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Implementation of the Serbian Law on Dual Education
First Report on Drivers and Barriers in the Pre-Implementation Phase

Report

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Executive Summary

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Introduction

Serbia's law on dual education (LDE), slated for implementation in the 2019/2020 school year, transitions part of the country's vocational education and training (VET) system to more intensive and more regulated model of work-based learning (WBL). Although many schools already cooperate with companies, WBL was not previously regulated.

Research shows that dual education has better overall outcomes than school-based VET does on the youth labor market (i.e. Bolli, Egg, & Rageth, 2017). Dual education, apprenticeship, and WBL are key to the VET-related policy recommendations of the OECD (OECD, 2015) and UNESCO (UNESCO, 2015). The European Union's European Centre for the Development of Vocational Training (CEDEFOP) also cites "increased WBL in all VET programs" as a main trend for the future of VET (CEDEFOP, 2018).

Although dual education is a worthwhile cause, it can be challenging to implement (OECD, 2009). Unlike school-based VET programs, dual education requires actors and institutions from the employment system to engage, participate, and even take on leadership roles and costs (Bolli, Caves, Renold, & Buergi, 2018). Managing so many institutions, actors, and diverse system logics is challenging, and existing research on implementing VET reforms offers limited guidance (Caves & Baumann, 2018).

To support the implementation process, this report is the first in a series of studies that look for drivers and barriers to the law. We intend it to be useful for the Ministry of Education, Science, and Technological Development (MoEST), the Chamber of Commerce and Industry of Serbia (CCIS), and the LDE's implementation oversight body - Commission for Development and Implementation of Dual Education (Commission Article 40). We also hope that it is useful for other national bodies, regional leadership, and the local schools, companies, and communities that will both implement and participate in dual education.

We interviewed 206 respondents from November 2018 to February 2019. Most interviews were in person or over the phone, with a few by e-mail, all in Serbian by the CEP team based on a form created by both teams. The CEP team translated responses into English and sent them to the KOF team. The quantitative data is in the form of yes/no questions, five-point Likert scales, or multiple-choice questions. The qualitative data is participants' responses to open questions, follow-up questions, and comments. The KOF team analyzed the quantitative data statistically and used content analysis for the qualitative data. Both teams collaborated extensively on interpretation of the results.

In order to represent the full landscape of dual education in Serbia, we interviewed a wide variety of actors representing every actor group engaged in dual VET and the reform. The main actor groups are the government and related national bodies, the CCIS, trade unions, regional units of both MoESTD and CCIS, schools, companies, students, parents, donor partners, and international community actors. For schools, companies, students, and parents, we spoke with those already involved in dual education programs and those not involved in dual education. For each group of respondents, we targeted specific actors that are closely involved in dual education. Table 1 summarizes the interviews by group, actor, selection strategy, and sample interviewed.

| Table 1: Sample			
Actor Group	**Actor Summary**	**Person**	**Sample**
Government and governmental bodies	MoESTD	Assistant minister for dual education	3
		Assistant minister for secondary education	
		Head of VET dept.	
	VET and Adult Education Council	President	1
	Prime Minister's Office	Person in charge of dual education	1
	Standing Conference of Towns and Municipalities (SCTM)	Person in charge of dual education	1
	Institute for the improvement of education (IIE)	Director	1
Chamber of Commerce and Industry of Serbia	CCIS	President of CCIS	1
	Centre for Education, Dual Education and Education Policies	Head of Centre	1
	Sector for strategic analysis, analytics, services, services and product packages	Head of Department	1
	Regional CCIS Units	Directors	15
Trade unions (labor)	Branch union	Representative	1
	Trade union focused on education issues	Representative	1
	Trade union focused on labor issues	President	1
Regional School Administrations	Regional school administrations	Heads of school administrations	14
VET Schools	Schools engaged in dual education starting 2013/14, when the first dual education pilot profiles were introduced	School principals	3
		WBL Coordinators	3
	Schools engaged in dual education starting 2017/18, when official implementation of dual education started	School principals	9
		WBL Coordinators	9
	VET schools not engaged in dual education	School principals	19
Students	Students enrolled in dual education	Students	30
	Students enrolled in other VET profiles	Students	30
Parents	Parents of students in dual education	Parents	15
	Parents of students in other VET profiles	Parents	15
Companies	Companies cooperating with schools within dual education	Managers/HR directors	18
	Companies not participating in dual education	Managers/HR directors	8
International Community & Donors	Major donor-partner organizations in dual education	SDC, GIZ, ADA	3
	Main international organizations operating in education	EUD, ETF	2

Results

There is almost universal awareness of the upcoming change and motivation to participate in implementation. Interviewees from all actor groups are willing to make changes and coordinate with other actors. Companies, schools, and parents that are already involved in dual education initiatives are excited about their experiences and eager to expand the model. Top-level leaders and organizers are invested in implementing the law, and there is an optimistic mood in general.

Interviewees also flag potential challenges. The law is not completely clear and aligned to the Serbian context, partially because its process-detailing bylaws and acts are still new and not well known (see the chapter on *Bylaws and Act on Specific Processes*). Interviewees are able to identify specific potential challenges like lack of staff, expertise, and funding for intermediary and facilitating roles. There are a few concerns that come up repeatedly, especially students' salaries, companies' willingness to participate, need for more information especially for mid- and operations-level actors, and need for more action from facilitating intermediaries like CCIS and regional CCIS branches.

Awareness

Overall, awareness of dual education in general is very high, and actors report feeling very well informed about the law. Respondents are aware of vocational education and of dual education in Serbia (4.3 out of 5 on average), and are similarly well informed of the new dual education law, at 4.2 out of 5. Students are very aware of dual education profiles, with 89.8% reporting they know about the new profiles, 3.4% unaware, and 6.8% unsure. Students rely on their schools, peers, and the internet for information. Parents, both with and without a child enrolled in dual education, rely on schools or the media.

