Thematic Performance Evaluation

USDOL ILAB-supported Labor Administration Electronic Case Management Systems

in

Colombia, Honduras, Paraguay, Peru, Philippines, Sri Lanka and Vietnam

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EXECUTIVE SUMMARY

The United States Department of Labor (USDOL), through its Bureau for International Labor Affairs (ILAB) Office of Trade and Labor Affairs (OTLA), contracted Sistemas, Familia y Sociedad (SFS) to conduct a thematic performance evaluation of the Electronic Case Management System (ECMS) components of five OTLA-funded projects in Colombia, Peru, the Philippines, Sri Lanka, and Vietnam along with two Office of Child Labor, Forced Labor and Human Trafficking (OCFT)-funded projects in Honduras and Paraguay. In these seven countries, past and current USDOL-supported projects collaborated with national labor administrations to develop and/or improve ECMS for the operation and management of labor inspection cases. This evaluation assesses the achievements, challenges, and sustainability to date of the projects' ECMS components in these seven countries.

The evaluation team's research methodology used a qualitative design. Evaluation findings were based on information extracted from three main sources: document review, key informant interviews and group interviews. Due to the ongoing coronavirus pandemic, the team was unable to conduct in-country fieldwork, relying instead on online conferencing and telephone to communicate with key informants.

Instead of organizing the evaluation findings using the traditional evaluation criteria of relevance, coherence, effectiveness, efficiency and sustainability, the evaluation team decided to adopt the Technology, People, and Processes framework. This framework is often used in Information Technology (IT) circles to plan, implement and evaluate IT-driven organizational transformation initiatives, with applications in both the private and public sector. The framework hypothesizes that successful initiatives to improve organizational effectiveness and efficiency balance and align these three dimensions of organizational change.

FINDINGS AND CONCLUSIONS

ECMS Status in Seven Countries

Of the seven projects with an ECMS subcomponent, four projects were closed (Colombia, Peru, Philippines, and Sri Lanka) and three were still ongoing. In the three active projects, two out of three ECMS (Honduras and Vietnam) are still in the software development phase. In the case of Paraguay, the deployment of the first version of ECMS was interrupted by the Covid-19 pandemic. The International Labor Organization (ILO) implemented four projects and Partners of the Americas, Program of Labor Development (Programa Laboral de Desarollo, PLADES) and World Vision each implemented one of the seven projects that were covered in the evaluation.

Although ECMS are a complex intervention with many challenges, project investments in this area are producing positive results that have been largely sustained in countries with mature systems. Among the closed projects, three out of four ECMS are still functioning and evolving in ways that are likely to have growing positive effects on the labor inspectorate's effectiveness and efficiency (Colombia, Peru, and the Philippines). Even in Sri Lanka, where the ECMS is, for the most part, no longer used due to both technical and user acceptance issues, the labor administration reported plans to redevelop a new system, building on the lessons learned from the USDOL-funded project.

Although the most-accepted ECMS use still appears to be for recording initial labor inspection results, in all seven evaluation countries, demand from labor officials for more advanced features and uses has grown over time. Increased demand for more automation of administrative tasks, sharing data between public sector and other information systems, client-facing services, and advanced data analytics suggested that decision-makers increasingly understood the potential benefits of ECMS. Indeed, labor administrations' interest and capacity to continually adjust and improve the ECMS appears to be a key factor in keeping ECMS in use, given changing laws, the inspectorates' evolving requirements, and the need for ECMS maintenance and upgrades.

ECMS Implementation Challenges and Ways Forward

Based on the experiences in the seven countries covered by this evaluation, there is no "one size fits all" ECMS blueprint that can be replicated across countries that are either currently implementing ECMS or considering it in the future. The seven countries covered by this evaluation experienced unique growing pains and obstacles based on their context. Nevertheless, there were some common pitfalls as well as good practices that were effective to mitigate or overcome challenges that are worth sharing.

