



Ex-post evaluation of the project “Tenure Track Pilot Programme” in Croatia

Report for the Croatian Science Foundation

Report

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1. Executive Summary



The TTPP aimed at piloting a tenure model in Croatia to spark a broader debate on how such models can offer young and talented researchers an interesting long-term career perspective in Croatia. Tenure programmes are characterised by providing fixed-term contracts to early-career researchers to conduct an independent project that leads to a permanent position at a higher level without renewed advertising and application in case the tenure project gets evaluated positively. The TTPP addresses the need to attract promising researchers to Croatia or prevent talented researchers from seeking careers abroad to ultimately heighten the quality of research in Croatia.

The TTPP offered outstanding scientists the possibility to participate in a competitive call for proposals. The three PIs which were contracted were funded for a five-year period in which they were able to conduct an independent sub-project. The idea was, that the further development of their scientific career would depend on the positive outcomes of the projects managed.

This ex-post evaluation examines the extent to which the Tenure Track Pilot Programme (TTPP) has achieved its intended objectives. The TTPP was implemented from 2017 to 2024 as part of the Swiss - Croatian Cooperation Programme.

Our analysis addresses the OECD DAC criteria efficiency, effectiveness, relevance, sustainability and to a lesser degree coherence. The evaluation approach of DLR-PT is characterized by three dimensions: it is theory-driven, based on a mix of methods and is conducted participatory. It involved reviewing documents related to the TTPP and conducting interviews with all relevant stakeholders. Different data sources (data triangulation) as well as suitable data collection and evaluation procedures (method triangulation) are combined with one another.

Our evaluation indicated that while the TTPP was overall very well managed and the three Principal Investigators (PIs) achieved great results, the TTPP did not manage to trigger a broader debate on tenure models in Croatia beyond its participants. As of today, it is not possible to implement a tenure model to its full extent as there is an obligation to publicly advertise new job openings. Consequently, the permanent position cannot be given to the PI solely based on a positive evaluation of the tenure project.

In this context, the key recommendation is to exempt tenure positions from public job postings. A clear signal from political stakeholders that tenure models are viable and actively supported in Croatia is essential to encourage the academic community's deeper engagement and foster meaningful discussions on their adoption.

2. Introduction

2.1. Background

Prior to the implementation of the Tenure Track Pilot Programme (TTPP), a multitude of international organisations, including the European Commission, the OECD and the World Bank, reached the conclusion that Croatia lacks the infrastructure to facilitate the pursuit of a research career by young researchers with the potential to excel. Plus, studies have identified the existing system of advancement and recruitment in public research institutes and universities as being unattractive for talented postdoctoral researchers.

In the absence of attractive opportunities in Croatia, talented researchers are compelled to seek opportunities abroad, resulting in brain drain. Croatia is interested in increasing the attractiveness of national research organizations by offering long-term perspectives for young and outstanding scientists.

To offer outstanding young researchers a plannable academic career path at an early stage of their careers, **tenure track programmes are providing fixed-term contracts that lead to a permanent position at a higher level without renewed public announcement of the permanent position and application.** It allows for early-career researchers to prove themselves on the job while working independently together with their teams. Tenure models are structured around rigorous assessments with the outcome of those evaluations determining if the candidate can proceed with a permanent position. Tenure models offer research institutions an instrument to increase their attractiveness and avoid excessive turnover for promising research newcomers by promoting mutual commitment.

The TTPP itself supported excellent young researchers at early stages of their career through a programme modelled after tenure track programmes abroad. Given the **limitations of the legal framework**, the TTPP was established as a **pilot programme** to explore the potential of a tenure model. Its purpose was to serve as a **feasibility study**. The pilot system is directed towards letting Croatian stakeholders experiment with a tenure model to promote a debate on such models and their broader implementation in Croatia.

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The ex-post evaluation seeks to provide answers to the following aspects:

- **Assessment of the TTPP’s achievements** in relation to the envisaged outputs and outcomes
- **Assessment of the potential of tenure models and further steps and recommendations for promoting the tenure model** beyond the programme period

The TTPP is jointly funded by the Swiss Agency for Development and Cooperation (SDC) with a share of 85% and the Croatian Ministry of Science and Education and Youth (MoSEY) with a share of 15%. TTPP is part of the implementation of the cohesion policy programme **Swiss - Croatian Cooperation Programme**. As a pilot programme on tenure track, the TTPP was inspired by the Ecole Polytechnique Federal Lausanne (EPFL). Being one of the pioneers for the introduction of tenure track models in Europe, EPFL provides mentorship for the supported PIs and on the scheme in general.

2.2. Methodological approach

The evaluation paid attention to the outputs, outcomes and to a lesser degree inputs of the TTPP and assessed the impacts as far as they are already visible. The evaluation was carried out following the OECD DAC criteria of relevance, effectiveness, impact, efficiency and sustainability and to a lesser degree coherence.

Effectiveness/ efficiency and internal coherence

Effectiveness and efficiency concern the status of the project, the achievements and the overall implementation of the TTPP and the interplay between the various stakeholders:

- What is the involvement and the roles of the stakeholders?
- What has functioned well, what could be improved and how?
- Has the project reached its intended outputs and outcomes?
- Has the project set-up been appropriate for reaching the ultimate objective?

Relevance, impact and sustainability

Relevance denotes the applicability and usefulness of the tenure model for the academic sector in Croatia. Impact and sustainability focus on the question whether the TTPP arrived at fostering wider adaption of and debate on tenure models in Croatia also beyond the programme period.

- Is a tenure model able to address the challenges in the Croatian academic sector?
- Is the Croatian academic community interested in tenure models?
- Do relevant stakeholders consider tenure models to be an appropriate approach?
- To what extent did the TTPP spark a larger debate surrounding the implementation of tenure models in Croatia?
- In how far does the new legal framework enable tenure models?