Figure 1: How aware are you of vocational and dual education in Serbia generally? How well informed are you about the new dual education law in Serbia?
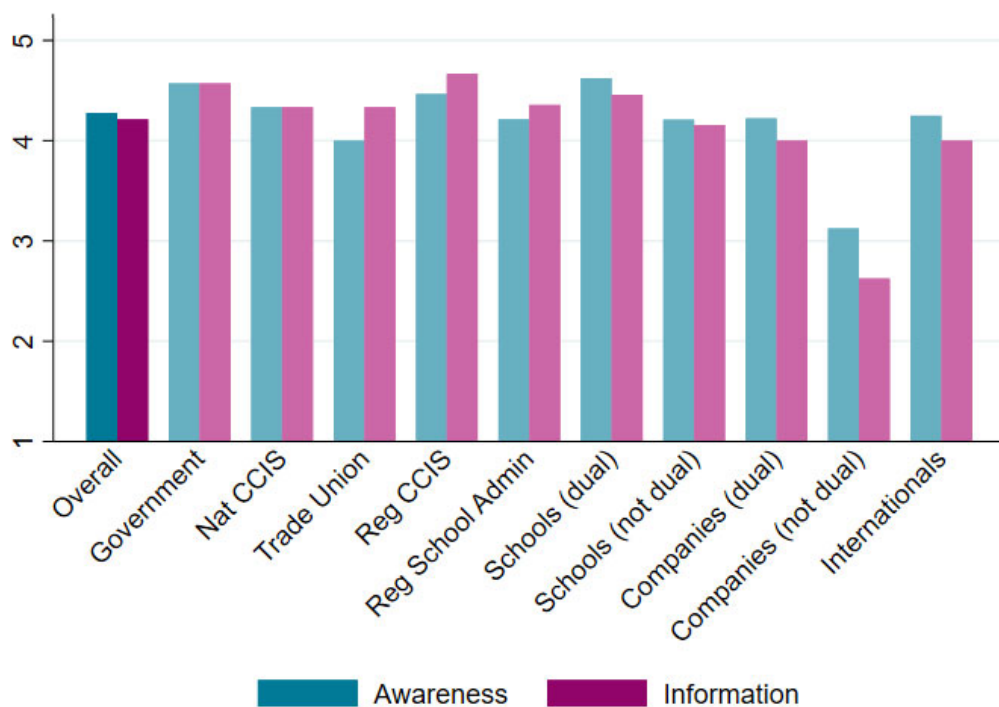
Reading guide: Responses range from not at all (1) to very much (5) on the vertical axis. Teal bars represent awareness, and pink bars information. The first, darker bars show the overall average response, and the lighter bars to the right show each actor group's average responses.

Context Fit

One of the central topics of our investigation is the understanding and effectiveness of the law. We asked all interviewees except students and parents how well the law fits Serbia's context, how well it addresses the important aspects of dual education, and how clear the law is. Most interviewees agree that the law meets all of those criteria, but a significant minority does not. Their reasons can help identify pre-implementation challenges that can be addressed before they turn into major issues during the law's rollout.

Although parents did not respond to these specific questions about the details of the law, they did indicate whether they would recommend dual education profiles to other parents. 86% said they would. This anecdotal evidence suggests that dual education profiles can work in Serbia and fit its needs.
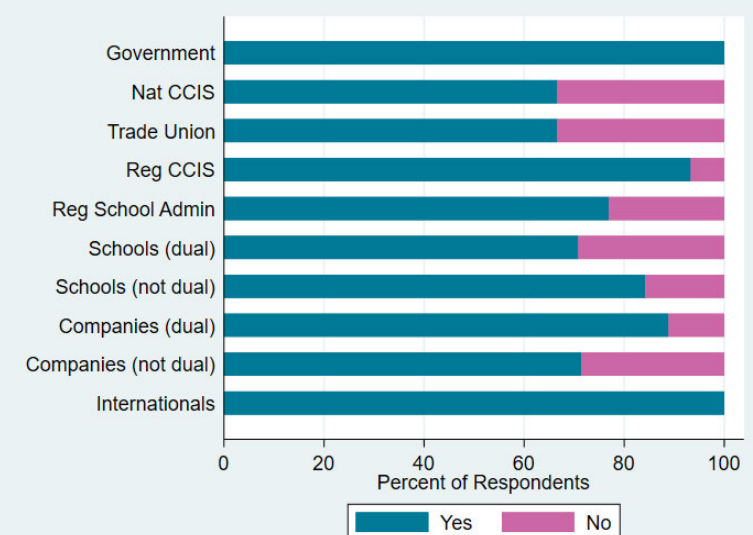
Fitting Serbia's Needs

For most interviewees (82.5%), the law fits the needs of Serbia's students and companies. Some respondents feel that the law fits one group's needs, but not another's. A government interviewee stated, "*It totally fits with the needs of students, but companies aren't satisfied, sometimes they don't see the benefits from dual education*." In contrast, a CCIS respondent argued that "*The initiative for the adoption of the Law on dual education came from companies*" and the law fits Serbia's context. Another CCIS representative disagrees, saying that the law does not fit because it does not align with the existing school-based VET system.

Figure 2: Do you think the dual education fits with the needs of Serbian students and companies?

Reading guide: "Yes" responses are in teal, and "No" responses in pink. Each actor group is shown on its own line.

Schools already in dual education have experienced great success with dual education profiles, like this experience, "*The feedback we are receiving from companies is great*" (dual VET school leader).In contrast, other schools worry about adapting to the law. For example, one states, "*the companies are not satisfied with envisioned procedures as well as with financial requirements, and especially smaller companies are affected by the law on dual education*" (company). Overall, the tension between excitement—what dual education can potentially accomplish—and nerves—whether companies will find what they need—is strong.

Companies already in dual education agree that the law fits their needs generally, though some complain that, under the law, "*Companies are taking all the risks and all the costs*" (company not in dual VET). Companies not already in dual education are less sure, "*especially related to fulfilling all requirements, such are the number of instructors and the manner and time of training for instructors*" (company not in dual VET).

Figure 3: Do you think the dual education law addresses all the important aspects of dual education?

