors and practitioners, as witnessed by the rise of the microfinance movement (de Aghion and Morduch 2010).

There used to be a lot of optimism about the power of microfinance to enable the poor to lift themselves out of poverty through entrepreneurship; the prevailing view was that the poor were natural entrepreneurs who would grow out of poverty if they only got a chance (Banerjee and Duflo 2011). A growing literature shows that this is likely not the case. Early evidence on the impact of microcredit was often anecdotal and based on impact studies that failed to disentangle causation from correlation (Banerjee et al. forthcoming).

While a few years ago there was practically no convincing evidence about the impact of microcredit, several randomized control trials have been conducted the last years. Six new randomized evaluations are being published in a special edition of the American Journal of Applied Economics, forthcoming in 2015. These studies use a wide range of methods, experimental design, and econometric strategies, and are conducted in both rural and urban areas on four continents. The microcredit programs evaluated also vary substantially, with different types of loan products and borrowers.

The evidence confirms that microcredit does not appear to be a miracle cure for poverty; it is far from as transformative as many microcredit proponents initially argued. At the same time, however, these studies have concluded that, on average, microfinance does not hurt the poor, as some academics and practitioners have recently argued (including the NRK-documentary “Trapped in Microdebt”). Furthermore, the studies have revealed that pick-up rates of microcredit are modest; most households and entrepreneurs do not want to borrow, indicating that microcredit is not a instrument generally suited for everyone.

Studies that look into differences in impacts for different types of entrepreneurs support the importance of selecting the right entrepreneurs into the program. McKenzie and Woodruff (2008) and de Mel, McKenzie, and Woodruff (2008) found that giving grants to randomly selected poor microenterprises resulted in higher returns to high ability, credit constrained firm owners. De Mel, McKenzie, and Woodruff (2010) found that only 25% to 33% of microenterprise owners had attributes such as ability, motivation, and ambition similar to that of large firm owners. In the literature focusing on developed countries, motivation, aims, and hard work are singled out as key characteristic of the entrepreneurs behind the "gazelles" – the highly successful entrepreneurs (Rasmussen 2014).

This finding has potentially important implications for Norwegian PSD policies, since MSE programs targeted at highly motivated/high ability entrepreneurs may create higher returns, which in turn may lead to more employment and poverty reduction compared to identical, untargeted programs. Moreover, entrepreneurship development programs (both finance and training, including business development services) that are open to all applicants generally do not result in increased incomes or employment (Cho and Honorati 2013).

PSD instruments targeted at growth-oriented microenterprises will always encounter a problem of adverse selection, however. This segment consists of a very large share of self-employed people with few other alternatives and no aspirations for growth, yet many will be interested in enrolling in a help program with the expectation of getting some benefits (Günther and Launov 2012). Many among the self-employed are not "true" entrepreneurs, but are better labeled "survivalists" due to their sole focus on making a living and maintaining their current status, as opposed to on growing and accumulating profits. Hence, little should be expected from such programs apart from small reductions in poverty among the participating individuals. This might nevertheless be desirable from the perspective of the donor, but would be considered a safety net intervention rather than a PSD program.

Small businesses – those that at least employ a few other people – seem to have a large potential for benefiting from PSD funding, although the evidence on the impact of PSD programs is very limited for this segment. However, there is plenty of evidence that entrepreneurs in this sector can grow their businesses, often at tremendous rates (in both income and employment) (Triodos Facet 2010; Nichter and Goldmark 2009; Klinger and Schündeln 2011; Ayyagari, Demirgüç-Kunt, and Maksimovic 2014). In China, small companies with less than eight employees created between 15 and 20 million jobs in a remarkable five-year expansion period from 1982 to 1987 (Kanamori and Zhao 2004). The question in our setting, however, is not whether businesses grow, but whether PSD programs can ignite or increase growth. Klinger and Schündeln (2010) found that coupling business idea competition with business training seemed to generate positive effects on business growth, but little is known about the success of other types of instruments in this segment.

Nonetheless, the potential for growth in small businesses seems high, since two prevalent market imperfections pose substantial obstacles for small enterprise development:

1. lack of access to financial capital, and

2. underinvestment in human capital.

In many markets, there are plenty of opportunities to acquire microfinance. However, this does not address the finance market imperfections facing small business owners, since they usually require larger loans than what microfinance institutions can offer. On the other hand, these entrepreneurs are often not served by formal banks, since their desired loan amount is too small to be commercially interesting (Triodos Facet 2010). Box 4 provides experiences from Tanzania.

Box 4. Reaching the missing middle: Narrowing the gap between microfinance and formal banking

Microcredit may create opportunities for self-employment and microbusiness, as it may reduce market failure in financial markets. While many microcredit clients climb to the top of the microfinance institutions' loan ladders and continue to take the maximum loan amount offered, few of them graduates into formal banking.

In the much acclaimed book *Poor Economics*, Banerjee and Duflo (2012) argue that most poor entrepreneurs who receive microloans, no matter how much of their profits they reinvest, will never be able to accumulate enough capital (and thereby obtain enough collateral) to get a formal loan that would enable them to invest in modern production technologies. For instance, not matter how hard a tailor with three employees works, he will never be able to accumulate enough funds to invest in modern production equipment that could allow him to reach economies of scale and export products outside his home market. For instance, in PRIDE Tanzania, the biggest group loans the bank offers are 1,000,000 Tanzanian shillings, or around 3500 NOK, which is enough to buy a few sewing machines and some fabric, but much less than what would be required to build even a very small factory.

A few microcredit clients with extraordinary talent have been able to grow into a small or even medium sized business. But if most entrepreneurs themselves realize or believe that they will not be able to make it big, why would they reduce their current consumption in order to save?

From a donor perspective, efforts that can reduce the gap between informal and formal banking may be a next important step. These would include policies aimed both at raising the loan ladders in microfinance and at lowering the thresholds in formal banking. Little research exists on how this could be done; therefore, joint research and donor efforts on this topic could potentially have strong impacts on knowledge about entrepreneurial growth and poverty reduction.

Stimulating enterprise growth in the high ability segment by addressing the market imperfections in both human and financial capital hence appears attractive from both an efficiency and an equity perspective. However, the mechanism that will lead to poverty reduction in such a program is likely to go through the creation of jobs for poor people; the high -ability entrepreneurs themselves are usually not below the poverty line (Triodos Facet 2010).

There also seems to be a large gendered constraint to developing SMEs. In a recent policy note summarizing the evidence on supporting growth-oriented women, the World Bank (2014) concluded that there was a need to (i) experiment more in service design and delivery; (ii) renew focus on strengthening the engendering of support programs to more specifically address gender-specific constraints, such as social norms, entrepreneurial preferences, and institutional arrangements; (iii) change the public discourse surrounding female entrepreneurs; and (iv) pay more attention to factors that induce female entrepreneurs to diversify into higher value-added activities. Moreover, the World Bank suggested that mentoring, consulting services, and networking could be important add-ons to existing practices of providing training in basic business practices. It also advocated for strengthening SME development by supporting more gender-specific content in all SME programs.

How to create the most employment for the poor out of a given PSD budget depends on the prevailing market imperfections and which high-potential entrepreneurs have been barred from growing their businesses. This has important gender implications, as women in many developing countries have traditionally been constrained in their economic choices. Poor women with entrepreneurial talent who were prevented from utilizing their abilities in business – due to cultural norms restricting education, access to capital, or the economic participation of women – could represent a high potential. Assuming that entrepreneurial ability is equally distributed across gender from birth, large gains can be expected from enabling women to develop their businesses in countries where such endeavors have been mainly reserved for men. Indeed, Cho and Honorati (2013) suggest that financial support is more effective for women entrepreneurs compared to other interventions to improve business performance. However, the literature discussed above, which found small or no impacts from various entrepreneurship programs for the general segment of poor, also found few or no impacts for female entrepreneurs as a group. Hence, a careful assessment of the local conditions is warranted before designing a women-focused program, as it may not be feasible for an entrepreneurship program to remove gender specific barriers and cultural constraints. Moreover, the selection of participants based on their abilities, growth orientation, and ambition seems to also be a prerequisite for women.