ECMS intervention/software design: Grantee and labor administration IT expertise and time limitations resulted in project-contracted IT service providers shouldering significant, and in some cases excessive, responsibility for ECMS design and implementation. Extensive outsourcing by grantees of ECMS software development, deployment, and change management strategies (user training, communication, and promotion) to IT contractors incurred risks including lack of effective oversight, design errors and delays due to the software development team's lack of subject-matter expertise and their challenges getting adequate input or cooperation from labor administration stakeholders, among others. In the early software development stages, labor officials often were not able to anticipate their needs or provide adequate input on software design, necessitating changes after the initial software development contract had been awarded and, for the mature systems, after the contract was completed and the ECMS deployed. In addition, decision-makers were often unable to fully grasp the potential benefits of ECMS prior to its deployment, which limited their motivation and capacity to provide guidance to IT contractors.

Some emerging good practices to anticipate labor administration needs more effectively, to better highlight potential ECMS benefits to decision-makers, and to avoid or mitigate the need for costly design changes that were demonstrated in the evaluation countries included:

- Reviewing other countries' ECMS design and deployment experiences through document review and/or exchanges with countries with mature systems, which informed decision-makers' understanding and vision for ECMS use. (Philippines, Vietnam, and Paraguay)
- Involving grantee's in-house IT specialists and personnel with previous ECMS implementation experience to provide inputs for the design and implementation of ECMS. (Colombia, Philippines, and Vietnam)
- Conducting preliminary feasibility studies and needs assessments to inform design decisions. (Colombia and Vietnam)

- Developing ECMS incrementally (using the Agile method of software development), which included processes for getting user feedback at regular intervals in the development process to correct flaws and adapt software features to meet user needs. (Colombia and Vietnam)

Digitization challenges: In the initial ECMS deployment stages, countries suffered some common challenges related to the labor administration's readiness for digitization. The absence of adequate Information Communication Technology (ICT) infrastructure (hardware, internet access and bandwidth), especially in sub-national field offices, limited effective system use in all countries. In addition, inadequate ECMS hosting solutions resulted in slow data upload speeds and frequent system outages, which incurred user frustration and constrained ECMS acceptance, especially by labor inspectors. Limitations in legal frameworks for e-government, such as recognition of e-signatures and digital files and archives, limited the ECMS' potential effects on reducing paperwork and increasing inspector efficiency, since manual processes could not be abandoned completely.

Poorly defined or nonstandard labor administration procedures were also a challenge for ECMS designers, whose work often extended beyond digitization to standardizing the procedures themselves. Deficiencies in some existing labor inspection processes likewise raised issues about if/how ECMS designers should align with these and suggested that broader technical assistance on labor administration reforms were needed to complement the ECMS intervention.

Some useful actions taken by grantees and/or the labor administration to mitigate digitization constraints included:

- In collaboration with labor administration IT departments, assessing ICT needs early in ECMS implementation and agreeing among the donor, the grantee, and the labor administration about which party will be responsible for acquiring needed hardware, software, and other infrastructure, which was in some cases formally documented in Memoranda of Understanding (MOU). (Colombia, Honduras, Paraguay, Philippines, and Sri Lanka)
- Upgrading the labor administration data center servers, increasing bandwidth, and improving server maintenance or outsourcing software hosting to professional service providers to overcome slow data-upload and server downtime problems. (Colombia and the Philippines)
- Providing training to labor administration IT teams on ECMS and related infrastructure maintenance. (Philippines and Sri Lanka)
- Documenting the country's laws and regulations on inspection and labor violation sanctions to guide ECMS software development so that it aligns with individual countries' legal requirements and specific timelines.
- Mapping and harmonizing existing labor office inspection practices and workflows.
- Developing specific ECMS modules to manage processes related to a specific industry, sector, or inspection area (e.g., occupational safety and health).