Reading guide: "Yes" responses are in teal, and "No" responses in pink. Each actor group is shown on its own line.
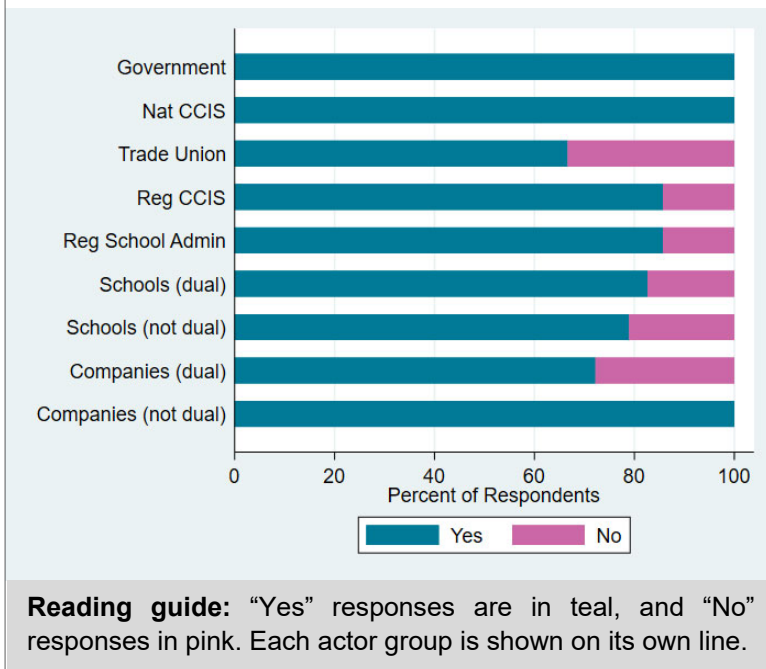
Clarity and Understandability

82.7% of interviewees reported that the law is clear and understandable. National-level actors are generally comfortable with the law, but local and regional actors have questions.

Schools report, "*There are lot of things companies and schools are not clear about*." These include students' payment, curricula, and the transition for existing dual profiles. Non-dual schools state, "*Teachers are still confused about the distribution of responsibilities, while companies are confused about students' payments*."
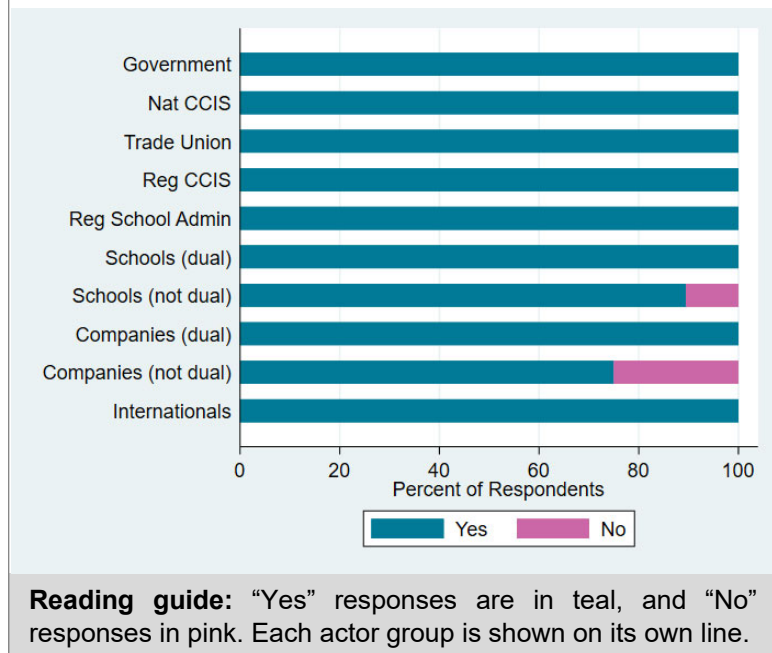
Some misunderstandings are serious enough to disrupt implementation. One school reports a company that dropped out because "*companies are not fully aware of their obligations to pay students. We had one big company, started cooperation and we got the profile…and now this company wants to exit the whole arrangement since they have no money to finance it*" (school in dual education).

Willingness to Implement

Motivation to implement dual education is extraordinarily high in Serbia. 97.3% of interviewees report that they are motivated to participate in implementation.

Nearly every company interviewee reports that developing a skilled workforce to meet employment needs is the main motivation for participating in dual education implementation. Companies already participating in dual VET state that "*we want to be part of the education process of future employees*" and "*we see the company's interest in participation*." Schools are motivated to participate in dual VET mainly in the interest of their students. For schools, the biggest concern is establishing cooperation with employers, making sure students are paid, and aligning with in-company trainers.

Figure 4: Is your organization motivated to participate in implementing dual education profiles?

Reading guide: "Yes" responses are in teal, and "No" responses in pink. Each actor group is shown on its own line.

Ability to Implement

Implementation requires resources beyond what every actor already needs for daily operations. Overall, resources are not fully adequate but are closer than expected. Even when there are challenges, stakeholders are positive: "*Time is always an issue but we are ready to invest time in training of possible future employees*" (company in dual education).