The selection of participants that will result in the highest impacts thus seems to be important for success, but difficult to apply in practice. Nevertheless, personal characteristics that might influence the effect of a program (like motivation, abilities, and persistence) are all characteristics that are applied to screening candidates in other settings, for instance, to find collateral substitutes (such as in psychometric testing or when deciding whether to lend against cash flows or previous credit history) or to choose leaders or managers (such as in personality testing). The rationale for focusing on growth-oriented women, like in the World Bank's Women Entrepreneurship Development Project (see box 5 below), may be strong in some developing countries.

Box 5. The World Bank Women Entrepreneurship Development Project

The Women Entrepreneurship Development Project is a US$ 63 million (NOK 410 million) program to increase the earnings and employment of MSEs owned or partly owned by women in Ethiopia. The project tailors financial instruments to the needs of the participants, ensures the availability of finance, and supports the development of their entrepreneurial and technical skills.

There are two main components to the project. The first component – access to microfinance – aims to facilitate access to financial services suited to female growth-oriented entrepreneurs by providing working capital and investment finance through a dedicated line of credit. A female entrepreneur herself must convince the microfinance institution (MFI) that her business plan is worth financing, and at that stage there is a clear separation of growth-oriented entrepreneurs from the rest. This component aims at improving the capacity of existing MFIs to serve female growth-oriented entrepreneurs with tailored financial products and provides technical assistance to the MFIs on how to manage larger loans. Implementing this component resulted in a tremendous increase in average loan sizes, from around NOK 3,000 to NOK 80,000 for growth-oriented women entrepreneurs.

The second component of the project concerns underinvestment in human capital for this segment. The project supports improving entrepreneurial skills, technology, and cluster development and is aimed at helping growth-oriented women develop their entrepreneurial skills, facilitating their access to more productive technologies that can raise their incomes, and helping unleash synergies from clustering.

In selecting the participating MFIs, the program was announced to all MFIs in the market. All interested MFIs could apply for participation with the intent that all MFIs that were willing to participate would be included, as long as they met some prerequisites for sound banking. Hence, the intention was to avoid giving any MFI an advantage over others in the market. However, when it comes to crowding out of other financiers, like banks and money lenders, there is reason to believe that the program did not have any such effects, as clients took much higher loans than before and provided feedback that women entrepreneurs were highly credit constrained. The project also provided a stepping stone for discussing policies that could further support growth of the sector, including a new World Bank SME lending program and policies to increase access to finance more generally in Ethiopia.

An important finding in the literature is that of the financial sustainability of MSE development programs. Although access to finance is relatively straightforward to maintain after a donor project closes, there have been huge challenges in maintaining entrepreneurship training in the same manner. The main issue is that entrepreneurs are usually unwilling to pay for training or business development services (McKenzie 2014; Forss and H. Schaumburg-Müller 2009). Hence, institutionalizing those services within government organizations with similar purposes is important.

Several donors are involved at all levels of MSE support; in particular, the International Finance Corporation (IFC) has taken the lead in this arena. Norwegian experiences with channeling funds to the IFC for small business development seem to be largely positive (Devfin Advisors 2010a and 2010b). Box 6 below illustrates the collaboration between DFID and the IFC to support SME development ranging from macro-level interventions (e.g., general registration, regulation, and taxation) to micro-level interventions (e.g., advice to individual businesses).

level interventions (e.g., general registration, regulation, and taxation) to micro-level interventions (e.g., advice to individual businesses).

Box 6. IFC's Enterprise Growth and bilateral add-ons.

Enterprise Growth is an IFC-implemented regulatory reform and SME competitiveness program supported by DFID (GB£ 40 million). Half of DFID's support is to be used to provide technical assistance to simplify and, where relevant, automate processes that businesses encounter and use, for example, in the areas of business registration, taxation, and commercial justice or alternative dispute resolution. A total of GB£ 5 million is being provided to the Bangladeshi activities of the IFC's South Asia Enterprise Development Facility, which works to improve the competitiveness of SMEs and provides advice to businesses to improve their productivity and reduce their environmental impact (focusing on the textile, poultry, and seed sectors). A third component has provided GB£ 15 million for technical assistance to support a US$ 120 million World Bank loan to create special economic zones, which will provide businesses with additional land and infrastructure in which to operate.

Source: DFID (2012)

One also finds more targeted interventions in SME development, including those that facilitate trade linkages. Despite the decision not to include trade issues in our review, we include one example to show how the private sector can be involved in innovative search and trial – in a form that mirrors the recommended industrial policy approach elaborated on above. The example is the DFID Food Retail Challenge Fund, which provides funding to help Sub-Saharan African businesses improve their products, services, marketing, business models, product standards, and supply chains and thus encourages UK retailers to source new goods from this region. One of the fund's projects supported British tea companies in sourcing more tea from Rwandan farmers into their blends. By using PSD aid to foster improved product standards, the project has helped Rwandan tea farmers to increase their incomes and compete more effectively in global markets. The approach of using such instruments to improve products for MSEs, even if it is only for the purpose of capturing market shares locally, can still be a viable route to poverty reduction, even if the trade linkage is not included.

In summary, there seems to be a niche for Norwegian PSD aid to promote entrepreneurship development programs aimed at growth oriented, high ability entrepreneurs in the MSE segment. A women-oriented program in countries where women traditionally have been barred from using their entrepreneurial talents may have the highest impact. The exact nature of any such program would need to be further explored, but would typically include addressing the market imperfections identified above – either as an integrated Norwegian program or as an add-on to other donors' initiatives. It would also require that the gendered barriers be mitigated in such a way that the female entrepreneurs' potential could be tapped.

5.4 SME finance

Given the advantage of getting finance for investments and the expansion of businesses, as opposed to accumulating the funds through personal savings and hence investing at a later point in time, it may not be too surprising that a well-functioning financial system has been found to be pro-poor. Research conducted by Beck, Demirgüç-Kunt, and Levine (2004) indicates that the income of the poorest sector of society grows faster than average GDP per capita in countries with better-developed financial markets. Moreover, they found that income inequality decreases more rapidly in countries with higher levels of financial intermediary development, so that the incomes of the poor are actually growing at a higher rate than those of the rich. Similarly, Ayyagari, Demirgüç-Kunt, and Maksimovic (2008) found that undertaking financial sector reforms to relax financing constraints was likely to be the most effective route to promoting firm growth.

Much information is available about finance market imperfections in poor countries. In fact, entrepreneurs themselves often identify a lack of finance as the key obstacle to enterprise growth (see McKenzie 2014). Interventionist policies such as government regulated interest rates can contribute to high market distortion, but distortions may also be due to underdevelopment of the market itself, for example, the lack of a credit registry, undervaluation of assets as collateral, excessive collateral requirements, the exclusion of certain assets as collateral, the lack of a legal framework for handling bankruptcy, or difficulties in managing defaults. In such a market, financial institutions often will not provide smaller loans to SMEs, mainly because of the high transaction costs involved in the lending process and the high risk intrinsic to SME lending; this can act as a barrier against expansion in the SME segment (Beck and de la Torre 2007). Moreover, market imperfections can lead to cost or information barriers that prevent financial institutions from lending to SMEs, for example, if deficiencies in institutions or market infrastructure make it expensive to gather information on debtors or projects, to value assets appropriately, or to monitor and enforce contracts (de la Torre, Soledad Martinez Peria, and Schmukler 2007).

