



▶ How market systems development strengthens productivity ecosystems

Improving worker employability and productivity in Peru's forestry sector

November 2021

▶ Introduction

In brief:

- ▶ Market systems development can be used to address productivity constraints at different system levels.
- ▶ In Peru, interventions in the forestry sector increased productivity through addressing a skills information gap, which increased labour productivity by both validating and improving the capacities of workers. Enterprises reported **worker productivity increase, lower labour turnover, increased clientele, and greater confidence in their staff**. These results led to additional government support for enterprises with certified staff through providing state public procurement advantages, which ultimately led other sectors to invest in similar skills certification programmes.
- ▶ Interventions at the macro-level established national coordination mechanisms—called *mesas ejecutivas*—for stakeholders to effectively collaborate in addressing the causes of low productivity across sectors. In the forestry sector, this provided a platform for key actors at the national and regional levels to develop critical regulation for improving the traceability of timber products, allowing enterprises in the wood and furniture sector to become more productive by **increasing accountability in their value chains and unlocking access to global markets** in which certified origin is required.

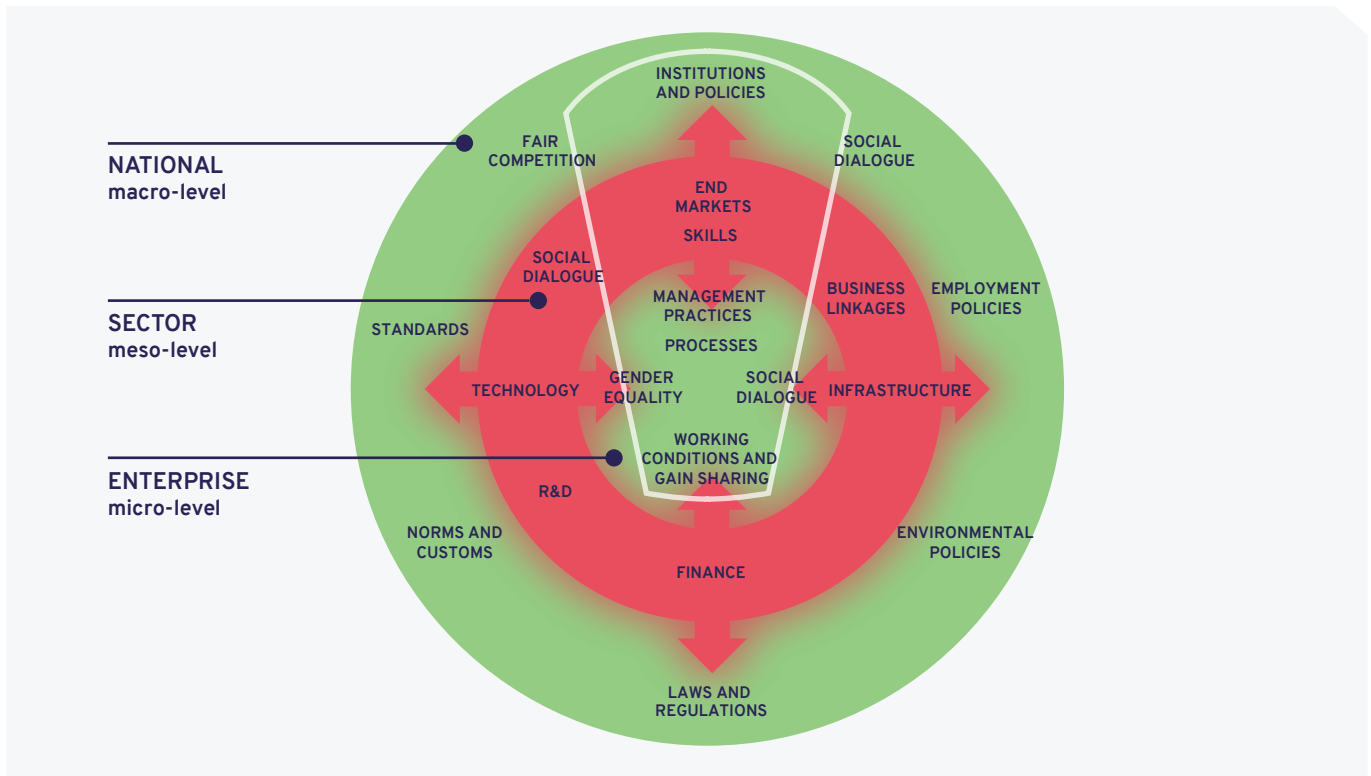
In March 2021, the International Labour Organization (ILO) Governing Body endorsed the Productivity Ecosystems for Decent Work (hereafter referred to as “Productivity Ecosystems”). The Productivity Ecosystems is an approach that works at the firm, sector and policy level to systematically identify key productivity¹ bottlenecks faced by micro, small and medium enterprises (MSMEs) and address them in an integrated and sustainable manner.²