It should be noted that as an evaluation team, **our ability to comprehensively assess the impact of the legislative framework on the tenure-track system is limited**. Our analysis can only rely broadly on the legislative texts, our preliminary evaluations of these laws, and the insights gathered from interviews. While these sources provide valuable perspectives, they do not allow

for a fully detailed examination of all relevant aspects, particularly considering the complexity and evolving nature of the topic.

The evaluation approach of the DLR-PT is basically characterized by three dimensions: it is **theory-driven**, based on a **mix of methods** and **participatory**.

According to good scientific practice, different data sources (**data triangulation**) as well as suitable data collection and evaluation procedures (**method triangulation**) are to be combined with one another. Qualitative data should be collected from different sources using different instruments to answer an evaluation question to ensure the greatest possible objectivity and validity of the findings and the conclusions and recommendations derived from them.

The participatory understanding of the DLR-PT means that the client is involved during the evaluation, especially in the development of the evaluation concept and the survey instruments as well as the subsequent evaluation of the results.

The evaluation of the TTPP was based on three elements:

1. Analysis of programme documents and legal texts

To carry out this evaluation, qualitative data was collected and processed through various methods. A secondary data and document analysis focusing on programme-relevant documents (mostly the minutes from the SC meetings and annual reports by the HRZZ) that stem from the period after the interim evaluation has been carried out.

This analysis served not only for a deeper understanding of the programme, but also for an initial assessment of the achievement of objectives as well as a sharpening of the evaluation design and, in particular, the adaptation of the evaluation questions.

2. Interviews

Interviews with key stakeholders were the primary data source. There were group interviews for the following stakeholders: political stakeholders in Croatia, PIs and Swiss counterparts. Additionally, we conducted one-on-one interviews with a representative of a Higher Education Institution hosting part of the PIs and of the HRZZ.

Both the one-on-one as well as the group interviews were conducted as semi-standardised guided interviews. The guides for the interviews were created based on the overarching questions to be answered in accordance with the terms of reference. These overarching questions were operationalised and broken down for the respective target group.

3. Triangulation

In this step, all collected information was analysed along the guiding questions, and recommendations were derived. The findings are presented in this report. The report is focussed on the implementation of the programme and potentials for further activities, not on the scientific or societal impact of the individual projects undertaken by the PIs.

3. Findings

3.1. Effectiveness, Efficiency and Internal Coherence

Roles of Stakeholders and Collaboration: Involvement, Decision-Making, Communication

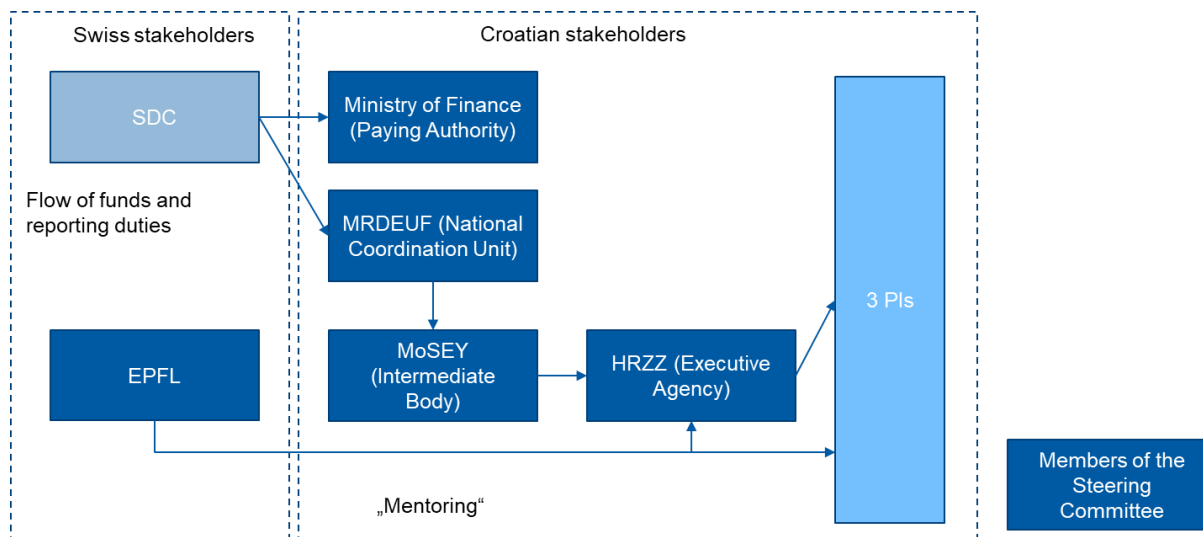


Figure 1: Stakeholders of the programme

The **Croatian Science Foundation (HRZZ) is the Executive Agency** for the programme. In this function, HRZZ is responsible for the management of the programme, the funding of PIs and the monitoring of their progress. HRZZ reports the progress of the TPP to MoSEY and the National Coordination Unit (NCU) and coordinates the Steering Committee (SC) Meetings. All stakeholders expressed a high satisfaction with the work of HRZZ. They highlight that communication with the HRZZ was direct and unbureaucratic. A clear contact-person was identified at all times. Two persons were involved in monitoring and the implementation of the TPP at HRZZ. One person is the contact point for the PIs and is dealing with day-to-day activities of the project. Together with the other person, the Head of the Department for International Cooperation, they communicate with MoSEY, NCU and SDC.

The **political stakeholders in Croatia** are represented by two institutions: **The Ministry of Science and Education and Youth (MoSEY) acts as the Intermediate Body** for the programme. The Intermediate Body is responsible for monitoring the work of and distributing the funds to the Executive Agency. The **Ministry for Regional Development and EU Funds (MRDEUF) acts as the National Coordination Unit (NCU)** for the Swiss-Croatian Cooperation Programme. In this role, the MRDEUF also oversees the implementation of the TPP. At the NCU there are two senior advisors monitoring each project. Apart from that there are the head of the department and the head of the sector supervising the senior advisors. From 2019 to 2023 two persons (one senior expert and the head of the sector) were responsible for the TPP at MoSEY afterwards only one person remained directly involved. Neither MoSEY nor the NCU report any

staffing issues. That being said, there was some fluctuation within the staff that at times complicated communication for other stakeholders as there was not always a clear contact person. That being said, the institutions themselves stress that they provided continuous support in communication despite fluctuations within the staff. Plus, the interviews revealed that at least some of the stakeholders felt that it was hard to get a clear impression of the opinion of the political stakeholders in Croatia concerning the tenure model and its relevance for the Croatian science system.