Another vehicle that is typically used to facilitate finance to SMEs is impact investment. Impact investment is a new approach of raising capital where financial rates of return can be lower than standard commercial expectations, but the borrower is obliged to deliver positive social impacts beyond what would normally be expected from a commercial agent. DFID, for example, argues that impact investment funds can help expand the pool of capital available to fund innovative solutions for development and to help develop sustainable financial and investment markets that work for poor people (DFID 2011). However, there is not much evidence on how this works over time. DFID itself seems to use the instrument in an exploratory way. It has written,

DFID will explore how to help impact investment contribute to creating and developing sustainable businesses that employ poor people and bring affordable, life changing products and services to them. Impact investing can also help to act as a stepping stone to sustainable private finance for businesses that cannot initially demonstrate sufficiently high returns to private financiers. (Ibid.)

Good intentions and negative returns are not a sustainable concept, since at some point the capital will be depleted and capital owners will need to replenish. At this point, the scheme looks much more like charity than a resource for developing viable private enterprises.

In general, donors should make an informed decision about whether they would like to contribute to increased access to finance under the prevailing circumstances in a market or whether they would prefer to contribute to developing the market into a functioning market for SME finance (or both). Since the latter task is highly specialized and requires a large team of dedicated specialists on the topic, we recommend that, if Norway is interested in supporting SME finance, it should focus on the former.

Nevertheless, even issues like lending to microfinance institutions, capitalization, and systems development of financial institutions are highly specialized and required in-depth competency among staff. Accordingly, in cases where larger donors like the IFC, the World Bank, or DFID are already engaged in financial market development, Norway might want to consider providing add-ons to ongoing interventions, with the aim of increasing access to finance through both technical assistance and capital interventions. Hence, country selection should be based on whether it is worthwhile to support access to finance under the prevailing conditions.

5.5 Credit guarantees

One of the most popular direct interventions in support of SME credit in recent years has been the government-backed partial credit guarantee (Honohan 2010). According to Green (2003), well over 2,000 such schemes exist in almost 100 countries. They usually target a particular sector, region, or category of firms or individuals that are thought to be underserved by the private financial sector. In addition, all of the multilateral developing banks have guarantee schemes (Honohan 2010).

Despite their popularity, very little research has been done to investigate the likely impacts of these schemes. The existing evidence is mixed. Some find that credit guarantees have had a positive effect on the ability of SMEs to obtain loans. For example, Ridding (2007) found that in Canada around 75% of guarantees are used by firms that would not have been able to obtain credit in the absence of the scheme. Similarly, Larrain and Quiroz (2006) assessed a guarantee scheme in Chile and found that the program increased the probability that small firms could get a loan by 14%. Others have found that loose eligibility criteria, low fees, and overly generous coverage ratios may result in the provision of guarantees to enterprises that would have obtained credit anyway (Bechri et al. 2001; Honohan 2008).

The World Bank undertook a synthesis evaluation of its guarantee instruments issued between 1990 and 2007, including the IFC's private sector guarantees (IEG 2009). The IFC guarantees were mainly used to enable private sector clients to access international investors for the first time, to introduce new financial instruments that companies might have otherwise been reluctant to use, to increase private sector exposure to important sectors like SME finance, and to expand clients' engagement in markets where they had potential but were limited by portfolio risks (i.e., where companies were reluctant to invest further to avoid "putting all the eggs in one basket" because they already had many investments in that sector). Although the evaluation was not rigorous and provides more of a narrative, it concluded that such guarantees have helped finance to reach MSEs by facilitating access to long-term local currency financing by leasing, microfinance, and consumer finance companies.

Important for small bilateral donors like Norway, however, is the evaluation's finding that providing single-credit guarantees to small investments in Africa has not been successful (ibid.). In fact, the World Bank has discontinued its former practice of providing credit guarantees or lending directly to SMEs, due a large share of guarantee calls and relatively high claims and pay-outs from the schemes. Moreover, giving guarantees directly to individual SMEs may also create severe market distortions, since it may function as protection against the effects of competition from other SMEs. This underscores the importance of applying a wholesale approach to financing and guarantees, something that requires relatively large amounts of capital and some expertise in financial contracting.

An important argument against the concept of credit guarantees is that such schemes are counter to sound banking in that the risk is removed from the borrower and transferred to another party, something that may

create adverse selection and moral hazard. Adverse selection may arise from the fact that those borrowers with more risky projects would be more inclined to seek credit guarantees. Hence if the higher risk is only known to the borrower, more high-risk types will seek these guarantees and the average defaults and costs to the scheme will be high. Moral hazard may arise because the guarantees cover high shares of the losses – as Beck et al. (2008) found, 40% of the 76 reviewed schemes offered guarantees of up to 100% of losses. Given such figures, it may not be in a recipient's interest to incur costs to save a project that is not performing well. Rather, the investor could let the project go bankrupt, since the guarantee would cover the loss.

All in all, there are several reasons why a small bilateral donor like Norway should avoid including credit guarantees in its PSD portfolio. If warranted, such interventions should be funded through the IFC or other donors with in-depth experience, appropriate staffing, and the capital necessary to make such instruments work.

5.6 Matching grants

Matching grant programs typically entail a government co-financing the costs of a firm purchasing business development services or undertaking quality improvement or technological upgrades, usually on a 50-50 basis. Such instruments are among the most common policy tools used by developing country governments to actively support MSME competitiveness. For example, more than 60 World Bank projects include such grants, resulting in more than US$ 1.2 billion in funding to more than 100,000 MSMEs (Campos et al. 2012). These grants have ranged in size from as small as US$ 200 in some of the African projects to as high as US$ 500,000 in some of the export- or biotechnology-oriented projects, with a typical project offering grants between US$ 5,000 and US$ 10,000. Including the resources from other donors and governments for such purposes suggests that huge resources have been spent on these schemes, despite the fact that there is currently very little rigorous evidence on how and if they work.

The justification for introducing matching grant programs usually relies either explicitly or implicitly on assumptions about positive externalities. These are thought to accrue to workers, other firms, or to the country as a whole when firms undertake investments financed by the matching grants. Investments in workers' skills may lead to workers finding better jobs or using their upgraded skills in other parts of the economy. Other firms will learn from firms participating in the program, developing the market for business development services. The government will receive additional tax revenues, and society will benefit from broader economic growth (Campos et al. 2012). The justification also includes other market failures, like credit constraints, risk aversion with limited insurance and missing markets (where matching grants may create demand that stimulates the creation of a market).

The question of whether providing matching grants is a desirable donor instrument, in a setting where the company may see it as free money, is whether or not these grants will spur firms to undertake innovative activities that they otherwise would not have done. Companies that are going to invest would surely apply for these matching grants; hence, the scheme could end up subsidizing investments they would have made anyway. In that case, the effect of the matching grant is zero. The argument can also be applied from the opposite side: if a company would not be willing to invest its own resources in the activity, why should the donor or government provide grants to induce the company to do so?

Like most support schemes targeting companies directly, the use of matching grants may suffer from the problem of adverse selection because those who need the support the least may be most likely to receive it. The scheme is also prone to the moral hazard problem, since a grant recipient has little to lose if the services

are not used properly, at least for the schemes that cover up to 90% of the cost. Further, in evaluating the outcomes and impacts of such programs, care needs to be taken to account for substitution and displacement effects, as well in attribution of results.