ECMS adoption and acceptance by users: Labor inspector acceptance of ECMS was a major challenge facing ECMS proponents in all evaluation countries. Common sources of labor inspector reluctance were the system's real or perceived negative effects on inspector workloads and routines, technical

glitches, and unfamiliarity with ECMS hardware or software; factors which were especially important early in ECMS roll-out. Fear of increased surveillance by supervisors, including possible adverse effects on their performance evaluation, also hindered some labor inspector acceptance and use.

To greater and lesser degrees, projects anticipated and implemented strategies to foster labor inspector acceptance. Some effective strategies included:

- Involving labor inspectors and other sub-national users in software development and testing stages.
- Supporting IT literacy and system use training programs.
- Providing user support through peer-to-peer and helpdesk mechanisms.
- Implementing targeted communication activities highlighting ECMS benefits and dispelling myths.
- Requiring labor inspectors to use ECMS through administrative orders or including the requirement in job descriptions.
- Tracking labor administration key performance indicators in ECMS reports and dashboards and using incentives to reward inspectors or inspection units that meet their targets.

Systemic issues like corruption and governments' slow progress toward improving labor inspectors' status and working conditions, although not directly related to ECMS, also affected their willingness to adopt ECMS in several countries. These issues were largely outside a project's control, although some grantees' advocacy and support for broader labor administration reforms created opportunities for dialogue on needed changes.

ECMS Outcomes on Labor Administration Decision-making, Labor Violation Case Management, Enforcement of Sanctions, and Transparency

In countries with mature systems, USDOL-supported ECMS were to differing degrees influencing decision and policy making, labor administration follow-up on labor violations, and had promoted greater transparency on issues related to labor law compliance. Peru stood out for having developed analytical tools to use data to predict compliance problems. The Philippines used ECMS data for performance evaluation and assessing training needs, inspection planning, and orienting labor policies, among other uses. Although improvements were still needed, labor officials in mature ECMS countries found that the ECMS had been useful to improve follow-up on labor violation cases. Most countries claimed they had or would be sharing ECMS data with stakeholders outside the labor administration, increasing the capacity of "outsiders" to see and advocate for compliance improvements. For example, respondents in Colombia and the Philippines reported that educating workers' organization representatives and tripartite bodies on their right to ask for ECMS-generated reports was useful to inform their advocacy and social dialogue activities.

Despite progress, the practice of using data to drive labor administration planning and policy decisions was still in its early stages in most of the seven evaluation countries, suggesting the need for better data analysis tools as well as additional project assistance to develop labor administrations' capacity to use data for performance management and strategic planning. In addition, countries with mature systems highlighted that although it was useful to have access to data on labor violations, political will, and not data, often still drove enforcement decisions. Similarly, despite increasing case management efficiency, prosecuting cases and imposing sanctions were also impeded by limited legal

expertise among labor personnel as well as labor court and other dispute resolution mechanism limitations. Finally, systemic challenges (too few and inadequately trained and motivated inspectors, inspectorates' limited power to impose sanctions, and corruption) negatively affected labor administration follow-up on labor violations and their effectiveness in enforcing sanctions.

ECMS Sustainability in Seven Evaluation Countries

Currently, Colombia, Peru, and the Philippines, within certain limits, have adequate technical capacity within the labor administration to sustain and improve their ECMS without significant donor or grantee support. Their systems have been in use long enough to overcome the most important technical issues as well as to demonstrate to decision-makers the benefits of having the system. The governments have allocated personnel and regular budget resources to cover ECMS maintenance and running costs (Colombia and the Philippines) and for future upgrades (Peru). Paraguay and Vietnam are facing the end of project assistance relatively soon after the initial deployment of their systems. Based on other evaluation country experiences, many software design problems and technical glitches, as well as user acceptance challenges, occur in the first year after the initial deployment. Ending project assistance too soon after deployment may put system sustainability at risk. The ECMS in Honduras, where software development is ongoing, will likely benefit from the additional time afforded by the three-year extension of the Futuros Brillantes project.