Swiss counterparts in the TTPP are represented by the following institutions: The **Ecole polytechnique fédérale de Lausanne (EPFL) serves as a partner and research consultant in the TTPP**, acting as a coach for the HRZZ during the implementation. EPFL’s contribution is appreciated by all stakeholders and in particular by HRZZ. The EPFL is perceived as very motivated and responsive. There has been a clear person responsible at all times. When the person originally responsible for the TTPP retired a new person was appointed without any issues in the communication concerning the TTPP. Apart from that, a mentor from EPFL was assigned to each PI. Overall the mentoring scheme worked out well but will be closer looked at in the following section. The **Swiss Agency for Development and Cooperation (SDC) co-funds the Swiss-Croatian Cooperation Programme**. The **Swiss Contribution Office (SCO) acts on behalf of SDC/Switzerland in the Republic of Croatia and is the principal contact point for the NCU** for the Cooperation Programme. The SCO has a Head of the SCO, and a National Programme Officer who are based at the Swiss Embassy to serve as counterparts to the NCU. The interim evaluation already revealed that besides the financial support, the SDC grants Croatian stakeholders high flexibility for the implementation and does not exercise micro management.

The **host institutions** of the PIs welcome the possibility to attract additional talent. However, interviews revealed that they perceived the TTPP as just another project like the other ones at their institution. The way higher education institutions are involved is quite similar to the way they are involved with other research projects they are hosting. For instance, the host organisations do not take part in the discussions on the TTPP at the SC meetings described below.

In general, the cooperation between the stakeholders is perceived as very cooperative and productive from all parties involved. Decisions are made at meetings of the **Steering Committee (SC)**. The Steering Committee consists of representatives of the NCU (MRDEUF), the Executive Agency (HRZZ), the Intermediate Body (MoSEY), the Paying Authority (Ministry of Finance of the Republic of Croatia) and the Swiss Partner EPFL. Representatives of the SDC are invited without voting rights. Additionally, there are **adequate written procedures** in place to also come to decisions in between SC meetings. None of the stakeholders felt understaffed for the TTPP. In case the tenure model gets rolled out human resources for the implementation and administration of such programmes need to be increased accordingly.

Assessing Project Success: Achievements vs. Expectations in Meeting Outcomes and Outputs

The interim evaluation concluded that the programme was on track to reach the output and outcomes it intended for. The latest available yearly report from 2023 and the interviews corroborates that impression for the most part.

This applies in particular to the outputs and outcomes at the level of the three sub-projects. The outcome aimed for at this level was **that excellent young researchers who participated in the new tenure model achieve internationally relevant research careers (Outcome 1)**.

The early days of identifying and contracting suitable projects have been covered by the interim evaluation. Hence, it should suffice to state that the TTPP succeeded in attracting a satisfactory number of researchers so that three sub-projects have been awarded contracts. The deadline for completion of the sub-projects was originally set for 30 April 2024. Two projects were extended by three months due to the impact of the Covid 19 pandemic and the earthquakes in Zagreb. By the time of this evaluation, **all sub-projects have been successfully completed**. The final evaluation of the quality of the sub-projects by HRZZ is still outstanding. Yet, all stakeholders are **pleased with the scientific progress and results achieved**.

One PI has secured a permanent position in Japan before the end of the TTPP. All stakeholders concur that this is a success, given that the objectives of the TTPP stated that the programme aimed for the PIs to find permanent positions either in Croatia or abroad. There is reason to believe that the TTPP was instrumental for securing said position. For example, the PI gained valuable experience in project management and teaching, the latter of which was a mandatory requirement for the position. The TTPP also provided **valuable experiences to the other PIs that helped them finding permanent positions in Croatia**. However, due to legal hurdles the TTPP was unable to fulfil the promise of positive evaluations leading directly to permanent positions. The **PIs had to rely on conventional channels for career development**.

The programme was not solely focused on the PIs, but also on the teams comprising **postdoctoral researchers and PhD candidates**. Fluctuations are a consequence of the Croatian system. In essence, postdoctoral researchers were permitted to hold two two-year contracts, resulting in a maximum of four years of employment. While some amendments to that situation have been made in the new laws on academia, the limited time frame for postdoctoral researchers to be employed made it impossible to retain a stable team. Some PhDs were already able to defend their thesis and find subsequent positions (including outside of Croatia). In particular, in the field of experimental biology, the time frame was too short for any of the PhDs to have defended their thesis. Alternative funding has been secured to enable all PhD candidates to finish their thesis.

The second outcome the TTPP aimed for was that the relevant institutions gained new experience and increased skills in managing the tenure model (Outcome 2). To that end, the TTPP included a component of knowledge sharing. It envisions knowledge flowing from the Swiss counterparts to the Croatian stakeholders. The **EPFL was intended to coach HRZZ**. This exchange is described by all involved stakeholders in very positive terms. One key part of knowledge exchange was the implementation of a **mentorship system**. Each PI was assigned an EPFL-based mentor. The number of personal visits was severely reduced by the pandemic. Nevertheless, all mentors maintain regular communication with the PIs. While the mentoring process is generally described as well-functioning, there is room for improvement in terms of the intensity and level of involvement of the mentors. There were no benefits involved for the mentors.

Once the tenure model is no longer a pilot it **needs to be implemented at the host institutions**. Looking at the members of the expert panel for evaluation of the PIs there were also members of the Host Institutes involved which allowed them to gain insights into that process. Other than that, the host institutions perceived the TTPP as every similar to other projects they host – the perception of the TTPP as just another project among others will be looked at in further detail below.