The evidence on the effects of matching grants is limited, and credible research on the existence of the above mentioned externalities is almost nonexistent. Most studies assess what happens with the companies that receive matching grants, which obviously is likely to lead to the wrong conclusions for the reasons stated above. If the best companies are more able to acquire matching grants, the case studies will have an upward bias and will typically conclude that the grants work well (when in reality these companies would perform well even without the grants or would get alternative funding in the absence of the grants). Box 7 below provides some case study examples that have seemingly positive results, although the counterfactual is a key question. Biggs (1999) examined a matching grant program in Mauritius and found that 80% of the companies that received grants indicated that they would have made the same investments in technology transfer even without the matching grants.

Box 7. Matching grants and the challenge of inferring impacts

One of the most successful cases of a firm that received a matching grant was that of a wind-generated electricity producer. It used a matching grant of US$ 8,000 to develop the feasibility studies that allowed it to enter into a joint venture with a European firm and obtain an investment of US$ 1 million. Within four years of receiving this funding, the project became commercially operational, and within the first year of operation the firm was already supplying 14% of all the electricity consumed in the two districts it serviced.

This project serves as a possible example of multiple levels of impact. The firm received greater profits, consumers received better quality electricity service (blackouts were reduced), and society received environmental benefits through the provision of clean energy. It is not possible to ascertain absolutely whether or not the firm would have undertaken the venture without the matching grant, but this is certainly the type of case where multiple market failures and externalities seem apparent and public benefit from the grant seems likely.

Two other examples of grant recipients concern investment in worker and firm training. A civil engineering firm used a matching grant to help fund quality certification training for its workers, while a communications firm used a grant to develop an employee training scheme. Both firms said that they had been unsure about the effectiveness of such training, but after seeing the results from the grant funding, they subsequently invested more of their own funding in continuing these activities.

Source: Campos et al. (2012)

Moreover, matching grants seem to be relatively costly. Phillips (2002) found that implementation costs of such programs in Africa ranged from 19% of the amounts given out (in Mauritius) to 40% (in Kenya) to as high as 54% (in Uganda). Importantly, these costs did not include the expenses of setting up project committees to evaluate applications for matching grants or similar administrative costs. All in all, the total cost of these grants seems high relative to the funds paid out by the matching grants themselves.

In short, despite the popularity of matching grants, there seem to be more arguments against spending Norwegian aid on matching grants than for such spending. Conceptually, matching grants are unappealing unless applied in a strategic manner to pave the way for new niches where the demonstration effects are clear and grants are likely to create relatively large positive externalities.

5.7 Challenge funds and innovation policies

A popular and relatively new PSD instrument is challenge funds. The principle behind this approach is quite straight-forward: a challenge fund is a financing mechanism to disburse aid for predefined purposes by using competition among potential recipient as the lead principle (Sida 2012). The fund's aim and organization is

established first, together with clear and transparent criteria for how proposals from potential recipients will be assessed and ranked. Then, the competition and the criteria are announced and proposals are invited from the target group. The winners are those who score the highest on the predetermined criteria. The winners will most often have to co-finance the project, as the challenge funds typically only finance a share. Although the principle of offering a reward for those who can solve a problem dates back many hundreds of years, it is only relatively recently that the instrument has been formalized for broad use in development (Bays and Jansen 2009; Gjengedal 2014; Brain et al. 2014).

There are several advantages of organizing development support in this way, especially in the area of PSD. Competition among the beneficiaries and a transparent award mechanism ensure fair treatment and lower the likelihood of market distortions, since all eligible companies can apply and hence no one is favored over others at the starting point. Moreover, awarding a prize to those with the best solutions mimics a functioning market where better performing companies take over market shares from poorer performing ones – in contrast to the procedure of giving support to a random company that can use funds to take market shares from better performing companies (i.e., using public aid to crowd out competitors). In addition, a competition to achieve certain aims ensures that applicants do their best in developing a feasible concept upfront. This also contributes to a search for the best approaches before any funding decision is made, which likely increases innovation. Finally, if risk is a key obstacle against private sector investments and the market cannot insure or hedge against this risk, large challenge funds can unleash benefits by pooling risk through the application of a diversified portfolio.

Challenge funds can in principle be set up for any purpose, not just innovation, and they have been used in a very wide range of topics, sectors, and geographical areas.[7] In development, they have been established, for example, to support the provision of finance to the poor, to enhance PSD, to target agricultural processing, to stimulate a search for solutions to specific health problems, to trigger investment to certain high risk markets, and to stimulate innovation for the effective use of water resources (Sida 2012). Direct or indirect poverty alleviation can be built into criteria for obtaining challenge funding.

The instrument is relatively new in foreign aid. In PSD it emerged in the late 1990s and did not take off in numbers or funds disbursed before 2007 or 2008. Figures from Brain et al. (2014) suggest that from 2000 to 2006 or 2007 there were only five enterprise challenge funds and they had a total annual disbursement of only about NOK 100 million. Today, there are more than 20 PSD challenge funds that provide at least NOK 1.5 billion in annual disbursements and finance companies at all stages of innovation and growth – from business idea exploration to final investments. Such funds finance seed money to explore business opportunities, provide start-up capital to the development of prototypes, support market research and business structure establishment, provide capital in the early commercialization and growth phase, and provide long-term finance for scaling up profitable existing businesses as well as more ordinary investments. With such diverse functions, challenge funds naturally vary a lot in terms of size, and can range from NOK 20 million (DFID/ADB fund in Vietnam) to NOK 1.5 billion (Grand Challenge Canada).

Most PSD challenge funds offer technical or financial support to (winning) businesses, or both (Brain et al. 2014). In order to ensure that the winners commit to the proposed activity, they usually require the recipient company to co-finance between 50% and 80% of the investment (Sida 2012; see also section 3.6 above). Hence, it is often stated that challenge funds leverage investments. More advanced financing instruments like lending, guarantees, and equity (as well as combinations of these) seem to be under development, but it is too early to assess whether they will work in practice (Brain et al. 2014). Given the challenges of assessing market opportunities, how the private sector is functioning, and how to avoid distorting the

[7] See O'Riordan et al. (2013) for an overview.

markets, it is common practice to outsource management of enterprise challenge funds to private sector consultancies. In order to provide some examples, two of Sida's challenge funds are briefly outlined in box 8 below.

Box 8. Challenge funds relevant for PSD for poverty reduction: Examples from Sida

Sida's Innovations Against Poverty (IAP) challenge fund was launched in 2011. Inspired by the "base of the pyramid" concept, it works as a risk-sharing mechanism for business ventures (commercial companies or market oriented organizations) that operate in developing countries and have a strong potential to reduce poverty. There are two application processes, one for small grants up to EUR 20,000 (170,000 Swedish crowns, or SEK) and one for large grants (EUR 20,000–200,000, or SEK 170,000–1,700,000). Grants are awarded to the best business plans that meet the criteria of the program. IAP also contains a third element that provides guarantees in line with Sida's guarantee program. The IAP is managed for Sida by a consortium led by Pricewaterhouse Coopers, who won the management contract through an international bidding process. IAP's initial funding for the 2011–2013 period was SEK 51 million. Since its launch, the IAP has completed two rounds of competition, and it funded 35 companies during its first 18 months of operation. IAP has so far not been subject to any independent review. I

Another Sida challenge fund, the Africa Enterprise Challenge Fund, was started in 2008. It provides grants and conditional loans to businesses interested in starting innovative, commercially viable, high-impact projects in Sub-Sahara Africa. The fund supports businesses working in agriculture, financial services, renewable energy, and technologies for adapting to climate change. It also supports initiatives in media and information services where they relate to these sectors. Moreover, it has several windows with different focuses, themes, geographical coverage, and application criteria. For example, there are windows for South Sudan, Tanzanian agribusiness, renewable energy, African agribusiness, and post-conflict countries. Applications are assessed during competitive rounds that are each subject to their own entry criteria. Grants and repayable loans are provided in amounts between NOK 1.7 and 10 million. The competition is open to companies from anywhere in the world, provided the business idea is implemented in Africa.