The approach was developed based on the ILO's previous work and programmes to improve productivity and decent work for MSMEs.

This case study is part of a broader series that seeks to shed light on key drivers of inclusive productivity growth and to showcase how the ILO has helped strengthen those drivers. Concrete examples are presented of how the ILO facilitated or promoted change that led to positive impact on productivity and decent work, especially for MSMEs. This case study zooms in on the sector-level and discusses how the ILO's Market Systems Development for Decent Work approach provides an effective approach to strengthening productivity drivers and working conditions in key sectors. Drawing on a case study of market systems development (MSD) interventions in Peru's forestry sector, both at the meso-level and at the macro-level, this document outlines how MSD can strengthen sector-level productivity drivers in a sustainable and scalable manner.

1 Simply put, ‘productivity’ refers to the efficiency of resource use—productivity increases when a greater output is attained with the same input. In the labour market, labour productivity is defined as the output of value added divided by the amount of labour used to generate that output. When labour works smarter, harder, or faster, or when technology improves to allow for more efficient processes, labour productivity increases (ILO).

2 The ILO defines MSMEs as enterprises with fewer than 250 employees. In many countries, more than 90% of all enterprises can be classed as SMEs, and a large share of those can be classed as micro firms, with fewer than ten employees. For more information, see ILO (2019), The Power of Small: Unlocking the Potential of SMEs. <https://www.ilo.org/infostories/en-GB/Stories/Employment/SMEs#intro>



Market systems development in the context of productivity ecosystems for decent work

Market systems development is an approach to addressing issues linked to income, employment rates, or working conditions by changing the way a market functions. It does so by working with market actors to fill market gaps through existing incentives and networks. The approach entails an analysis phase, during which the underlying causes to market constraints and opportunities to address them are identified. This includes looking at the entire market system in which a value chain operates, including the key supporting functions (e.g. finance, business development services, information, etc.) and rules (e.g. regulations, standards, and laws), as reflected in Figure 1 below.¹

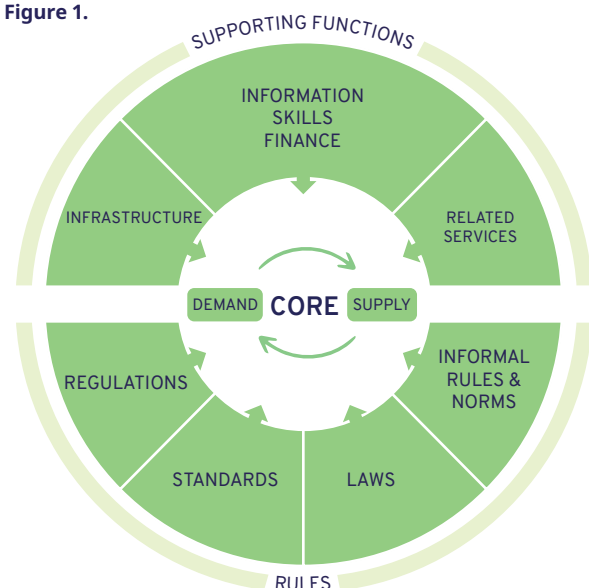
The key distinctions of a market systems development approach from more traditional approaches to development are that it