The TTPP's approach is distinct from traditional funding models in that it aims to advocate for and demonstrate the effectiveness of the tenure model in Croatia. **Correspondingly, the third envisioned output for the programme was that the new model of researchers' career development is introduced as a pilot programme in Croatia and evaluated for integration in the Croatian system for science (Outcome 3).**

One of the outputs the TTPP strived to achieve this outcome was to organize meetings during the implementation with representatives of host institutions, participants and policy makers. As a corresponding indicator the HRZZ tracked the SC meetings. However, the interim evaluation already pointed out that the **SC does not offer advice to policymakers and higher levels of the administration**. Therefore, the discussions about the programme taking place in the SC might not be properly reflected in the political discussion on tenure track. Plus, the SC meetings do not include participants and the host institutions. In addition, the reports provided by HRZZ identify the kick-off meeting and the closing conference as indicators for promoting the tenure-track programme at the national level.

To further promote the tenure model according the EPFL's approach model as well as the original objectives of the TTPP were presented at the **final conference of the Croatian-Swiss Research Programme** held in Zagreb. Plus, the HRZZ Director attended the **2nd meeting of the Council in November 2023**, where he presented the objectives of the programme and the potential for tenure track models. **EPFL and Ruđer Bošković Institute (RBI) organized a conference featuring a panel discussion** on the Croatian academic system and brain drain with the participation of the Dean of RBI Dr David M. Smith, Prof. Olivier Küttel from EPFL and two PIs who participated in the TTPP. Additionally, **a new framework agreement for the Cooperation between Switzerland and Croatia was signed in 2022**. For this occasion, the cooperation projects including the TTPP were presented in a **panel as well as in a short film**.

In 2021, the entire Swiss-Croatian Cooperation programme underwent an evaluation. In the aftermath, the Swiss stakeholders intensified their efforts to initiate a debate on tenure track models. This entailed the implementation of two additional activities within the TTPP project in 2023. These were: **study visits of HRZZ staff to Swiss institutions that had implemented the tenure track model; and the short-term mobility of Croatian scientists and researchers to research institutions in Switzerland that had implemented the tenure track model**.

While those activities meet the output and outcome indicators tracked through HRZZ's annual reports, the interviews revealed that it might not have been enough given the ambitious goal to trigger a broader debate on tenure models in Croatia beyond the participating parties. Speaking to the academic community revealed that no such debate was sparked among researchers or

leaders of higher education institutions. In fact, they observed **that the TTPP was perceived as “just another project”** that brought funding to the institution and allowed for great research but not as the pilot it set out to be. In particular the institutions did not feel that the TTPP differed much from the “Installation Research Projects” which is a programme implemented by HRZZ as well that provides funding for young scientists already employed at research organisations who wish to start their own research groups.

As outcome 3 includes the evaluation of the tenure track model for integration in the Croatian system for science the debates surrounding the new legal framework for the academic sector and especially the Programme agreements with the research performing organisations (RPOs) play an important role. In accordance with the new Act on Higher Education and Scientific Activity, in 2023 MoSEY initiated negotiations with individual research performing organisations (RPOs) regarding Programme Agreements. These agreements will define the funding packages and career advancement models for the respective RPOs. However, this does not necessarily indicate the introduction of a tenure model. In fact, a tenure model is neither explicitly named in the new law, nor is there a widespread effort of higher education institutions to implement models resembling a tenure model within the possibilities of the new laws. That being said, the changes to the legal situation and its implications and persistent hurdles for tenure models will be looked at in further detail below.

Overall, there appears to be a discrepancy between the ambitious goals and the relatively limited scale of the programme, which is only funded for three PIs. As a result, the impact is predominantly felt at the sub-project level where the TTPP yielded great results. **There further appears to be a discrepancy between the expectations of the different stakeholders.** While the Swiss Counterparts had high expectations of the pilot programme triggering a larger debate around tenure-track programmes or, at the very least, around how to offer young researchers attractive conditions, the expectations of the political stakeholders on the Croatian side were more modest. They emphasise that systematic changes require a significant investment of time and that a single project such as the TTPP should not be expected to have a substantial impact on the systemic level. However, this should not take away from the fact that the TTPP was very successful at the sub-project level.

Challenges, Solutions, and Unexpected Outcomes: Navigating Gridlocks and Implementing Recommendations

The recommendations provided in the interim evaluation were directly aligned with the challenges identified during that evaluation. As such, it is pertinent to examine both the challenges and the recommendations in conjunction, as dealing with the challenges is oftentimes overlapping with considering the recommendations.

The **challenges outside of the TTPP’s scope** identified in the interim evaluation mostly persisted. Although **there were substantial increases in the salaries, the salaries are not yet competitive at an international or European level.** The salaries were an obstacle to recruiting high quality staff for the sub-projects. The PIs had to put a lot of effort into seeking candidates and had to look for applicants from low-wage countries. However, hiring from outside the European Union is a long process and requires a lot of administrative overhead. None of the

PIs had to do any recruiting after the recent wage increases. Additionally, the **legal situation limiting the time a person can work as a postdoctoral researcher** led to fluctuation. Consequently, a lot of effort went towards hiring and onboarding. Moreover, **public procurement procedures** pose an additional administrative burden for the PIs.

There were also some **challenges pertaining the setup of the TTPP**. The **duration of funded projects is shorter than comparable tenure track schemes in other countries**. Against this backdrop the interim evaluation recommended a prolongation. This and other recommendations derived from analyzing other tenure models outside of Croatia with regard to how a programme is designed. **Those recommendations relate less to the current programme and more to adjustments that would have to be implemented/considered in the event of a new edition or continuation of the programme beyond its current term.**

In the context of this ex-post evaluation recommendations attached to **challenges that could be tackled within the ongoing programme period** are of particular interest. The interim evaluation recommended to reduce reporting duties for the PIs in line with research funding schemes and allowing for some flexibility with regard to the work plan would help PIs to focus on their research. The issue of reporting will be discussed in length when looking at the efficiency of the programme. At this point it shall suffice to say that **no changes have been made to the reporting procedures.**

Apart from that the interim evaluation recommended that the programme should **offer a clear career perspective** for the current PIs. Due to the legal situation the programme has not been able to do that. All PIs found permanent employment outside of the channels foreseen by a tenure model.