The fund is a special partnership between the Alliance for a Green Revolution in Africa (AGRA) and its donors, which include the Australian Agency for International Development (AusAid), the Danish International Development Agency (Danida), DFID, the Netherlands Ministry of Foreign Affairs, and Sida. Its total funding is NOK 800 million, and Sida's contribution was NOK 25 million annually from 2012 to 2017. KPMG has been appointed as the fund manager. In 2011, after three years of operation, the fund was reviewed by independent consultants. By then, the fund had made investments in 48 projects in 16 countries. The review concluded positively and underscored that the portfolio had the potential to deliver significant development impact, systemic change, and learning.

Source: Sida (2012)

As with many other PSD instruments, existing evaluations of challenge funds remains anecdotal and are often based on self-assessments. In a review of the evidence, Brain et al. (2014) found that there are no rigorous evaluations of the impact of this modality and there is only a very thin research literature. They also found that reviews and reports of these funds often did not take into account basic evaluation requirements, such as an assessment of additionality, attribution, or impacts. Indicative findings from these reports, together with self-reported institutional experiences, can provide some guidance on the effectiveness of these funds, but there is no empirical basis for strong statements about the development impact of the public funds spent through challenge funds.

With these qualifications in mind, our general conclusion on the attractiveness of these funds in PSD is positive. Challenge funds are considered to deliver in accordance with their stated objectives, and in terms of additionality, there seems to be agreement that the funds have stimulated private sector activity that would otherwise not have happened (Sida 2012). Some exceptionally impressive results seem to have emerged, but it is important to note that these successes are not balanced against the failures and those that have had only moderate success.

Among the success stories, it is worth mentioning the DFID-funded Financial Deepening Challenge Fund (FDCF) that was said to have catalyzed innovative projects in wholesale finance for microfinance, leasing, micro-insurance, and mobile phone based payment systems. The FDCF supported M-PESA, which now provides cheap money transfer services to over 26 million customers. The project completion review of the FDCF concluded that the program had delivered excellent value for money, although it also recognized that no rigorous evidence had been used to draw this conclusion (DFID 2010). More generally, stories about the achievements of these funds usually say little about systemic changes and the extent to which the funds were useful in generating structural changes and spillover effects – particularly those relevant for poverty reduction.

Moreover, several important issues concerning the functioning of PSD funds have been addressed at a more general (see Cunningham, Gök, and Laredo 2012; Sida 2012; Brain et al. 2014). In particular, the strategic aim of achieving systemic impact is often not built into these instruments (Elliot 2013). Related to this is the challenge of avoiding distortions of market competition and displacement of commercial sources of finance or other companies. It is argued that fund managers need to have a profound understanding of the market that the fund engages in, so that the grants do not cause unfair competition or displacement effects (Brain et al. 2014). Whether this is sufficient to avoid market distortions is, however, unclear.

With respect to more concrete experiences, much can be learned from DFID – which is considered the pioneer in using challenge funds in development and has mainly used the instrument for supporting PSD (Sida 2012). One lesson is that too narrow of a focus (either geographical or thematic) may not attract a sufficient number of qualified applicants – especially in the poorest countries that have a relatively small and narrow base of companies. For this reason, DFID had to close a challenge fund in Ghana in early 2000. Another lesson comes from management experience: it is considered a success to outsource fund management to an independent organization, such as a consultancy firm, through competitive bidding (ibid.). Nevertheless, managing a challenge fund is demanding. If the challenge fund functions as intended, a large number of private company applications and proposals will be submitted and each must be assessed.[8] Hence, management costs can be as high as 20% to 50% of the total resources allocated to the fund. Finally, if the underlying market failure is such that there is no risk-willing capital, there may be a rationale for

[8] Short-listing has been proposed as a solution to the challenge of the heavy workload in assessing applications.

moving more towards lending instead of grants. That is, however, a much more challenging task than distributing "free money," as it involves much more complicated transactions.

All in all, the above discussion provides several arguments in favor of using challenge funds as part of Norwegian PSD aid. Moreover, the instrument fits particularly well with the Norwegian model of partner-led aid, since the aims for a fund can be taken directly from the recipient country's own strategy for PSD and incorporated into a grant scheme. The grant scheme can then specify the eligibility criteria for implementing partners and elaborating the necessary competencies for management of the fund.

Moreover, the challenge fund is a flexible instrument and can be used in a way that allows Norway to specialize in certain niches or to join forces with other donors with more experience (most notably, DFID, Sida, or the Australian Department of Foreign Affairs and Trade). DFID's experience shows that a challenge fund is relatively easy to brand and can provide high visibility in the donor community with the potential for easy buy-in from others. On the other hand, if Norway were to chose a more low-profile, less strategic, and more traditional approach to company finance, channeling funds to the IFC would be a good alternative to explore.

Finally, it is important to learn from the failures and successes of others before entering the design stage of establishing a challenge fund. One issue that emerges from the literature is the need to make challenge funds more strategic. In this regard, coupling the powerfulness of a challenge fund with the strategic role of self-discovery elaborated in 3.2 would seem to be a particularly promising avenue for Norwegian PSD aid. In the (unlikely) event that intellectual property were to become an issue in the diffusion phase, the fund could be set up in a way that would ensure an optimal spread of the innovation through the provision of adequate compensation for the innovators.

5.8 Capacity building

Capacity building is a cross-cutting issue in this study and can be included, to a varying degree, in all of the instruments discussed above. Moreover, there are examples of capacity building projects for most of these instruments. For some examples, see Sinha, Holmberg, and Thomas (2013) and the references therein. Here we concentrate on capacity building as a general instrument and the lessons learned.

The added value of capacity building in PSD can be illustrated by the following two approaches that address the same market failure: It is one matter to initiate a Norwegian grant scheme that will contribute to the establishment of challenge funds that will support self-discovery and trigger sector-wide positive externalities. It is a completely different matter (and a much more challenging task) to strengthen the recipient country's capacity to establish and manage such funds itself. Building a formal institutional structure, providing appropriate incentive schemes, attracting and managing competent staff, developing appropriate institutional culture, and so forth may all be part of an effort to build the recipient's capacity to handle this on its own.

The degree to which it is productive to include capacity building in a grant scheme depends on the PSD instrument, the recipient's own interests and policies, and considerations of sustainability. If the aim is to contribute to a lasting structure, such as a broad institution that promotes self-discovery in the recipient country (for example something similar to Innovation Norway), then institution and capacity building must

be a main component.[9] If the aim is rather to support self-discovery in selected sectors over a specific period in the hope that once the potential is discovered this will, according to the model, grow by itself (through other companies investing in the profitable opportunities discovered), sustainability should not be a concern and capacity building does not need to be included.

The evaluation literature on capacity building generally acknowledges the difficulties in measuring initial capacity as well as the challenge of measuring or assessing changes in capacity (Mizrahi 2004). Adding to this is the inherently difficult, and sometimes impossible, task of attributing the changes in capacity to the different influencing factors and, moreover, separating out the donors' contribution from those of others (White and Fortune 2004; Ruben 2008; Lindahl, Marŭsić, and Söderbäck 2011; Sinha, Holmberg, and Thomas 2013). Assessing capacity building is often a matter of evaluating the process, assessing the activities conducted and their outputs, and then analyzing the likelihood that these activities actually led to the desired capacity changes. Hence, the literature offers little concrete guidance on the impacts of different types of capacity building, although some lessons can be drawn based on self-reported experiences.