Figure 5: Does your organization have enough resources to implement dual education profiles?
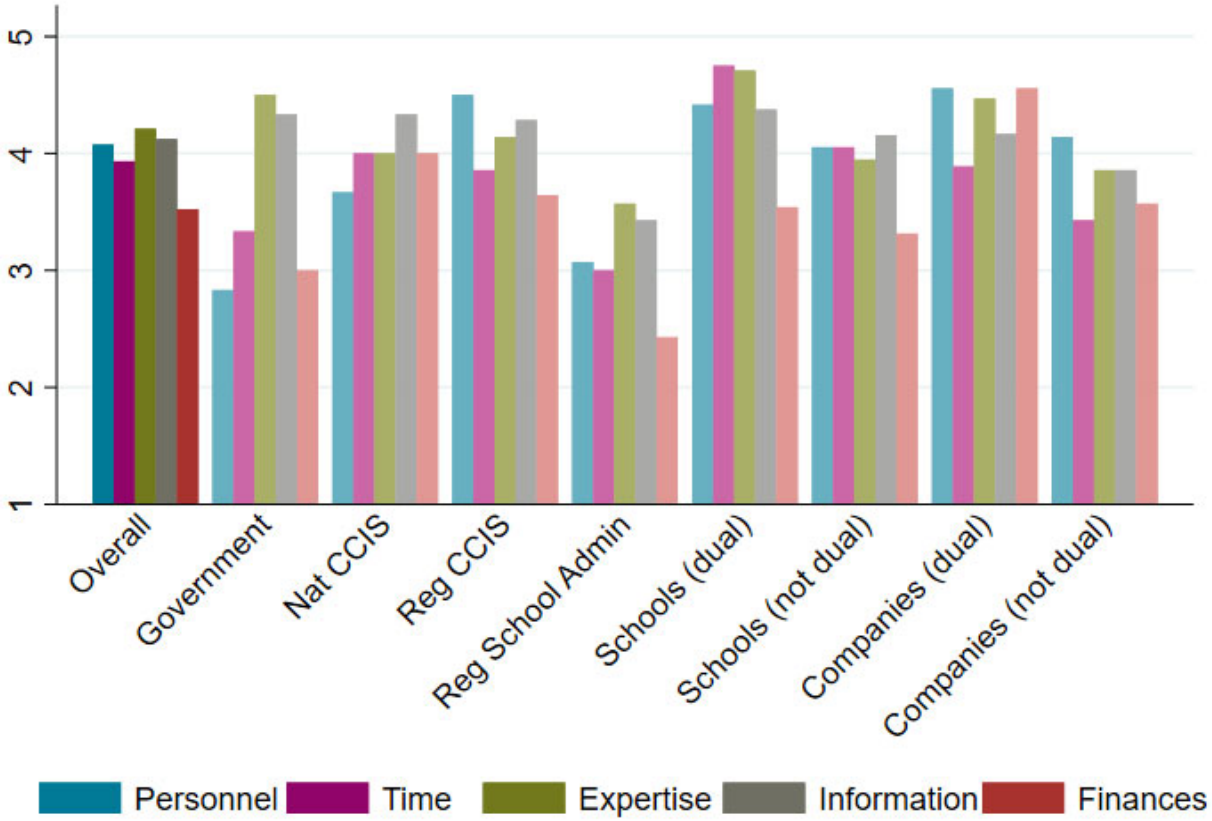
Reading guide: Responses range from not at all (1) to we have enough (5) on the vertical axis. Bars' colors represent the type of resource, while groups of bars represent actors. The first, darker bars show the overall average response and the lighter bars to the right show each group's average.

Cooperation

Steering the new dual education system will demand greater cooperation and coordination than the existing school-based VET, and implementing it requires even more. Nearly all actors report being prepared to cooperate (98.2%). This comment, from regional CCIS, exemplifies the tone of interviewees' responses, "*We are ready to cooperate on the implementation of dual education with all other actors*" (regional CCIS).

According to interviewees, the **drivers of cooperation** are mainly schools and companies. One school director stated, "*My experience is that schools are doing the most important part in terms of*

establishing and maintaining cooperation with companies, and CCIS is not active as it should be in this area" (Dual VET school director).

Regional CCIS, for example, recognized the important role of all stakeholders as cooperation drivers, saying, "*All actors: institutions, companies, schools, students who actively participate in the realization of education through work are the drivers of dual education*" (Regional CCIS).

The issues that stakeholders cited as **obstacles** to cooperation were lack of interest from some institutions and actors, lack of willingness from companies to pay students, low capacity of small companies, implementation of the law without flexibility, and lack of human resources in CCIS.

Figure 6: Is your organization prepared to cooperate with other actors on implementing dual education?

Reading guide: "Yes" responses are in teal, and "No" responses in pink. Each actor group is shown on its own line.

Coordination

Current and projected cooperation level are key challenges. Interviewees report that actors are not sufficiently coordinated (34.5% say they are not) and the majority do not believe everyone will be coordinated by the start of the next school year when implementation begins (55.9%).