- does not impose any predetermined set of interventions or policy options; rather, interventions are *informed by an analysis* of how the system works, market gaps, and opportunities for change;
- *leverages existing market incentives and capacities to facilitate change* versus a project filling a missing market role/function itself (e.g. supporting a business development service provider to better cater to the needs of rural enterprises, as opposed to training enterprises directly);
- embraces *adaptive management*, which allows adaptation and redirection of interventions based on how well actual change occurs.

Market systems approach v. productivity ecosystems for decent work approach:

While MSD can be applied to identify and address all types of underlying constraints, current practice indicates that it is primarily applied at the micro and meso levels. A productivity ecosystems approach is an adaptation of an MSD approach with a stronger focus on policy level outcomes. Beyond the specific focus on productivity, this is perhaps the biggest difference between a market systems approach and a productivity ecosystems approach.

Figure 1.



1 For more information, see [Value Chain Development for Decent Work: A systems approach to creating more and better jobs \(ILO 2021\)](#).

Where does the productivity ecosystem approach come in?

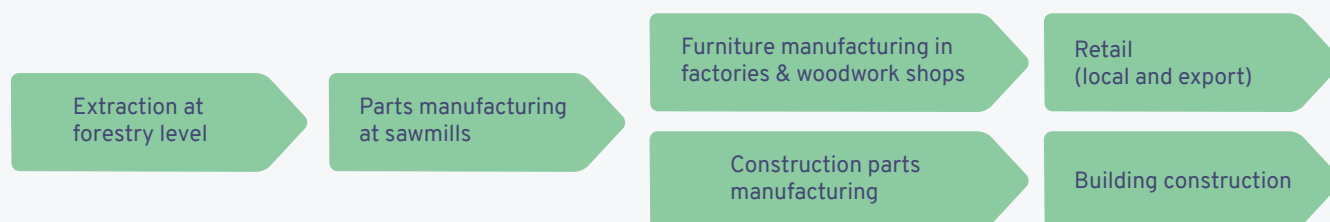
Improving productivity is not always so simple. First, it is critical to ensure that the gains from increased productivity are shared equitably between workers and enterprises as opposed to being achieved at the detriment of workers (e.g. through job losses). Second, the factors that allow and incentivize labour to work smarter, harder, and faster are linked to other conditions—access to education and training, conditions of employment, and technological advancement to name a few—and these conditions vary by economy, sector, and function. Therefore, it can be argued that productivity is context specific and can also be examined in the framework of a larger ecosystem in which its drivers will differ depending on that context. As practitioners, the question of how to improve productivity becomes less about the ‘what’ and more about the ‘how’. In other words, developing an approach to understanding how productivity changes based on the nature of the ecosystem in which it operates will be more attainable than finding a list of fixed interventions that are universally successful.

Background: market systems analysis to identify key constraints in Peru's wood and furniture sector

In 2016, an ILO project called ‘[the Lab](#)’ used a market systems approach to uncover the underlying causes to poor working conditions in Peru's wood and furniture sector. The sector consisted primarily of micro and small enterprises, employing an estimated 140,000 people, with the main activities starting with extraction at the forestry level, and through parts manufacturing, and either to furniture manufacturing and retail or to building construction. While being a relatively small sector, its GDP growth was anticipated to rise to 5.5 percent over the coming years. The sector was chosen after a rapid market assessment of multiple sectors, which identified the wood and furniture sector as having significant opportunities for change. This was due to the level of participation of the target group in the sector, the high prospects for improving working conditions, and both the presence and willingness of market actors to drive forward change.