Browne (2002) provides a good overview of the issues concerning capacity building and states that there are many examples of technical cooperation at the project level that have been successful across the world – something that is also reflected in the evaluation literature.[10]

A main challenge for success concerns sustainability and how to incur systemic change. Importantly, a key lesson has been that donor-driven capacity building is not sustainable. The literature emphasizes the need for recipient countries to take charge and make their own determination of capacity development needs as part of a coherent development strategy. Successful projects require strong political commitment, leadership from the top in the institutions involved, and a strong implementing team with the authority and incentive to demand change (ibid.; Sinha, Holmberg, and Thomas 2013). Hence, it is necessary to apply a systems approach, taking into account the country's political economy and institutional circumstances. Moreover, moving capacity to a higher level on a permanent basis requires hard work over long periods of time, so preparation and managing expectations are essential.

Another lesson is that when engaging in capacity building, efforts are often hampered by the fact that the institutions involved on the recipient government's side are part of the wider civil service (Browne 2002). The civil service may have terms and conditions of employment, incentive structures (that may not reward individual performance), and bureaucratic decision making and reporting requirements that threaten to undermine the project. For example, attracting key personnel to an institution necessary for building capacity could involve offering a favorable incentive package. If that package is beyond what other civil servants at the same level receive, this may not be feasible in practice and recruitment may falter (ibid.).

Moreover, there is frequent criticism that aid-funded capacity building undermines existing local capacity through displacement effects; it distorts the government's priorities by bypassing normal budgetary processes and favors high-profile projects that speak to the donors' constituencies (Fukuda-Parr, Lopes, and

[9] Innovation Norway (2015) is, in its own words, "the Norwegian Government's most important instrument for innovation and development of Norwegian enterprises and industry."

[10] See, for example, the White and Fortune (2004) assessment of DFID activities to promote an enabling environment for small businesses, the Lindahl, Marŭsić, and Söderbäck (2011) evaluation of the Swiss business environment reform collaboration (where the IFC receives a good score), and the overview by Sinha, Holmberg, and Thomas (2013).

Malik 2002). Hence, the effects of capacity building may also work against developmental objectives. Careful design and implementation is required in order to avoid such negative implications.

A main finding from the evaluation literature is that often capacity building is conducted by expatriates with inappropriate skills or inadequately qualified foreign consultants (Browne 2002). A key principle to ensure competency in capacity building and technical assistance is to outsource the assignment to implementing institutions that are in charge of the same responsibilities in the donor or developed country that sets the standard. For example, if a grant scheme aims to build capacity for developing an institution in the recipient country that promotes private sector innovations, Norad's implementing partners should be Innovation Norway and similar institutions in other countries that have profound practical experience in exactly that area. Similarly, if the aim is to build capacity to develop an apprenticeship system in a recipient country, technical vocational education institutions should be the implementing partners. If one aims to build an investment fund (e.g., a challenge fund or a strategic fund), Norad should partner with the funds that have a proven track record in similar investment management.

The principles for effective capacity building, as indicated in the literature, are very much in line with the Norwegian partner-led model of aid allocation. Developing grant schemes with clear rules about which partner institutions are eligible to build capacity in specific areas of PSD seems to be a sensible use of aid. An additional requirement to ensure the recipient government's commitment would be to condition the scheme on the recipient government applying for the funds.

5.9 Natural resources and local content

The extraction of natural resources such as oil, gas, and minerals can have wide implications for most parts of an economy. It is likely to influence government revenues, public expenditures, investments, salary levels, demand for labor and expertise, and so on. For the purpose of our study – to use aid to the private sector to reduce poverty – the most relevant area seems to be support to governments interested in imposing local content requirements. Nevertheless, one should keep in mind that resource rents are usually much larger than the economic value of any local content generated (Tordo et al. 2010). Hence, government management of these incomes (taxation, expenditures, macro management, and so forth) is likely to play a much more important role in poverty reduction than local content policies (LCPs). Given that there is likely a trade-off between the use of the resource revenues for LCPs and other welfare-enhancing and poverty-reducing investments (such as education, health, and infrastructure), we should keep in mind that there is an alternative cost to these policies.

Local content requirements are considered to be among the most important tools for extracting additional benefits to the local communities from foreign investments (beyond the direct effects such as tax revenue, employment, and so forth) (Davies and Ellis 2007). The aim of LCPs is usually to ensure an equitable distribution of the resource. If international companies are given the task of extracting and selling the resource without any LCPs, the amount of revenue generated for the government to share with its people may be the largest. However, governments often prefer to have additional economic activities generated in their countries, even if that means that a government's total revenues become smaller. It is also sometimes argued that LCPs create an investment in the future: the establishment of a stronger local industry now will generate larger future flows that will compensate for the lower current revenue flows.

Local content policies are very popular among policymakers and have been widely applied in both developing and developed countries (Qui and Tao 2001). Norway's experience is often referenced because

of its long history of applying such policies with success in building up its national petroleum industry since the 1970s (see Hunter 2011 and the references therein). Norway has followed an active LCP for the petroleum sector since the sector's beginning in the early 1960s, and its main aim has continuously been to get as much local content in manufacturing as possible (Bråthen et al. 2007). The key principle was to bring the petroleum industry onshore. In contrast, offshore solutions would imply a minimum of local content and have been actively discouraged. Knowledge about LCP design and implementation is important, since it may help to reveal the division of labor and potential areas for collaboration between potential investors and local companies. Hence, Norway is currently funding large research efforts in this area, and major donors such as the World Bank are also funding studies (such as Tordo et al. 2011).

Internationally, LCPs have changed significantly over time. In the 1970s, the focus was on creating backward links through transfers of technology that provided new inputs to local industries, the generation of value-added in domestic supply sectors, the creation of local employment opportunities, and increases in local ownership and control. Currently, there is a much stronger focus on creating forward links through facilitating domestic processing before exporting. Examples include the use of natural gas in fertilizer production, the development of petroleum refineries, and the domestic cutting and processing of diamonds.

Norway's experiences with LCPs not only include successes like the establishment of Statoil and the creation of a large and geographically spread oil supply sector, but also include a number of failures, such as the very costly refinery on Mongstad, and disappointments, such as the lack of local content created from the Tjeldbergodden plant and severe pollution from the Rafsnes plant (as well as its large economic losses) (Bråthen et al. 2007).[11] This is important to keep in mind for developing countries, as it is considered a very challenging task to create local content from the petroleum industry. The likelihood of enduring failed interventions is quite high, even in more advanced countries.

In addition to the general challenges to PSD interventions pointed out above, natural resource extraction consist of highly complex operations with advanced processes and specialized inputs that make the development of backward and forward linkages into a local underdeveloped economy quite challenging. Hence, the abilities of the existing local private sector and their potential for adapting to the requirements can be an important factor in determining how much local content is created (Bråthen et al. 2007). In the 1960s and 1970s, Norwegian companies had almost no experience with the petroleum sector. Nevertheless, as many have pointed out, a factor in Norway's success was that it was already developed when the oil industry started and thus the technical level of operations in the private sector was quite high.

The competency of the workforce is another important factor influencing local content. Again, in Norway, the workforce was relatively educated with experience in relatively advanced technical industries such as shipbuilding, hydropower, and power-intensive industries (Isaksen 2014).