Many comments referred to things working well at one level, in one region, or in one local area but possibly not in others. It is clear from interviewees' comments that there have been ongoing efforts to coordinate more for VET, and this law will represent an extension of that effort. Another common theme, especially among schools with dual profiles, is the difference between involvement and coordination. It appears that actor groups are generally involved in VET-related issues, but not fully coordinated. Local actors especially seem to feel that there is not enough vertical coordination. The need for increased horizontal coordination between the education and employment systems is obvious in building dual education, but vertical coordination is also a key issue.
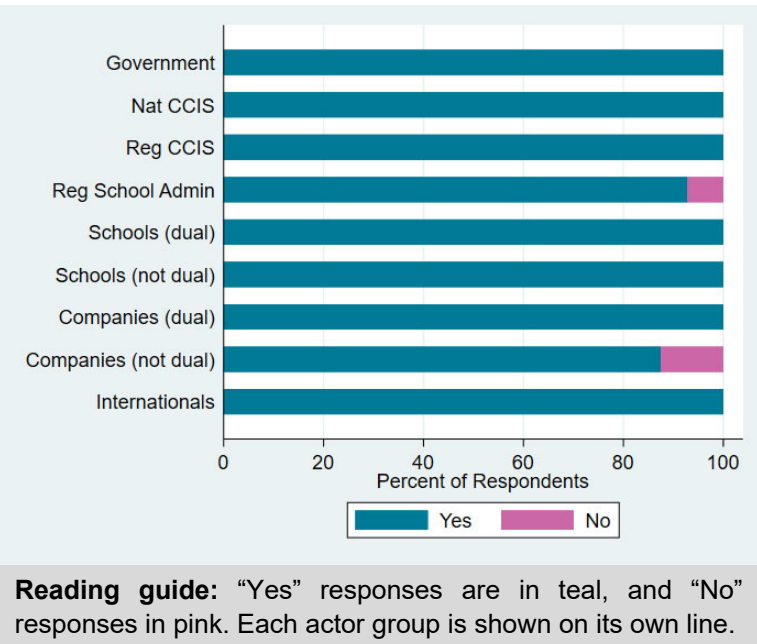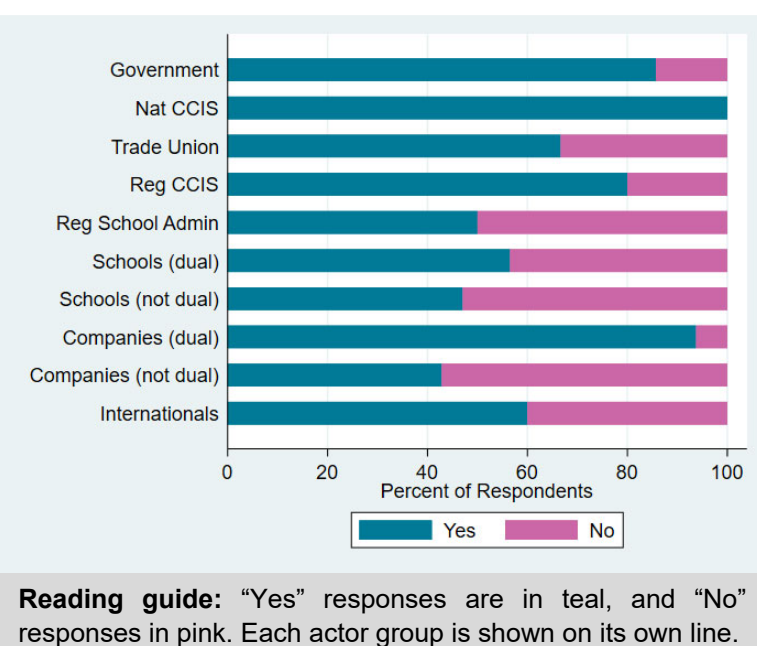
Figure 7: Right now, are all of the relevant actors and institutions coordinated to implement dual education?

Reading guide: "Yes" responses are in teal, and "No" responses in pink. Each actor group is shown on its own line.

Bylaws and Acts

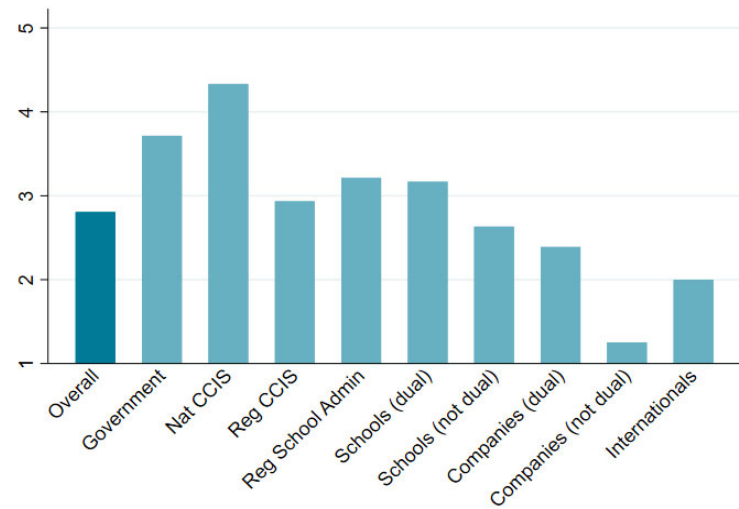### Career Guidance and Counseling

We find that awareness and understanding of the career guidance and counseling bylaw is only moderate (2.8). The national CCIS is most aware, but is not heavily involved in implementing career guidance and counseling. Awareness is lowest among more local-level actors like companies and non-dual schools. These are precisely the actors that need to implemented career guidance and counseling, so this is a problem. One interviewee predicts this, saying their worry is the "*Involvement of employers in such teams since I am not sure they will have enough time to be fully dedicated to career guidance and counseling activities*" (dual VET school).

Figure 8: How well informed are you of the career guidance and counseling plans for the new dual education program?

Reading guide: Responses range from not at all (1) to very much (5) on the vertical axis. The first, darker bar shows the overall average response, and the lighter bars show groups.

Making sure that every student eligible for a dual education profile in the 2019/2020 school year has access to quality career guidance and counseling before making their decision needs to be a priority for time, energy, and resources.

Training In-Company Trainers

Actors are somewhat aware of trainer training (3.1). However, regional school administrations and non-dual education schools are unaware, and non-training companies are completely unaware. Those who are aware of the trainer training plan have concerns about its feasibility. There are various concerns about the selection of trainers, trainers' fitness for the job, and small companies' incentives to invest in training trainers. However, the key issue is summed up, "*Thousands of instructors have to be trained in very little time*" (international partner).

Figure 9: How aware are you of the planned processes for choosing and training in-company instructors?
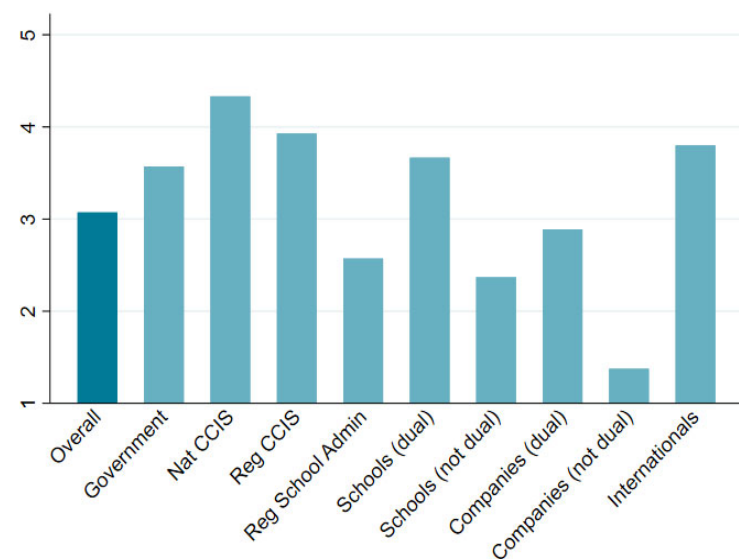
Reading guide: Responses range from not at all (1) to very much (5) on the vertical axis. The first, darker bar shows the overall average response, and the lighter bars show groups.