Figure 2 – Wood and furniture value chains



A market systems analysis then followed to take a closer look at what was causing poor working conditions to exist in the first place. This entailed in-depth interviews with market actors—including large and small, formal and informal enterprises; Ministries of Health, Labour, Finance, Production, Education, and Agriculture; service providers; and nonprofit/development organizations active in the sector—as well as firsthand observations of business practices and interactions.

Through this process, the project identified four feasible opportunities for improving working conditions through addressing underlying causes to constraints in the market system. These included supporting the capacitation and certification of workers in the core skillsets needed to perform jobs in different segments of the value chain, advancing new norms that would enable enterprises to access concession discounts for complying with working condition best practices, advocating for a change in regulation that would allow carpentry workers to access better health insurance benefits, and

conducting research on export market opportunities for Peruvian furniture products. While the desired outcome of these interventions was improved working conditions, the hypotheses behind each were that if different aspects of working conditions improved, productivity would follow, resulting in greater profits for enterprises: a win-win.

The Lab initiated *action research* to test interventions in these four areas, which allowed the project to test its hypotheses adaptively and flexibly through small initial investments and move resources to the interventions that proved most successful in creating the desired systemic change. This case study will examine one of the four interventions, which involved addressing an information gap through a skills certification programme for workers who had learned their trade on-the-job,³ as well an intervention led by the Ministry of Production to address the lack of coordination at the institutional level, which effectively led to addressing traceability issues through improved regulation at the forestry level.

3 A full brief of the action research may be found here: https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/---ifp_seed/documents/briefingnote/wcms_573266.pdf.



Interventions for improving productivity in the wood and furniture sector

Improving productivity hand-in-hand with working conditions through certification at the sector-level

During the market systems analysis, one of the primary constraints reported by enterprises working in the wood and furniture sector was that skilled labour was hard to come by. Enterprises frequently had to 'try out' workers to see if they could actually perform the tasks they claimed to be proficient in, which resulted in high labour turnover. When training service providers were asked about the type of services they provided, they informed the project that while they offered subsidized courses in technical skills relevant to the sector, no one enrolled.

Looking deeper, the project discovered that most workers in the sector learned on-the-job through mentorships: many workers had acquired the relevant skillsets yet had no formal documentation to make them more competitive when applying for jobs. Meanwhile, enterprises were forced to continuously hire on a trial basis, cycling through under-skilled workers several times before finding a qualified candidate. This impacted productivity by causing enterprises to fulfil orders late and/or deliver furniture products that were sub-standard, which often resulted in a loss of clients.

CITE Madera—the technological innovation center for wood under the Technological Institute of Production (ITP)—had already been working in collaboration with GIZ,⁴ to develop a skills certification system that would allow workers to be formally certified for the skills previously learned on-the-job, as well as identify and train them on any skills that they were missing according to the industry standard for that occupational profile. As this certification mechanism would address one of the primary causes of high labour turnover and in effect, low productivity,

and because CITE Madera had both the capacity and will to fill this specific market gap, the Lab supported the development of the programme.

The entire framework consisted of 11 occupational profiles covering the primary job functions along the value chain, with one profile having already been successfully piloted. Each of these profiles required compiling a list of specific key tasks, developing evaluation tools for executing those tasks, and certifying evaluation centers before the occupational profile certification could be put on offer. The ILO helped fund the completion of 2 carpentry profiles as a type of seed funding, with the intention of supporting CITE Madera to demonstrate the benefits of such a programme for certifying workers within the sector and ultimately encouraging other market actors (public or private) to further invest in developing the rest of the profiles.