The PIs also expressed a **wish for accompanying measures** in the interim evaluation. Already at the 2nd SC meeting, the SC approved to reallocate some of the unused funds within management costs to introduce a new sub-category, titled “Training for PIs”. HRZZ intended to organise trainings for PIs in the area of transferrable skills (project management, grant application, leadership in science etc.) in 2023. By the time of the latest interim financial report (2023) no part of the budget for that activity (6,522.72 EUR) had been spend.

Another recommendation pertained to the final quality assessment of the sub-projects. It was advised that in order to apply for follow-up activities or other positions, it would be good if PIs could have the results approximately six months before the programme’s expiration. **By the time of this ex-post evaluation the sub-projects have ended but the final quality assessment is still ongoing.** The intended purpose of the final assessment was to enable the PIs to automatically get permanent positions and higher scientific ranks at their host institutions. Yet, such a model is not possible. Consequently, the reviewing process could not serve its original purpose. Nevertheless, if the PIs have to wait months after the completion of their sub-project for the evaluation results this could cause periods of unemployment for this process which would render tenure models highly unattractive.

All stakeholders claim that they tried to show as much flexibility as they were able to. An example is the extension granted to two sub-projects. Another example would be the call “Expansion of project activities within the Tenure Track Pilot Programme” launched in November

2020 as reaction to smaller number of sub-projects being contracted than originally envisioned so that unallocated funds had to be redistributed.

Overall, the stakeholders observed little surprises in the implementation the TTPP. One **major surprise was one PI finding a permanent position in Japan and leaving the TTPP before its conclusion**. This challenge has been dealt with successfully as the implementation of the project resumed with a new PI and the team members could remain in their positions.

Assessing Reporting Procedures: Perspectives from Stakeholders and PIs

The interim evaluation indicated that the PIs perceived the **reporting requirements to be not sufficiently tailored to the specific conditions under which research is conducted**. Subsequently, the procedures for reporting remained unchanged, thereby perpetuating the aforementioned criticism. However, this issue is not exclusive to the TTPP. The main point of criticism from the perspective of the PIs is the obligation to prepare detailed plans in advance. It is argued that it is not feasible for scientists to determine which conference they will participate in, and so forth, a long time in advance. Similarly, precise goals and detailed work plans that fail to accommodate unforeseen challenges inherent to the scientific process are perceived as unduly restrictive. While there is a possibility to make amendments to the long-term plans, for instance in the event of budgetary adjustments, such modifications require considerable investment of personal resources in administrative procedures.

That being said, it is important to note that reporting serves to keep funding agencies informed about progress and enable them to take prompt corrective action should the programme deviate from the intended trajectory. It is therefore essential to consider the perspective of the other stakeholders. The results of our interviews indicated that the reporting obligations for PIs involved in the TTPP are less onerous than those of researchers participating in other programmes in Croatia. The HRZZ receives annual financial reports from the sub-projects and is satisfied with this procedure. However, **updates concerning the progress of the research are only shared with the HRZZ every one and a half years. This period is described as rather lengthy**, as both the funding institutions and the public have an interest in obtaining information on a more regular basis. This would also facilitate the promotion of the programme.

The NCU who monitors the HRZZ is satisfied with the reports it receives from the HRZZ and the MoSEY agrees with that. The reports helped them to keep track of the process that it was also possible to reach out to the HRZZ for further information.

On the other hand, **the annual report put a lot of focus on the three sub-projects**. The Swiss counterparts were less interested in the individual progress of the sub-projects, regarding them merely as a vehicle to promote the tenure model and not as the main goal. From their perspective the reports lacked more detailed information on the progress of valorisation of the pilot project. That is to say, they wanted to be better informed about the debate around the tenure model beyond the immediate beneficiaries.

The Swiss side further felt like **reporting might have been too focused on formalities** (reports handed in on time etc.) and the content-related perspective took a back seat. Plus, the monitoring is described as too passive. When it became clear that the sub-project was under-spending the

available funds there should have been more active countermeasures to spend the resources either on the sub-projects or to reallocate them for instance towards communication measures.

The HRZZ raises technical issues concerning the reports. There is a **mismatch between the reporting period of HRZZ and the period (annually) when the HRZZ receives new reports by the PIs (every year and a half)** leading to outdated information being reported in the annual reports.

3.2. Relevance, Impact and Sustainability

Exploring the 2022 legislative changes: Potentials for the tenure model and the attractiveness of Croatia’s research system

In late 2022, two new pieces of legislation were enacted in Croatia with the purpose of regulating the higher education and scientific activity system: the **Act on Higher Education and Scientific Activity** (*Zakon o visokom obrazovanju i znanstvenoj djelatnosti*, OG 119/22) and the **Act on Quality Assurance in Higher Education and Science** (*Zakon o osiguravanju kvalitete u visokom obrazovanju i znanosti*, OG 151/22). The latter defines the national-level internal and external quality assurance system, along with the activities and organisational structure of the Agency for Science and Higher Education, a legal entity with public authority tasked with quality assurance and improvement in science and higher education.

A central feature to the new legal framework is a **performance-based funding model for public universities and other public higher education institutions**. This new model requires institutions to sign **program agreements** with the MoSEY. These agreements shall be based on transparent criteria and on performance indicators linked to the institution’s development objectives. They also outline strategic goals, personnel policies, research priorities, performance indicators and budget allocations. In 2023, programme agreements have been signed with all public research institutes in Croatia (25 of them), while faculties and universities are next in line. While the reforms aim to make scientific careers more attractive through transparent, merit-based recruitment policies, they lack a robust framework to support tenure-track models.