Issues that affect ECMS sustainability include the extent of buy-in for system use by labor administration decision-makers, the capacity of the labor administration to support and maintain the system, the availability of state budget allocations post-project, and IT capacity to adapt the ECMS software to evolving laws, regulations, and procedures. Evaluation findings suggest it is difficult to anticipate and resolve all ECMS sustainability risks in one project cycle. Colombia was fortunate to benefit from additional USDOL assistance through a subsequent project to overcome its ECMS technical challenges and align the software with procedural changes. Similarly, the Philippines received USDOL assistance to rebuild their ECMS to overcome the failings of their first system and develop internal capacity to update the software. In contrast, ILO and USDOL support for Sri Lanka's ECMS was relatively limited post project, which although not the only factor, was certainly an important cause of the system's eventual collapse.

Most projects also funded short software warranties and trained or planned to train labor administration personnel on system maintenance, which was useful for fostering sustainability but with limitations. Overall, grantees appear to have underestimated the time and level of IT expertise required to resolve post-deployment software design issues and maintain ECMS software and related infrastructure. Stakeholders in several countries with mature systems (Colombia, Philippines, and Sri Lanka) indicated that longer term post-deployment support from the IT specialists who developed the system was important, even when the labor administration had their own in-house expertise. External support was often needed to correct software bugs, address new user requirements, update forms, as well as for routine software and server maintenance.

Most projects were effective in gaining buy-in from labor administration decision-makers, including securing their commitment to maintain ECMS with government funding post-project. Frequent labor administration leadership changes as well as high levels of personnel turnover negatively affected progress and posed sustainability risks. A few projects documented high-level commitments in formal MOUs (Colombia and Paraguay), a strategy that helped to ensure institutional memory and

promote sustained commitment from labor administration officials. Making ECMS implementation part of trade agreement commitments was likewise useful to sustain political will (Colombia and Honduras).

RECOMMENDATIONS

1. **Conduct readiness assessments prior to ECMS software development:** Grantees, in collaboration with labor administration officials, should review third countries' experience and carry out studies assessing ECMS readiness. Assessments should examine a variety of issues, including: ICT infrastructure availability; government IT standards and e-government readiness; computer literacy and aptitudes for technology applications among labor administration personnel; labor inspection process and legal requirements; human resource structures and limitations; and information systems in other labor administration departments as well as institutions outside the labor administration for potential data sharing. Based on assessment results, grantees should develop strategies to capitalize on good practices, address identified gaps and mitigate risks. USDOL and grantees should also assess political will to overcome challenges and take needed actions based on assessment results and, assuming government willingness, develop clear MOUs outlining the roles and commitments of the donor, grantee and the government.

2. **Use more adaptive management approaches:** With grantee support, labor administrations should develop ECMS software in phases, taking into account the time required to address system design errors, incorporate new features to meet emerging needs, resolve technical bugs, train users, and overcome their reluctance to ECMS use. As part of this approach, grantees and labor administrations should pilot the system before expanding countrywide and/or developing all planned ECMS modules, recognizing the limits of how quickly technology can drive organizational development. Projects may consider drawing on the results of pre-implementation assessments to identify which procedures and/or in which geographic zones institutional readiness is the greatest and start there. Achieving early success, even on a limited scale, is more likely to foster sustained government buy-in than early failures.

    - USDOL should plan additional support (for overcoming system technical flaws, implementing change management strategies, and adding new features if needed) for ECMS development in Vietnam following the end of the current project. Depending on the status of progress at the end of the project, USDOL should consider providing support to scale the ECMS in Vietnam through a future project.

    - USDOL should monitor ECMS deployment in Paraguay post-pandemic and consider providing additional support (to address technical flaws, implement change management strategies and potentially add new features if needed) during the initial redeployment phase.

    - In the project extension phase, World Vision should provide support to deploy the ECMS in Honduras in phases (geographic and/or by system module), providing support to correct problems before attempting countrywide deployment.