Improving productivity through enhanced coordination mechanisms at the macro-level

Meanwhile, the Ministry of Production was also taking steps to improve productivity at the macro-level. Despite relatively strong economic growth in the region since the early 2000s, Peru still encountered significant productivity constraints across key sectors, in large part due to the siloed nature with which government agencies worked. In response to this, from 2014 to 2016, the Ministry of Production in Peru established what are now known as 'mesas ejecutivas' (MEs) to improve coordination between government agencies to ultimately address critical production issues. They included six sector-based MEs—forestry, aquaculture, creative industries, textile, gastronomic, and agro-exports—and two transversal MEs—logistics and high-impact entrepreneurship.

⁴ <https://larepublica.pe/economia/2019/07/19/ejecutivo-aprobo-medidas-para-impulsar-el-desarrollo-del-sector-forestal/>

Through ME working groups, public and private sector actors work together to identify bottlenecks in their respective value chains and develop solutions to raise productivity and improve competitiveness, primarily through productive development policies (PDP). Piero Ghezzi, the Minister of Production at the time, described PDPs as being about “identifying and removing constraints to the growth of sectors with (latent or actual) comparative advantages” and that this process requires cooperation between diverse public and private actors to be able to solve complex coordination problems. In essence, Ghezzi’s plan was not dissimilar to a market systems approach. Bringing market stakeholders together under a forum for strategic dialogue was not only in itself a means of addressing the perceived underlying constraints to productivity within sectors and across the economy, but it also embedded a function within the public sector for consistent *analysis-driven decision-making*, which *facilitated leveraged incentives and capacities, and utilized adaptive management*.

In forestry, the ME working group is composed of the Ministry of Agriculture and Irrigation (MINAGRI), the National Forestry Service and Wildlife (SERFOR), the Agency for Supervision of Forest Resources and Wildlife (OSINFOR), the Ministry of Production (PRODUCE), and the regional governments of Loreto, Ucayali, Madre de Dios y San Martín.⁵ Since its inception, the working group focused on addressing major regulatory problems, one of which was the lack of timber traceability of forestry products. Many species were being logged illegally or in higher quantities than permitted and transported with counterfeit papers. Not only did this result in an unsustainable and illegal logging industry but it also disrupted downstream

activities. Enterprises in wood processing, construction, and furniture manufacturing could not rely on their suppliers—both in terms of on-time delivery and in terms of the actual raw material—and exporters struggled to get reliable certification of timber origin.

In 2021, to address the issue of illegal extraction and traceability of forestry products, the ME working group worked together to pass a new regulation that established pecuniary sanctions for non-compliance with forestry and wildlife legislation. Measures included fines and confiscation of forestry products and biproducts whose legal origin could not be accredited or that resulted from unauthorized extraction, hunting, or collection. Such products or biproducts transported without documentation proving their legal origin and species, or whose transport diverted from its registered trajectory, would receive infractions and/or would be prohibited from continued activity in the sector.⁶

To support the implementation of the regulation, SERFOR, the National Superintendent of Customs and Tax Administration (SUNAT), and the Ministry of the Interior on behalf of the Peruvian National Police signed an agreement to develop strategies for strengthening forestry control points. At the regional level, the governments of Loreto and Ucayali set up Regional Forestry and Wildlife Management Offices to strengthen the role of the forestry authority within the regions. Additionally, OSINFOR and the regional governments of Ucayali, Madre Dios, San Martin and Loreto agreed to work together to carry out joint inspections and to improve information channels. Budgetary measures were also put in place to enable certain regions to carry out their own zoning, control and surveillance.⁷



5 <https://larepublica.pe/economia/2019/07/19/ejecutivo-aprobo-medidas-para-impulsar-el-desarrollo-del-sector-forestal/>

6 <https://www.agraria.pe/noticias/gobierno-aprueba-reglamento-de-infracciones-y-sanciones-a-la-24115>

7 <https://larepublica.pe/economia/2019/07/19/ejecutivo-aprobo-medidas-para-impulsar-el-desarrollo-del-sector-forestal/>



Findings

In 2021, the ILO went back to follow up on the impacts of the interventions on productivity and working conditions in the sector.