Student Placement

Figure 10: How well informed are you about the planned processes for matching students and companies?

Reading guide: Responses range from not at all (1) to very much (5) on the vertical axis. The first, darker bar shows the overall average response, and the lighter bars each groups.
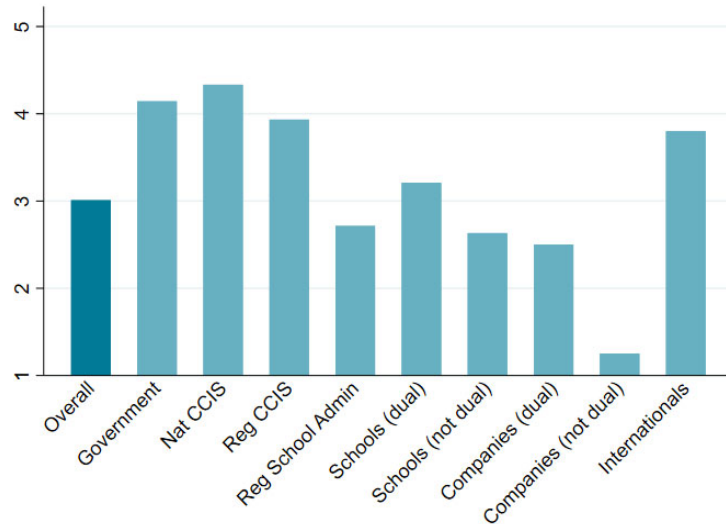
Actors are somewhat aware of the planned student-company matching process (3.0), but awareness was mostly high at high levels. Interviewees' specific concerns are that it is a "lengthy process" (regional CCIS), it might create mismatch, and there might be equity issues for students in disadvantaged groups. A regional CCIS respondent summarizes the risk of rushing, saying, "*There is a risk that career guidance and counseling teams won't have sufficient information to make good distribution of student in the first year.*" However, one WBL coordinator from a dual VET school finds that the proposed process "*Seems complicated but logical. It is necessary to seriously approach the process.*"

Trainer Licensing

Trainers' skills need to be confirmed before they start training. Despite the time pressure associated with this process, awareness of the bylaw is low (2.6). This relates directly to the complaint quoted earlier that CCIS has information but does not have the time or resources to disseminate that information in a way that schools can understand. Hence, CCIS needs more resources and support to share its knowledge.

Those who are aware of the plan are confident that it will help ensure the quality of WBL and give instructors the pedagogical knowledge they need. However, as one regional CCIS interviewee astutely points out, "*There isn't enough time for all candidates for instructors to go through training for instructors.*"

Figure 12: How well informed are you about the planned processes for training for instructors, exams for obtaining licenses and the license registry?
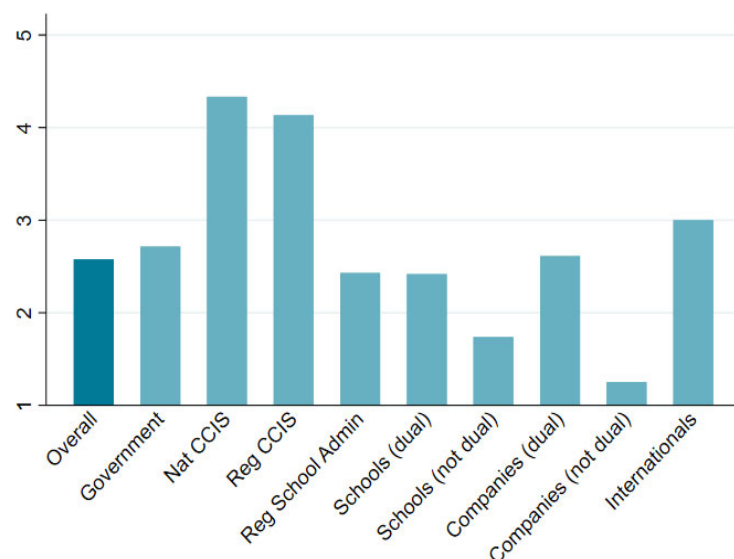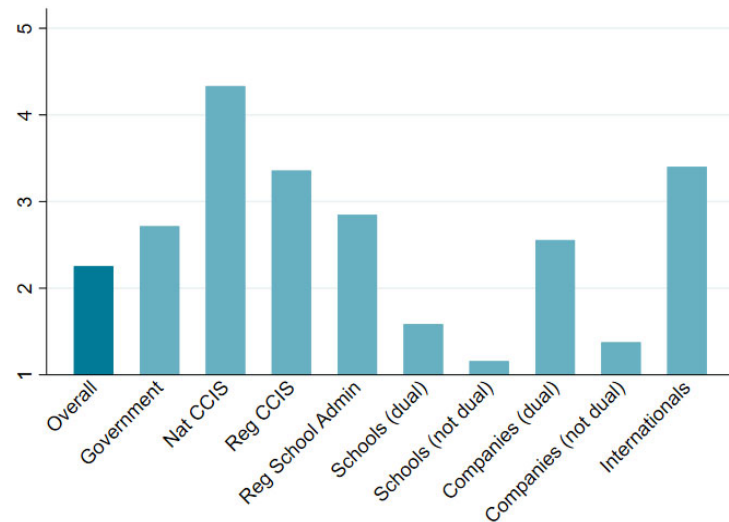

Reading guide: Responses range from not at all (1) to very much (5) on the vertical axis. The first, darker bar shows the overall average response, and the lighter bars show groups.

