In the first note on skills, we saw that the acquisition of practical skills was essential to firm productivity, competitiveness and ultimately, inclusive growth. This note explores the question of delivery.

How can these skills be delivered? Where firms have been able to successfully provide market-oriented and flexible practical skills, some types of cooperation models have been at play to overcome market failures of incentives and information. Firms, trade unions, TVET institutes and public agencies have engaged in various forms of collective action and bargaining arrangements at the mezzo level - from clusters to cooperatives. The underlying principle driving firm-based training is that beyond a certain threshold of foundational skills, jobs can become a channel to build, nurture and sharpen skills through interactions among workers within and outside the firm\(^1\). In other words, jobs pull skills. If so, then two sets of questions appear important and are explored in the remainder of this note:

a. What factors influence how well jobs pull practical skills - for workers and middle managers - across the range of delivery channels?

b. What models of cooperation have been developed among firms, the state, unions and other actors to help deliver practical skills? How does this vary by the extent of formalization of cooperation?

**FACTORS THAT INFLUENCE HOW WELL JOBS PULL PRACTICAL SKILLS**

Two factors appear to influence the extent to which jobs are able to pull skills: (a) the proportion of firm involvement in the training and (b) the ecosystem a firm functions within. Rather than frame on the job training as an either-or phenomenon, it is the level of firm engagement in the training process that appears to matter. At one end of the spectrum is training where the firm is involved intensively, for instance, in the case of full time employees. On the job training carries sizeable returns and results holds strongly for firms connected to global value chains. Well-designed apprenticeships and industrial training that have strong private sector buy-in can be potential alternatives for youth in formal TVET institutions and entry level workers. The apprenticeship system in Germany, UK and Australia that has the technical and financial backing of the private sector is able to combine class-room learning with in-

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1 World Development Report, Jobs. 2013
company training. Some factors that seem to influence the participation in apprenticeship programs are possibilities to progress into permanent employment or higher qualifications, occupational coverage, level of responsibility expected of the firm, compliance requirements and size of stipend among others².

But a firm’s relationship with its ecosystem also appears to matter for a worker’s skill building. Rather than the individual firm, it is the linkage with the ecosystem - whether a cluster, a supply chain, the city or a value chain – which influences the extent to which the firm is able to provide interaction opportunities, chances for knowledge diffusion and social learning to the worker. In general, firms which are linked to global value chains and/or export markets, or to foreign-owned companies allow for greater efficiencies in acquisition of new technical and managerial skills³. In such firms, an employee can go beyond codified knowledge – learn tacitly - and interact with suppliers, sub-contractors and customers in complex ways. There is some evidence of knowledge spillovers and agglomeration benefits accruing among firms that are able to create a learning environment⁴. On the other hand, local domestic firms may have trouble identifying their skill requirements. In many countries, only a small fraction of workers has access to such training. In India, barely 2 percent of the workforce has formally acquired skills, and another 2.4 percent has some informal training⁵.

MODELS OF COOPERATION TO DELIVER PRACTICAL SKILLS

Cooperation models range from highly formalized to the extent of being legally enforceable to less formal, but beneficial modes of interaction among firms at a mezzo level. No matter the level of formalization, a cooperation or partnership approach helps get around the binary framing of skills as either “demand-side” or “supply-side”; a framing that conflates the provider with the objective. Even when it does not create such a confusion, training (when it is purely employer-led) can tend to be too narrow, as employers often fail to invest in “soft” or generic skills that are important for the trainee’s lifelong learning⁶. A purely school-supplied paradigm has its own issues.

Formalized types of cooperation for skills delivery spell out pathways for firms to interact with the ecosystem; history and political economy appear to matter. Germany has formalized participation from private firms which function in an ecosystem of collaboration with the government (which closes the funding gap and provides quality control), trade unions (which accept below-minimum-wage compensation for trainees and conduct due-diligence on firms and apprentices), vocational schools (which tailor and teach curricula connected to workplace needs) and employer associations (which cooperate to offer placements to strong apprentices as a common good) using both legislative and financial instruments. Known for its apprenticeship model - in 2010 - Germany placed two-thirds of its apprentices in full-time jobs with host firms⁷. More than 80 percent of training costs are met by employers, and youth unemployment in Germany has been below 8 percent (by comparison to 56 percent in Spain and 38 percent in Italy⁸).