3. **Address hardware, software, and software hosting solution requirements:** To promote usability, projects and/or labor administrations should allocate enough resources to ensure the

ICT infrastructure available to users is adequate. This means ensuring that labor inspectors have access to computer hardware (which may include mobile phones, tablets, laptops, and/or desktop computers in labor offices, depending on the context) and when possible, high-speed internet access. Proper attention should be paid to ECMS software hosting solutions (server processing speeds, memory and bandwidth, server maintenance).

4. **Outsource at least part of software maintenance to the software development company following deployment:** In addition to building the capacity of a ministry's internal IT support and maintenance teams, projects and/or labor administrations should acquire software maintenance contracts after the software is deployed for at least two to three years (or longer, depending on in-house IT expertise availability and capacity). The contracts should include clear level-of-service agreements.[1]

5. **Design and implement comprehensive change management strategies:** These include clearly specifying ECMS use requirements in job descriptions and administrative orders, user training, involving labor inspectors and other users in "continuous improvement" processes to identify and correct system bugs and identify other needed improvements, creating user support systems, and developing communication activities aimed at fostering ECMS acceptance and adoption. Training should include basic IT literacy (if needed) and system use training, and for decision-makers, training on using data for labor inspection system monitoring and strategic planning.[2]

    - Grantees in Honduras, Vietnam and Paraguay should help ministries to develop and implement a change management strategy that includes user consultations to define how ECMS software can be improved to align with their needs, identify system bugs, training, user support systems and targeted communication activities on ECMS benefits.

6. **Advocate for and assist with overcoming systemic issues affecting labor administration effectiveness:** To the extent that they have leverage, USDOL and grantee personnel should advocate for and support labor administration officials to address systemic issues affecting the efficacy of labor inspection in parallel with ECMS development. Systemic issues include the limited number of labor inspectors, their status and access to training, as well as broader issues such as national leaders' commitment to enforcing labor laws and fighting corruption. Sources of leverage may include trade agreements, and USDOL, ILO and other international and national

[1] The agreements should describe covered services and service levels, the metrics by which the services are measured (such as response times), the duties and responsibilities of each party (such as what software components are covered by whom, frequency and type of preventative maintenance, remote access to the system), the remedies or penalties for breach, and a protocol for adding and removing metrics. Project managers may need to consult with IT experts within their organization on the elaboration of the service contract.

[2] Variables to consider when evaluating training needs and budgets include the number of labor inspectors and labor offices, the users' baseline IT competencies, the complexity of the ECMS and the users' role as well as the training strategy (whether a training of trainers approach will be used, or end users will be trained directly by the project).

stakeholders' advocacy and technical cooperation activities that highlight countries' areas of noncompliance with international labor standards, including Convention 81 on labor inspection.

7. **Ensure software developers are guided by government and grantee labor inspection specialists:** Project labor inspection specialists and labor administration officials should allocate adequate time and human resources to accompany software developers during the "business processes" engineering phase of ECMS design and development. How much time and access to technical expertise is required will vary from country to country depending on the extent that labor inspection processes and procedures have already been elaborated and standardized across the labor administration, including sub-regional offices, and whether the former account for the most recent labor law reforms.

8. **Orient ECMS data collection forms and reporting tools to facilitate measurement of labor inspection key performance indicators and other required reporting:** ECMS development should consider the labor administration's strategic plans and key performance indicators and adapt system database structures and reporting features so that, to the extent possible, the ECMS produces data to measure progress against indicators. In the absence of key performance indicators, projects should consider providing technical advisory services and training from labor inspection specialists on the development and use of key performance indicators.

9. **Capitalize on lessons learned from past ECMS interventions:** USDOL and grantees which currently provide support for ECMS development in many countries (ILO), or may do so in the future, should systematize and document good practices and lessons learned supporting ECMS development in practical formats, such as an ECMS toolkit, business cases, or implementation guidelines. Given the specialized and varied knowledge required for ECMS development, USDOL or the grantee should consider creating a multi-disciplinary team(s) that may provide support for future ECMS interventions.