Political stakeholders have argued that the new law allows institutions to adopt tenure models in their program agreements. However, the decision to do so rests entirely with individual institutions, which- according to the MoSEY - **lack prior experience with such models**. They think that that is the reason why the model is not picked up by the higher education institutes, but they express optimism that tenure-track systems might be adopted during the renegotiation of program agreements in four years. That being said the tenure model will not be defined in the agreements but rather in the statute and other acts of the respective institution.

Other significant barriers remain:

Mandatory public advertisement of permanent positions

Croatian law mandates that all positions be advertised through an open and public call. This prevents offering a guaranteed permanent position after a positive tenure evaluation, a

cornerstone of successful tenure models globally. This does not apply if the permanent position is considered to be a mere promotion. However, the interviews revealed that the permanent position is perceived as a new position and hence the automatic progression from the tenure project to the permanent position is believed to be not possible.

Workarounds compromise tenure integrity

For instance, one could hire someone at permanent position and pause that position for the duration of the fixed-term tenure project. However, in those cases permanent employment would be guaranteed independently of the evaluation of the project. Or one could make the call for the permanent position so narrow that in fact it only fits the person the position is intended for. However, as that is not supposed to be done, one cannot broadly advertise such a model to attract young research to the tenure model. The only way a real tenure model could be implemented would be if tenure model were exempted from the public call for the permanent positions.

Legal clarification or exemption from the public announcement needed

To implement a true tenure model, an exemption for tenure-track positions from public advertisement rules might be necessary. In case the progression from the tenure project to the permanent position is considered as just a promotion, this should be cleared up so that the relevant institutions know that they can actually offer a tenure model.

The legislative framework, as it stands, has limited potential to enhance Croatia’s international attractiveness for researchers. A key draw of tenure systems globally is the clear pathway to a secure, permanent position for outstanding researchers, offering stability and career prospects. The Croatian system's inability to guarantee permanent positions after a successful tenure evaluation diminishes its appeal to international talent.

However, especially on a national level, the Swiss Counterparts praise that in the context of the legal reforms the question on how to boost young researchers has become a topic in Croatia and there is an increased level of awareness for this issue. The EPFL hopes that debates around this issue continue. Rendering academic careers more attractive was the underlying goal of the TTPP. Despite its limitations regarding tenure-track models, the new legal framework introduces measures to enhance academic careers:

Merit-based recruitment

Transparent criteria, performance indicators, and monitoring mechanisms promote quality research outputs and allow institutions to rigorously evaluate candidates. To be clearer, one can promote the programme to the institutions by arguing that it allows them to thoroughly test the PIs on the job and introduce stricter criteria in the evaluation that go beyond the National Criteria used for conventional recruiting.

Increased Flexibility for Promotions

Researchers no longer face job insecurity when pursuing promotions, and the absence of budget constraints for promotions encourages career advancement.

Increased flexibility concerning the career level one gets hired at

Previously the laws stipulated that one had to be employed for five years at one career level before being able to move up to the next level. This made it very difficult for researchers from abroad or Croatian researchers who spend part of their career outside of the country to be hired at an appropriate and attractive level. With the new laws in place there are no obstacles to be directly employed in a higher permanent position instead of an initial position if the candidate meets the merit-based criteria. The interviews with further stakeholders corroborate that is major step in rendering the research system more attractive.

Improved Employment Terms for PhD Students

Five-year contracts provide greater job security for early-career researchers.

Simplified Structures for Research Careers

Vertical and horizontal mobility is enabled through autonomous institutional selection processes. Hence, promotions do not need to be based on public calls any longer and you are not risking losing your employment whenever you are aiming for a promotion. Plus, the hurdles for a promotion are now lower because under the programme agreements there is no limited budget for promotions so that everyone who fulfils the criteria can be promoted.

While the 2022 legislative framework partially addresses aspects of tenure systems, it falls short of fully implementing tenure-track models as seen in other countries. The inability to guarantee permanent positions after tenure evaluation remains a significant hurdle. Nonetheless, the focus on merit-based policies and increased flexibility represents progress in enhancing academic career attractiveness. Continued debates and legislative adjustments are needed to ensure that Croatia's research system becomes competitive in attracting and retaining international talent.

Further Promoting the Tenure Track model: Stakeholder expectations and challenges

All stakeholders agree that a tenure model is highly relevant for Croatia. They believe such a model would enhance the attractiveness of academic careers for talented early-career researchers. Applications to the TTPP and the contracted PIs have demonstrated that the TTPP has successfully attracted researchers to stay or even return to Croatia.

Tenure models are expected to increase the appeal of academic careers by providing a clear, merit-based pathway to permanent employment and offering the PIs substantial freedom in setting up their tenure model. Moreover, they are anticipated to elevate research quality by enabling institutions to hire based on rigorous, entirely merit-based evaluations, after PIs demonstrate their capabilities on the job. **This view is shared by the Croatian political stakeholders involved in the TTPP, who express strong support for broader implementation of such models and a willingness to promote them.**

However, interviews with the representatives of the research community revealed that the TTPP did not spark serious debates **about** tenure models, as there is no expectation of their imminent implementation in Croatia. The **PIs revealed that tenure models are known among their peers in research and considered** highly attractive. An interview with a representative of a higher education institution further corroborated that. **Higher education institutions are very**

interested in innovative funding schemes and in attracting as well as retaining talents. They are aware of how tenure models function and are implemented abroad. Yet, without believing that tenure models are a practical option for implementation at their institutions, **serious debates** around vague and **abstract** scenarios **are unlikely to arise**. This awareness stems from what they have observed abroad and is not based on the TTPP.

The **main target group for further promoting the tenure model would be higher education institutions**. The Swiss Counterparts stress that the tenure model will ultimately be implemented at the institutional rather than the national level. For them, to pick up the model **any legal uncertainties must be resolved, and the new possibilities need to be communicated clearly**.