Several policies have contributed to the success of Norwegian LCPs. The initial framework determined that the oil and gas industry should primarily be taken onshore in Norway and that search, development, and production should be undertaken domestically. In a 1973 white paper (No. 30, 1973-74), Norway described the requirements for localizing the petroleum supply industry and specified in detail where in the country the industry was to be established. The aim was to spread the benefits, in particular the jobs, across the country. In particular, localizing the operation offices of petroleum companies in local communities was seen as important to establishing a direct link between the purchasers and local industries (Bråthen et al. 2007). This would, in turn, increase the degree of local content. Nevertheless, due to high costs and loss of economies of scale, this was not received well by the petroleum companies. The high oil sector profits

[11] Note that Statoil was a partial owner of both Mongstad and Refsnes.

eventually led to a situation where there was a general acceptance that costly LCPs could be justified by the argument in favor of distributing benefits across the population. When oil prices declined abruptly in 1987, however, profitability was substantially reduced with the consequence that the LCPs were sidetracked while the interests of the oil companies and their profitability were prioritized (ibid.). More recently, there seems to have been a compromise in practice in Norway between profitability and local content requirements. Nevertheless, differences in profitability across industries lead to very different environments for the introduction of LCPs (Tordo et al. 2011).

In the initial phases, the Norwegian supply policy maintained that only domestic companies were allowed to supply the national petroleum sector (Bråthen et al. 2007). The concrete aim of this policy was to ensure that the enormous investments in the petroleum industry led to the creation of jobs onshore in Norway. Nevertheless, in the early phase there were no such companies in Norway and the oil companies had to be supplied by international companies. The large efforts to establish university degrees in petro-related studies did subsequently mitigate the situation and produced educated Norwegians suitable for the sector. This also contributed to the development of the technical competencies of the involved universities and other educational institutions.

At a later stage, it became common in Norway to include requirements for using local employees in various contracts, to require oil companies to split up supply contracts into smaller parts suitable for local companies, and to train local companies in the requirements necessary for delivering in accordance with accepted standards. In general, studies of the Norwegian experience show that during the mid-1980s – 20 years after the first licenses for exploration were granted in 1965 – there was still a negative relationship between the complexity of the tasks in onshore investments and the share delivered by local companies. More advanced tasks were usually carried out by international companies because these were the only ones that had the knowledge and skills to deliver according to the requirements. Current legislation rules out this possibility and all contracts are subjected to international competitive bidding.

There is also some evidence that the entry of petroleum companies into Norway has had a positive influence on infrastructure and public services. Since these companies brought with them highly skilled employees, they demanded demand service and infrastructure. In Norway, collaboration between the petroleum companies and local authorities led to improvements in services in areas such as education and health, and in infrastructure such as roads, roads safety, and airports (ibid.).

Taken together, the development and implementation of local content requirements are very challenging tasks that can involve most layers of the society. Norwegian foreign aid can play an important role along two routes. The first is that of analysis. In order to understand what can realistically be achieved in LCPs, the conditions under which they will be effective needs to be analyzed (ibid.). In developing countries, this analytical capacity is usually non-existent. The second concerns technical assistance and the creation of linkages. Technical assistance must be delivered by those with practical knowledge and skills in the relevant area. If the aim is to build a national petroleum company, those who run a successful national petroleum companies may be best placed to deliver the assistance. In order to manage contracts to ensure local content in supply industry, experts in such contract development should be involved with the recipient country's negotiators.

Local content requirements are highly country-specific. What has worked in some countries will not necessarily work in other countries. The literature offers several focal points for donor financed analysis and technical assistance. Based on a survey of LCP experiences in 48 countries, Tordo et al. (2011) provided a summary of the main factors that governments (and hence donors) should take into consideration in their efforts to stimulate local economies. We provide a short summary of their recommendations here.

First, it is important to maintain consistency between LCPs and other economic development policies. LCPs are embedded in a range of other policies, and all these policies must pull in the same direction if they are to be effective. As, for example, with the Norwegian experiences, policies to improve education, health services, and infrastructure may well be an important part of attracting petroleum companies' additional onshore upstream and downstream investments. Further, there is usually a rationale for LCPs to address market inefficiencies in the local context. The petroleum industry is characterized by strong global supplier chains with limited entry points for companies outside the chain. A previous relationship with successful delivery is often a precondition for future contracts. In addition, local suppliers may be barred because contracts are too large or lump together too many different components; there also may be information asymmetries.

The extractive sector may also give rise to a natural monopoly, for example, in the distribution of natural gas. In addition, both extractive companies and governments sometimes have a tendency to shelter preferred companies from competition. In developing countries, the prevailing elite may use these structures to strengthen their power base. Hence, stimulating competition in LCP development is an important area, both for efficiency and for allowing a broader segment of the private sector to be involved in these opportunities.

Another important area is to promote technology sharing and learning from others. There is a tremendous potential for domestic companies to learn from the extractive sector. Stimulating spillovers may not only be important for local companies that provide supplies to the extractive industry, but also for the local industries' ability to develop in other directions. The high level of technological complexity and its use of specialized inputs and knowledge equips these companies with tools that can also be used in other industries, should the circumstances so dictate. For example, in Norway it is often the case that when oil supply companies are scaling down, the laid-off employees can transfer their skillsets to almost any other industry branch. Research and development efforts can be an important venue for technology and knowledge transfer.

Obviously, skills development is a cornerstone in LCPs. Shortages in qualified employees are a key obstacle for generating local content in almost all natural resources-producing countries. The more advanced the requirements are, the more dire the skills gap usually is. Education and skills enhancement at all levels are hence crucial in most countries' LCPs. Moreover, knowledge transfer between companies is also important, and cluster development and regional trade have been used to promote such spillovers. Research suggest that clusters may be important for innovation and technology transfer and many LCPs build on this and use geographical and sectoral clusters to accelerate the development of local companies.

Finally, there may be a strong temptation to introduce excessive local content requirements. Since the government does not necessarily identify the cost of these requirements, and it may be believed that the extraction companies bear the full costs, it can be tempting to impose heavy-handed LCPs to gain popularity in the electorate. Moreover, it may be challenging to identify the true cost of the imposed requirements. It is also important to keep the administration of the LCPs simple and transparent. The costs of complying with complex requirements may be high and may in turn make it harder to detect corruption – especially if transparency is low. The political economy in countries where rent seeking and corruption play a large role should always be part of the consideration on whether to engage in LCP development. Local content requirements are easily adapted to the needs of rent seekers and can make it easier for them to engage in corrupt practices. Moreover, LCPs can be used strategically by multinational corporations, which in turn facilitate patronage problems in resource rich countries and exacerbate the resource curse (Wiig and Kolstad 2010).

Taken together, there seems to be a strong rationale for Norwegian aid to support LCPs in countries and sectors where rent seeking and corruption can be tackled.[12] However, it is important to incorporate measures that take into account the fact that in natural resource extraction, corruption and rent seeking are more prevalent than in any other sector (Sala-i-Martin and Subramanian 2003). Norwegian institutions have a lot of experience in creating and implementing successful LCPs in Norway, including in handling corruption, tax fraud, and rent seeking, and these institutions have the capacity to play a key role in delivering PSD aid. Finally, much important analysis and documentation of LCPs is only available in Norwegian, which provides an additional rationale for Norwegian support to both analysis and technical assistance in the area.

[12] We would like to point out that it might be perceived as a conflict of interest to provide such a recommendation: CMI and the authors of this report are currently involved in a research and capacity building program in Tanzania, financed by the Norwegian Embassy in Dar es Salaam, where local content analysis is one component.