Costs of Trainer Training and Licensing

This bylaw details how the costs of such training and licensing will be distributed. The pattern for awareness of this bylaw is similar to the one before, with CCIS aware of it and other actors not. Overall, awareness is a low 2.3, indicating that there is a severe gap in communication. Regional CCIS worry that "*Training costs may be a problem for involving employers in dual education.*" Companies' opinions bear this out, as "*It takes too long (40 hours) and it is hard to have people out of work for that many hours*" and, "*The process requires a long absence of staff from their jobs. The optimal process of work is jeopardized*."

Figure 11: How well informed are you about costs of training and exams for instructors?

Reading guide: Responses range from not at all (1) to very much (5) on the vertical axis. The first, darker bar shows the overall average response, and the lighter bars show groups.

Checking the Fulfillment of WBL Performance Requirements in Companies

Quality assurance of workplace training is a requirement for high quality dual education. It ensures that students learn what they are supposed to learn while in the workplace, and without it, the program can never have high status or strong outcomes for graduates. This process has not been clearly communicated, awareness is extremely low at 2.0.

One government interviewee stated that the bylaw is still in process, while a CCIS interviewee said that the process is fully organized. Regional CCIS representatives seem to understand the bylaw very well, clearly articulating who is involved in inspections and how they work. Overall, however, most interviewees are unaware of the plan for quality assurance inspections.

Figure 13: How well informed are you about the planned processes for checking performance requirement fulfillment for WBL in companies?
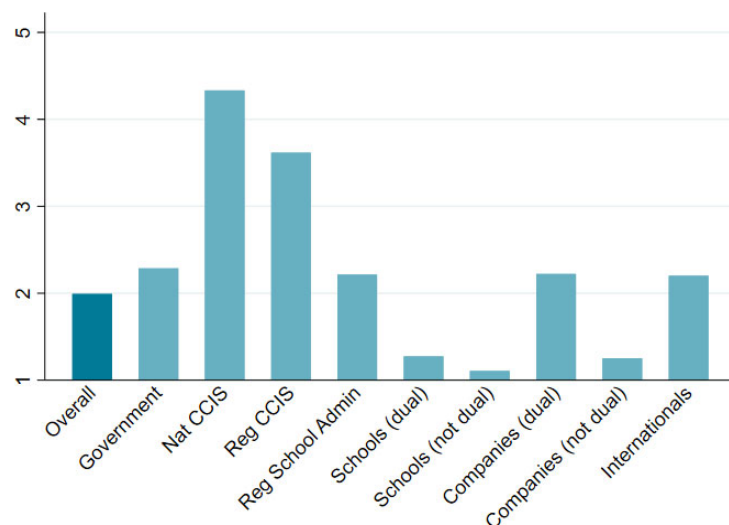

Reading guide: Responses range from not at all (1) to very much (5) on the vertical axis. The first, darker bar shows the overall average response, and the lighter bars show groups.

Conclusions and Recommendations

The overall picture of stakeholders' awareness, willingness, and motivation to implement the LDE is very positive. Although there are reasons to take this optimism with a grain of salt, it is an accomplishment on the part of this initiative's leadership and is a major advantage in the upcoming effort of implementation. Two key points may help prepare the initiative for the future: preparing for deflation, and dedicating resources to system building.

Preparing for Deflation

The high rates of motivation, willingness, and even available resources indicate that there may be some degree of inflated expectations at play. A model of positive feelings over time in an innovation process, called a "hype curve" (O'Leary, 2008) shows the common cycle of initiation, massive excitement leading to the peak of inflated expectations, then sudden downturn until the trough of disillusionment before reaching the plateau of productivity.

Figure 22: Simplified model of innovators' feelings of success over time
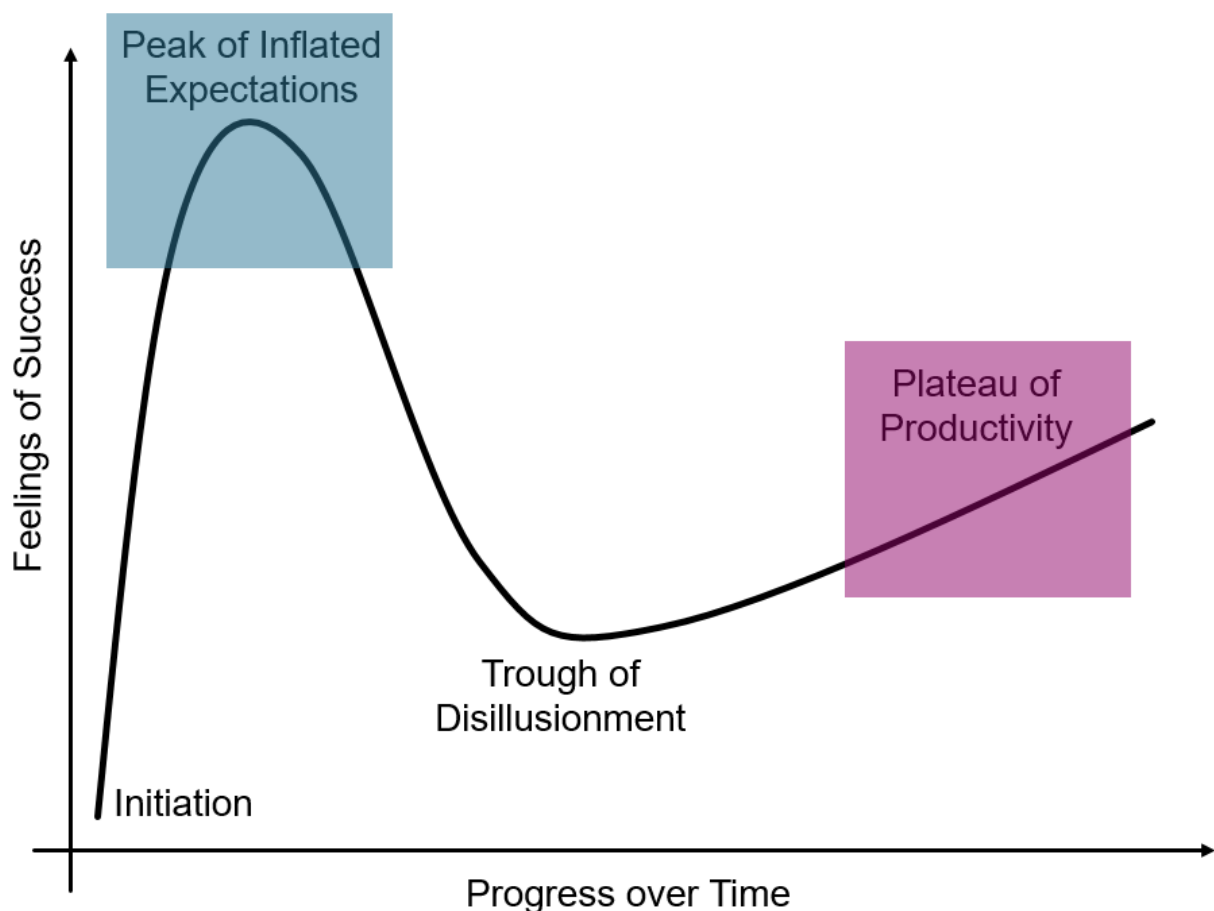
Reading guide: When the line is higher, implementers feel more successful. The teal box highlights the "peak of inflated expectations," where this initiative is now. The pink box highlights the "plateau of productivity," where companies and schools that participate in dual education have already arrived. Source: Adapted from O'Leary (2008)