In another example of formalization but with fewer actors involved, Korea has developed the “Bridge Model” for SME competitiveness. This is a three-way partnership involving a single major enterprise, clusters of SMEs that serve as its main subcontractors, and a government-supported university. Samsung was the first “bridge” in 2006, and it contributed technical knowledge toward the training of SMEs in clusters, with Korea University of Technology and Education supplying the teaching facilities and content. Since then, five other large companies have become bridges and have disseminated skills in SME clusters as part of their supplier-development initiatives.

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² World Bank & International Labor Organization. 2014. Possible Futures for the Indian Apprenticeship System.
Denmark tapped on industry-labor cooperation to provide training to skilled and unskilled workers. In Denmark, trade unions play an important role in local implementation of TVET programs; access to training is a concrete benefit they promise to new members. Historical conditions and political economy factors have contributed to the close collaboration between industry and unions in the country. The industry benefits significantly from such cooperation. In 2003, a collective agreement was signed to restrain wages in exchange for greater access to training. These investments in skill formation have helped revitalize the Danish economy over the course of the 1990s and 2000s.

Absent such conditions for formalized cooperation, modalities for less binding, mutually beneficial cooperation among dense, inter-firm networks at a mezzo level can help deliver practical skills. Not every context is conducive for a German, Danish or Korean type cooperation. The experiences of skill development in the Indian auto-component sector, the Zambian dairy sector and the Bangladesh apparel joint-venture are instructive of less formal but advantageous arrangements.

**Maruti** - one of the largest car manufacturers in India - started a supplier development program to impart skills for new product development post liberalization of the license raj in the 1990s. The beneficiaries were component manufacturers, also called ancillaries, who located themselves near Maruti’s facilities to partake in these programs. Using the system of dense and supplier relationships, technical and managerial skills were transmitted by Maruti personnel within supplier-SMEs to help the latter deliver components that met Maruti’s design requirements, in turn helping Maruti climb the value chain.

Policy support appears to have played a role in enabling mezzo level cooperation in Bangladesh. In 1979, when the Bangladeshi government set up export processing zones and liberalized foreign direct investment (FDI), Daewoo – a leading Korean garment exporter – set up a JV with a local Bangladeshi garment start up to collaborate on technical training. 130 workers were sent to the Pusan factory in Korea for hands-on managerial courses and returned to set up 3 additional production lines, train 500 workers and export 43,000 shirts. Within two years, several of the 130 trained managers left to start their own businesses spurring entrepreneurship in the region. It appears that mezzo level cooperation would have been challenging without help from a policy framework (e.g. FDI liberalization, export processing zone, financing regulations etc.).

In Zambia, a lead firm arrangement for cooperative formation helps in skills delivery. Parmalat – a leading dairy processor in Zambia – acted as the anchor firm and supported the formation of Palabana cooperative to deliver skills in financial literacy and nutritional supplements for cow breeds to informal milk producers. It signed a 5 year off-take guarantee with the cooperative. This interaction over two years has already led to an increased output from 5 litres to 12 litres per day for a cow. This was enabled by government policies on investment climate reforms in Zambia.

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CONCLUDING REMARKS

Various models of cooperation - from more formalized to firm-level arrangements - appear to have navigated market failures to deliver effective practical skills. The replication of such models is however delicate because of the contextual nature of each arrangement. Yet some policy implications can already be identified and point to the need to increase interventions from the demand side. A better understanding of the firm needs and linking them to the solution design would be a practical way to move forward. Overall, the ability to deploy practical skills is one of the indispensable elements of competitiveness.

TABLE 1: COMMON LESSONS FROM COOPERATION MODELS IN SKILLS DELIVERY

Whatever the extent of cooperation, partnership models appear to have followed certain good practices.

a. Each cooperation model leveraged some integrator or coordinator for collaboration from lead firm arrangements to network agents (e.g. unions)

b. They triggered collective action among firms through legislative or other means to navigate the free-rider problems that persist among individual firms

c. Models were demand-oriented and sensitive to market needs regardless of the provider

d. Models balanced generic and technical training addressing both firm and worker needs

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