6. Conclusions and recommendations

Private sector interventions are controversial for many reasons – they could distort markets and encourage rent seeking. They also require highly competent implementing institutions. PSD is thus very demanding for both governments and donors. Nevertheless, the PSD toolbox remains popular among policy makers. Some strategies may be more effective and suitable for Norwegian PSD support for poverty reduction than others. Here we provide the key elements of any proposed PSD strategy.

First, the strategy should be based on the important overarching *principle of relevance to the poor*. The interventions supported should have a logical and explicit link to the poor, their livelihood, and the main asset that they possess: their labor. Our assessment suggests that Norad PSD support should select sectors and industries that have a high share of unskilled labor, or a potential to employ or provide economic opportunities directly to the poor. Moreover, support to more labor intensive sectors that have a low entry level with respect to workers' skills (so that the poor are likely to employed) is likely to have a larger impact on poverty. This also gives clear implications for selection of partners. Larger and more advanced companies and institutions supporting high-end segments will most likely provide only indirect and long-run effects on poverty, effects that are dependent on trajectories beyond the control of the donor (as we see in resource rich enclave economies). Many previous recipients of Norad PSD support would not get support under this principle (like private banks, ICT and software companies, medical equipment producers, and utility companies; see Devfin Advisors 2010a and 2010b).

Second, the strategy must prioritize projects that have the *potential to cause domino effects in the recipient country's markets*. It is generally wasteful to provide support to one company in a functioning market in a developing country: the net effect is likely to be zero when taking into account the non-supported companies' adjustments as a result of the aid. In organizing support, we propose that Norad apply a strategic approach to finding areas where the effects of a grant will flow logically to a wider range of beneficiaries in the recipient country than those who receive the support directly. This implies that support should be given for innovative ideas with a growth potential for other companies in the recipient market – such as support for front-runners that others are likely to follow. Hence, the current Norad PSD practice of providing support to Norwegian companies without any documentation of innovation would no longer be an option and should be phased out. Similarly, support would not be given to companies who wanted to enter existing well-functioning markets (for example, subsidies to telecommunications).

Third, the strategy should be based on the *principle of competition among private businesses.* Competition should be a key principle in all PSD support. We find that the practice of favoring Norwegian companies is likely to be highly inefficient; much more value for money can be achieved through international competitive bidding. In concrete terms, this means using an active open bidding process for conducting feasibility studies or pilot projects in selected recipient countries. Moreover, for projects in the recipient countries (for example, when financing strategically oriented feasibility studies aimed at creating low-skilled jobs by opening new markets), tenders should be published nationally and real competition among local companies to take part in the tender should be fostered. Similarly, competition should be ensured for measures to promote transfers of technology, private sector experiences, and competencies. Norwegian companies should not be favored over foreign companies, either implicitly or explicitly. Perhaps Chilean salmon farmers would be more cost effective in providing technical support to developing fish farming in developing countries, as opposed to relying on Norwegian fish farmers. The cost of a donor implicitly or explicitly tying aid to own companies is well documented.

Fourth, the strategy should contain *instruments that foster searches in recipient countries for innovative and profitable opportunities in labor intensive, low-skilled industries*. The approach should be based on

structural transformation of the recipient country and would typically involve manufacturing industries. Importantly, the private companies themselves should engage in this search for opportunities; no requirements should be imposed by the donor. In countries in need of structural transformation, Norway can collaborate with governments to introduce contests among national companies to bid for support for investments in innovative activities that are likely to generate large potential spillovers. To this end, challenge funds seem to be a particularly promising vehicle for delivering results. These funds can effectively structure a competitive environment that supports self-discovery by financing the best proposed feasibility studies or other search and trial costs. The management of such funds would require private sector experts who could identify which proposals contain the most promising ideas. Outsourcing management of such funds to the private sector itself seems to be one promising opportunity.

Fifth, the strategy should contain *instruments that support growth-oriented micro, small, and medium sized businesses* where the support can create employment for others. The structural transformation that industrial policies seek to achieve takes generations, even for the best transformers. Hence, PSD should focus on supporting MSMEs. However, the principle of supporting innovative ideas should also be maintained under this instrument. The MSME sector is highly relevant for most of the poor in any developing country because either the poor or their families are involved directly in such businesses, or they aspire to become so involved. Importantly, however, this does not imply support for gazelles, since they would grow fast without support. The selection of MSMEs into the program should rest on clear criteria for growth potential. It should be a main aim to exclude those with little or no potential for growth.

It is important to recognize that, irrespective of the degree of success in creating formal salaried jobs, most of the poor will never get such employment in their lifetime. The link between the PSD intervention and poverty reduction goes mainly through support to growth-oriented entrepreneurs who grow their business and subsequently hire more workers – some of whom are poor and are lifted out of poverty by an increase in earnings. Hence, targeted enterprise development programs aiming to reach those who can create employment for others is a promising strategy for Norad's PSD aid. To this end, making sure women are included is important. Such programs would typically include growth-oriented entrepreneurs who have the greatest ability to use the support to generate employment for the poor. Selecting these entrepreneurs is a key challenge and needs careful attention at the program design stage. The entrepreneurs' participation should be based on their self-selection into the program coupled with criteria such as prior experience, size of business, motivation, abilities, and ambitions. The support would target financial instruments and training based on thorough needs assessments coupled with mentoring and network building.

Contributing to financial solutions is a very demanding task for PSD support. If this is included in the Norad PSD strategy, it is highly recommended that Norad join forces with other donors that are experienced and have capacity in this area. The Katalyst program (see box 2 above), where innovation and analysis were provided to support entrepreneurs' searches for profitable opportunities, seems to be the type of program in which Norad could engage in particularly promising add-on activities.

Sixth, any PSD strategy should *support capacity building, technical assistance, and analytical work* to enhance the effects of the PSD on poverty reduction. A key principle in this work is that it needs to be built on the interest and visions of the recipients, which aligns well with the Norwegian principle of ownership. The competency and experience of Norwegian institutions can provide important inputs to the development and administration of interventions, especially in capacity building, public management, tri-partite collaboration in negotiation and labor market policies, and developing regulations. Moreover, there is a large potential for Norwegian institutions to provide such support to the development of LCPs in resource rich countries. Nevertheless, this element is broad and the Norad Section for PSD needs to narrow in on a few specialized topics.

Finally, the seventh element of the strategy should be to explicitly recognize that such *a strategic and innovative approach carries much higher risk* than traditional PSD support (for example, subsidizing current business operations). At the same time, it should be emphasized that taking such a risk is necessary for private sector aid to generate real impacts on employment and poverty reduction. Nevertheless, this risk is likely to lead to more failures than the current approach, and these failures will likely be visible, since the approach involves giving support to several innovative projects in order to support the few that cause domino effects that lead to learning and expansion in other companies. For example, supporting self-discovery by funding feasibility studies in an area of production that no one else is involved in (in the recipient country) is more likely to result in failure than financing feasibility studies for companies who want to enter an established market. This principle – that implicit in innovation there will be many failures along the way – is the same principle that Norway applies in Innovation Norway and other publicly financed private sector support programs.

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Private sector development (PSD) is back on the donors' agenda. In Norway, PSD aid and aid funded loans have increased more than five-fold during the last decade and the government has promised further expansions. To guide the efforts, a new White Paper was submitted to the parliament mid-2015. This report discuss the literature on the most relevant topics and instruments for Norad's PSD aid and discuss their likely effectiveness. Moreover, the report also discuss which are the most suited instruments for this part of Norwegian aid. The conclusion provides a set of principles and instruments for Norwegian PSD aid to be effective in poverty reduction. One key recommendation is to set up a challenge fund to stimulate recipient country companies to search for innovative profitable investment opportunities.

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