Yet, **some TTPP stakeholders remain sceptical about the likelihood of tenure models being widely adopted**, even if the above recommendations are followed. They believe this reluctance stems from an unwillingness to change established procedures in favour of untested approaches. Additionally, project-based funding, relatively new to Croatia (introduced approx. 15 years ago), may not yet be fully integrated into institutional planning processes.

Despite these challenges, interviews with members of the research community reveal **optimism about** a potential uptake, with expectations that at least some practical examples of tenure track implementation will emerge. These examples should then be widely promoted and publicized. Furthermore, there are indications **of a certain level** of willingness to **adopt** new funding schemes. For instance, interviews reveal that institutions make use of a returnee programme which is considered an innovative funding scheme.

4. Conclusion and recommendations



Summing up, the TTPP seems to be well implemented – in particular regarding the three sub-projects. Especially, the Executive Agency is highly praised by all involved stakeholders. All stakeholders are fully engaged and their roles are well defined, and no major delays could be observed with regard to decision making or the interplay of the stakeholders involved. Some factors hinder the efficiency of the implementation, e.g the reporting procedures in place and the rules for public procurement. However, those factors are oftentimes outside of the TTPP.

In general, the biggest problem of the TTPP is that the three sub-projects were often perceived as just another project that brings funding to institutions while overlooking the pilot character. The TTPP did not spark a larger debate on tenure models in Croatia beyond the involved stakeholders.

The review allows to identify some factors that could support the further promotion of tenure models as well as a potential upscaling programme. There are also some factors that could be considered when setting up future pilot programmes independent of their concrete content. Based on our findings the following adaptations seem desirable:

Finding	Recommendation
Strategic Rollout of Tenure Track Model	
Extending the Project Duration	
Programme with five years duration rather short compared to other TT models.	Prolongation of up to seven years seems desirable to offer a long-term perspective for the PIs and allow for scientific impacts to become more visible.
Reducing Bureaucratic Barriers	
PIs expressed complaints over high administrative burdens, especially reporting and planning procedures, which require much effort and take away time from their actual research.	Reporting duties should be kept as low as possible while not undermining the need for information of the funding agencies and tax payers. In particular, reporting measures should cater to the specific framework conditions of conducting research so that the gained information is useful and does not cause undue administrative overhead.
Enhancing the Role of Mentors	
The mentoring process is functioning well overall but mentor engagement and involvement could be improved. Mentors reported no personal benefit from their role.	Should the programme be set up again, the EPFL would advocate for the inclusion of benefits for mentors to encourage greater involvement. This could be done by involving the mentors in joint projects so that some part of the project funding is also allocated with the mentors and the mentors actively contribute to the research.
Addressing External Factors	
External conditions limited the attractiveness of the TTPP. A single program within an unfavorable framework is unlikely to significantly improve the academic system’s attractiveness. Despite salary increases and a new legal framework, salaries remain uncompetitive internationally and administrative challenges, such as public procurement and lengthy hiring processes, persist.	To reduce the administrative burden, the PIs recommended hiring a part-time administrator to handle non-research issues, allowing more time for research activities. Focusing solely on the tenure model will not significantly boost the attractiveness of the academic system unless the broader framework is also adapted. Ongoing discussions on how to attract and retain top researchers in Croatia, involving all relevant stakeholders, are essential.
Exempting Tenure Models from Public Position Announcements	

<p>The legal situation requires public advertisement of positions and renewed application for the permanent position so that a tenure model cannot fully be implemented.</p>	<p>Tenure models should be exempted from public position announcements to guarantee permanent positions based on positive tenure evaluations. Since program agreements have been signed with all public research institutes in Croatia but not yet with faculties and universities, these issues should be addressed promptly, and the promotion of tenure models should be integrated into ongoing negotiations. In case no exemption is needed because the progression from the tenure project to the permanent position is considered to be just a promotion, this needs to be clearly communicated as the higher education institutes are not aware of such an option.</p>
<p>Political Commitment to Tenure Track</p>	
<p>A serious debate on tenure models among researchers and host institutions is unlikely as long as full implementation is not possible.</p>	<p>For the tenure model to be seriously discussed within the Croatian research community, authorities must convey their genuine intent to implement it. Steps in this direction should be shared with relevant stakeholders, and new opportunities should be clearly communicated.</p>
<p>Institutional-Level Implementation</p>	
<p>The tenure model needs to be implemented at the institutional level.</p> <p>The academic community is aware of what tenure models entail and how they look like in other countries.</p>	<p>Promotional efforts should focus on the institutional level, potentially led by MoSEY in cooperation with HRZZ.</p> <p>Promotional efforts can focus on the opportunities to adopt such a model in Croatia and do not need to focus on spreading knowledge about what tenure models look like.</p>
<p>Active Demonstration of the Model</p>	
<p>MoSEY believes host institutions avoid tenure models due to a lack of experience and expects increased interest when programme agreements are renewed after four years.</p>	<p>The years before the programme negotiations are renewed should not be spent waiting, but actively demonstrating how a “real” tenure model beyond a pilot could look like, showcasing examples of its implementation. This will ensure, by the time negotiations begin, the model and its practical steps for implementation in Croatia are well-known among Croatian higher education institutions.</p>
<p>Implementation of Pilot Programmes in general</p>	
<p>Perception of the Pilot Nature</p>	