Productivity impacts from skills certification

The results of the certification programme to date have been quite positive. Just prior to the ILO's intervention, survey-based research in 2014 showed that following the original pilot certifications of 55 industrial carpenters in Pucallpa, 43 percent increased sales, 96 percent improved procedures at work and/or increased the quality of their products, 56 percent increased productivity, and 86 percent considered that their employability was increased (Chia Picasso 2015). While no more recent survey has since been conducted, CITE Madera reported observing similar trends up through 2019 prior to the COVID-19 pandemic and again in 2021 as the economy began to recover.

From the side of enterprises, demand for certification services continued to rise. Some began to pay to certify their entire staff, claiming that it attracts new clients, as this is a recognized indication of reliability and quality of products and services. Some

The number of certification centers also continued to grow. CITE Madera and CITE forestal Pucallpa now each accredit 4 occupational profiles. In 2019, the National Institute for Agrarian Innovation in Pucallpa (INIA-Pucallpa) was accredited in competencies related to timber species identification at the forestry level, and in February 2020, for the first time in the timber industry, 15 specialists were certified as forest species identifiers ("identificadores de especies forestales") with the aim of improving the employability and competitiveness of workers, while also enabling enterprises to become more productive through having qualified and trained staff. Two additional agencies were also in the process of becoming accredited in areas related to forestry and construction.

Following the onset of COVID-19, because demand for the service still remained high, a **virtual evaluation process** was established to make the evaluation process for the certification programme possible remotely. This has allowed evaluations to recommence despite limitations caused by the pandemic.

Additional incentives for certification were created at the state-level, as they are now integrated into state procurement programmes like Compras Myperu - Carpetas. SMEs now receive an extra point on their bid evaluations when they can prove they have the relevant profile certifications. This triggered similar investments in other sectors as well: "*Within the CITE network in ITP, this experience motivated other CITEs to also invest in labour certification, such as in the case of CITEccal (leather and footwear) in Lima and Trujillo, CITEagroindustrial in Ica, and CITEagroindustrial in Chavomochic.*"⁹

This demonstrates the ripple effect that projects and programmes can have with interventions that are analysis driven and with strategic partnerships based on the right incentives and capacities.

"The result has been very positive, because workers did not realize that this type of training was available to them. After receiving the training, productivity increased up to 50%."

Home improvement store based in Lima.⁸

have gone as far as to publish proof of certification on company websites, reporting that this provides them certain distinction from their competitors, attracting new clients and better positioning them in the market. Recently interviewed employers of workers certified in 2019 in Lima

said they saw increased labour productivity as well as growth of their client base, despite the economic setbacks brought on by the pandemic.

⁸ Home improvement enterprise. Interview on 21 September 2021.

⁹ Jessica Moscoso, CITE Madera. 19 August 2021.

Productivity impacts from improved coordination

At the institutional level, the MEs evolved to provide coordinated responses to some of the most critical and complex sectoral constraints to productivity. This is evidenced through the regulation measures introduced in forestry. While the regulation itself is still too new to see its effect, according to CITE Madera, the fact that through the ME, stakeholders are now working together to make concerted efforts to tackle illegal logging and improve traceability is a major success, as it will enable producers to have a more reliable supply of raw material, meet project deadlines, and access new markets where certification of origin is required. Addressing illicit activity is no easy undertaking and requires strategic, united efforts.

Take-aways

Improved productivity at the meso-level

In the case of the wood and furniture sector in Peru, a market systems approach proved extremely useful in identifying opportunities to address market gaps in a specific sector that hindered productivity (via improved working conditions) based on strategic partnerships with market players that were aligned with the objectives of the project.