In this case, it appears that most pre-implementation stakeholders are at the peak of inflated expectations, highlighted by a teal box. However, the schools and companies that already participate in dual education can be a source of hope because they—highlighted with the pink box—are already closer to the plateau of productivity. It is clear from the data that experienced stakeholders are happier and more confident with dual education profiles.

At the peak of inflated expectations, we can expect a great deal of optimism and we do see that in the data. However, we also see that more granular issues—for example the bylaws—start to show some evidence of difficulty. This is likely to increase as stakeholders realize how much the implementation process will demand from them, both in terms of resources and in changes and adaptations. One symptom of the initial fall towards the trough of disillusionment is bad press (O'Leary, 2008), and this might be part of the challenges to come.

Starting the reform process on a high is a good thing and helps bring in diverse stakeholders from different levels and types of actor groups. However, it does not guarantee that there will be smooth sailing until the law is fully in place. We recommend cautious optimism, with community building to support engaged actors and public dialogue to address and recruit dissenting opinions.

Resources for System-Building

There is an interesting pattern in the results that interviewees' overall resource needs do not match the details of specific statements. As we move both from general to specific questions and from high-level to operational level actors, more gaps appear. The first major misalignment deals with companies' costs, and the second with facilitation. Both of these can be solved by investing resources in system-building areas like intermediaries, information, and communication.

Companies—especially those already in dual education—state that they have everything they need to start participating in dual education. In contrast, however, multiple other actors report that companies will need either more resources or simply incentives to participate. Companies report quantitatively sufficient resources, and also make statements like "*We have everything we need*" (company). However, the government, regional CCIS, trade unions, and even some schools report that companies do not have what they need.

Many of the concerned respondents raise the issue of subsidizing company participation in training. One calls for "*Specific changes in the domain of tax rights and obligations for employees who engaged students*" (MoESTD), while another more vaguely states that the government will need "*To provide benefits for companies that are in dual education*" (MoESTD). The most specific plan is "*Providing financial resources for companies from the budget by Ministry of finance*" (MoESTD).

CCIS is even more specific, raising the issue of company subsidies specifically. One interviewee states, "*Companies bear all burdens and responsibilities of dual education. Given that and the early phase of implementation of dual education, benefits (e.g. through financial subsidies) should be given to companies that have decided to participate in dual education*" (Regional CCIS). Another joins in, "*If companies had some financial incentives (e.g. subsidies), it is expected that companies will actually have the announced benefits of dual education such as saving money on training new employees, higher employee productivity, and saving money and time*" (Regional CCIS). That last statement is particularly interesting because it calls for subsidies while highlighting the benefits companies already reap by participating in training.

The lone dissenting voice, aside from the companies themselves, comes from trade unions arguing that public funds should not go to private companies, especially to subsidize training that is already at least somewhat profitable. We agree strongly with this sentiment. Companies themselves do not ask for training subsidies, companies will reap benefits from training as stated by CCIS, and there is no evidence that such subsidies are necessary for the success of the system. Furthermore, they

are not called for in the LDE. At this point, subsidies for training companies would be an investment in an unproven concept outside the bounds of the law being implemented.

However, there is a need for more resources and there is a way for them to be invested so that it reduces companies'—and other stakeholders'—costs of participation in dual education without simply gifting them money. Investing in system building to reduce frictions, improve communication, support start-up costs, and resolve trouble spots is the right way to add badly needed resources to the implementation process.

CCIS, both regionally and nationally, is one of central players in dual education. Multiple interviewees pointed out the importance of CCIS and the need for its presence—not just remotely but also in person—in processes from career guidance to trainer training and company recruitment. An investment in additional temporary staff for CCIS would facilitate implementation and lower startup costs for every stakeholder group.

Information is another issue that came up frequently from respondents, and a dedicated information source, troubleshooting hotline, and campaign to disseminate information to parents and students would be useful. Lower-level actors are concerned that they do not know everything they should, that information is slow in getting to them, and that they are not accurately carrying out the requirements of the law. These measures would help that. Schools and companies also report that parents and students are not fully aware of the new option, so a certain degree of marketing would support their efforts to recruit participants.

In this pre-implementation phase, expectations and eagerness are both running high. There will be challenges ahead, but the degree of stakeholder excitement and willingness are good signs. The start of implementation will probably bring some deflation as expectations readjust and work begins, and building a strong support system for participating stakeholders can help reduce the challenge. Instead of investing only in company subsidies to solve a problem that does not exist yet, invest in system-building measures like CCIS staffing, information campaigns, and a troubleshooting hotline to improve communication and support operational implementers.

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