<p>The TTPP was not perceived as a pilot initiative by the host institutions; instead, it was regarded as just another routine project.</p>	<p>The host institutions should have been more actively involved in the debates surrounding the pilot character. They could have been invited to join the SC meetings or information on lessons learned about the tenure model could have been shared with them more regularly, inviting them to join in on that debate. Plus, regular updates on the political efforts undertaken by the TTPP to promote the tenure model would help disseminating the benefits of the model.</p>
<p>Align Stakeholder Expectations</p>	
<p>The stakeholders held varying expectations regarding what the TTPP was realistically capable of achieving.</p>	<p>It is crucial to establish a clear and shared understanding of the program’s objectives. Policymakers should facilitate stakeholder consultations to align expectations, and ensure that all parties are working towards realistic and agreed-upon goals. Additionally, implementing consistent communication and regular updates is critical to managing expectations effectively throughout the program’s duration. This approach allows for necessary adjustments to address evolving needs and concerns proactively.</p>
<p>Enhancing Stakeholder Engagement</p>	
<p>Enhancing Stakeholder Engagement</p> <p>The TTPP did not spark a broad debate around the implementation of tenure models in Croatia.</p>	<p>More efforts are required to foster engagement among key stakeholders such academic institutions, faculty members, and policymakers.</p> <p>A series of consultations, workshops, and forums informed by the experiences of the TTPP could facilitate open dialogue and gather diverse perspectives on the benefits and challenges of tenure models. Additionally, targeted communication campaigns could be launched to highlight the importance of tenure models in improving academic career development and institutional quality. These initiatives would help build momentum, build stakeholder support, and lay the groundwork for meaningful dialogue and informed policy development.</p>
<p>Reporting Schedule Mismatch</p>	
<p>There was a mismatch in the reporting schedule, as the HRZZ submitted annual reports while receiving reports from the PIs on the progress of sub-projects only every 18 months.</p>	<p>For a more meaningful and up-to-date reporting scheme reporting periods must be matched.</p>

Single Point of Contact	
Frequent turnover among certain stakeholders complicated communication, particularly during specific periods, as stakeholders were not always aware of the appropriate points of contact for the TTPP.	A clear contact person responsible for the programme should be identified at all times and clearly communicated to all stakeholders. It is crucial that not only a designated contact person is identified but also that all relevant stakeholders are made aware of this individual's identity. In times of fluctuation it may be helpful to appoint an interim contact person to avoid any gaps in communication.
Improving Reporting Focus	
Some stakeholders felt that the reports focused too much on the three sub-projects and contained too little information on the promotion of tenure models and dialogues initiated in that regard.	The expectations for the reports and the focus of the indicators should be discussed between all stakeholders from the outset when setting up the reporting scheme. The aim of this discussion should be to ensure that the reports adequately reflect the needs and interests of all relevant stakeholders.

5. Annex

5.1. Table of figures

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5.2. List of abbreviations

DAC	Development Assistance Committee
DLR-PT	Project Management Agency, German Aerospace Center
EPFL	Ecolé polytechnique fédérale de Lausanne
HRZZ	Croatian Science Foundation
MoSEY	Ministry of Science and Education and Youth
MRDEUF	Ministry for Regional Development and EU Funds
NCU	National Coordination Unit
OECD	Organization for Economic Cooperation and Development

PI Principal Investigator
RBI Ruđer Bošković Institute
RPO..... Research Performing Organisation
SCO Swiss Contribution Office
SDCSwiss Agency for Development and Cooperation
TTPP..... Tenure Track Pilot Programme

5.3. List of interviewees

National Coordination Unit– Ministry for Regional Development and EU Funds:

Ms Natalija Laštro, Head of Sector

Ms Mara Miljak, Senior Expert Adviser, Sector for EU Programmes and International Financial Mechanisms

Intermediary Body – Ministry of Science and Education and Youth:

Ms Amalija Babić, Head of Sector for Scientific System and Technological Development

Executive Agency – Croatian Science Foundation (HRZZ):

Dr Dario Lečić, PhD, Research Grants Coordinator

Principal Investigators :

Prof Tamara Nikšić, Faculty of Science, project: Exotic Nuclear Structure and Dynamics

Dr Helena Bilandžija, Ruđer Bošković Institute, project: Evolution in the Dark,

Dr Lovro Palaversa, Ruđer Bošković Institute, project: Mining the Variable Sky

Higher Education Institutions :

Dr David Matthew Smith, Director General, Ruđer Bošković Institute

Swiss Partner – École polytechnique fédérale de Lausanne:

Professor Olivier Küttel, PhD, Head of International affairs

Swiss Agency for Development and Cooperation:

Mr Roland Python, Swiss Contribution Office

Ms Stela Fišer Marković, Swiss Contribution Office

Ms Nathalie Barbancho-Bozzini, Deputy Head, EU Member States Section

5.4. List of documents

Addendum 3 to the Project Agreement between SDC and MRDEUF on the Grant for the “Tenure Track Pilot Programme”, signed on 23. June 2023

Annual and Interim reports for 2021, 2022, 2023

Collaboration Agreement between EPFL and HRZZ, signed on 28 March 2018

Decision on amending the Decision on the establishment of a Steering Committee, 26. October 2020 and 17 January 2024

Decision on the establishment of a Steering Committee, 25. April 2018

Minutes from the the 4th Steering Committee Meeting on the 17. October 2022 and the 5th Steering Committee Meeting on the 23. January 2024

Minutes of the Meeting of the 7th Annual Meeting of the Swiss-Croatian Cooperation Programme, June 2022, Ministry of Regional Development and EU Funds

SC meeting 2022, Attachment New Act on Higher Education and Scientific Activity, Treatment of the tenure model in the new Act on Higher Education and Scientific Activity, Report prepared by Ministry of Science and Education and Youth

SDC Decision Letter on Final Project Proposal, 25. October 2017

Legislative framework:

Act on Higher Education and Scientific Activity (only available in Croatian) - Zakon o visokom obrazovanju i znanstvenoj djelatnosti, OG 119/22, <https://www.zakon.hr/z/3328/Zakon-o-visokom-obrazovanju-i-znanstvenoj-djelatnosti>

Act on Quality Assurance in Higher Education and Science (only available in Croatian) - Zakon o osiguravanju kvalitete u visokom obrazovanju i znanosti, OG 151/22, <https://www.zakon.hr/z/3388/Zakon-o-osiguravanju-kvalitete-u-visokom-obrazovanju-i-znanosti>



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