If the project had not employed a market systems development methodology, it could have taken a different—and less effective—direction. In the case of the skills intervention, one of the first observations the project made was the lack of training services on offer, and since relevant training services had in the past been made available by the National Service for Training in Industrial Work (SENATI), under the Ministry of Education, the first assumption was that the curricula were outdated and no longer meeting demand. The project then considered how it might disseminate surveys to gauge what specific skills were needed on the market to guide a revision of those services. As it explored this option further with market actors, it eventually found that many workers possessed some or all the necessary skills but lacked a means to prove them. Had the Lab gone through with the survey, it would have made a significant financial investment for inessential information and likely an ineffective intervention. Gaining enough insight into the specific context of how the relevant

skills are actually acquired in the wood and furniture sector in Peru, was therefore crucial for success.

What made the skills certification intervention particularly effective was first and foremost the continuity of CITE Madera's commitment to own and promote its development. Changes in leadership within national partner organizations very often shift priorities, and the needed momentum behind an intervention may wane. Change at scale can take time, particularly if it is systemic and market driven, which is why it is so important to have consistent leaders. At the time that this brief was written, the skills certification programme had been underway for five years, but thanks to the steady commitment of CITE Madera to fill the market gap, increased productivity and improved working conditions have continued to be scaled within the wood and furniture sector.

Also crucial to success was identifying and leveraging the right incentives for the intervention to become market driven. The increased demand for certification and the willingness of enterprises to pay for the service, given the overall increase in labour productivity and impact on client retention and growth, propelled the continued expansion of the programme.

Improved coordination at the macro-level

MEs are a mechanism with great potential for institutionalizing market systems development at the national level. They operate at the policy level but are organized by sector, allowing them to work in their specific sectors and value chains while also developing PDPs that may work across sectors.

Public agencies improved coordination at the macro level through the development of MEs, which were then able to address systemic constraints at the meso level contributing to a lack of timber traceability through improved regulation in forestry.

The emergence of regional MEs also allowed for intervention designs that address specific regional needs through the participation of regional stakeholders. This enhanced the scope of feasible interventions, since there was already significant buy-in from the stakeholders themselves. As was also the case for the Forestry ME, when the analysis and facilitation is driven by a coordinating body, it also becomes more likely to result in sustained and scalable impact.

Conclusion

A market systems approach can be quite effective in understanding and addressing productivity constraints more holistically and can be applied at various levels of the economies. Since markets are complex systems, and no two are exactly alike, bringing about change requires a deeper understanding of its unique complexities and cannot be done with a template. Systemic approaches embrace this through being analysis-driven, facilitating through leveraged incentives and capacities, and embracing adaptive management.

While market systems approaches have normally been facilitated by practitioners who work at the enterprise or sectoral level—such as with the ILO's action research in the wood and furniture sector—it can also be effective at the policy level to address public policy or regulatory issues.

Drawing from these cases, productivity issues can perhaps best be addressed at the more macro-economic level if there is a strategic platform or structure in place that fosters multistakeholder engagement and allows the public sector to work across the most critical areas of the economy. This allows interventions to be catered to the unique constraints and opportunities within a sector, while also allowing for upward learning and coordination across the economy through an organized network of sector-based stakeholders.

That said, MEs were successful in large part because the government was both capable and motivated to promote them for this purpose. Systems approaches consider the 'will' and 'skill' of market players when choosing project partners, as well as in considering the feasibility of intervention options, as this will greatly influence the prospects for long-term impact and systemic change.

Whether the approach is facilitated by external practitioners or taken up directly by national public agencies or forums, strong national buy-in and commitment is critical for achieving meaningful change. In the case of wood and furniture, the commitment of CITE Madera to continue building out the skills certification programme was essential for the long-term success of the intervention. At the forestry level, the combination of public agencies passing regulation to institute sanctions and the national and regional stakeholders coordinating enforcement measures required a strong, untied pledge between national entities.

All in all, a market systems approach may be one of the most viable tools for addressing productivity issues, improving working conditions, and more, because it is not prescriptive. Productivity itself comes in many different forms and productivity constraints can exist at different system levels. Therefore working to improve productivity requires an approach that is analytical, facilitative, adaptable, and systemic.

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