A Comparison of the Characteristics of **TAFTIE** and **RELAI** Innovation Agencies

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Abstract

This report brings together the results of a comparative analysis of the Latin American Network of Innovation Agencies (RELAI) and the European Network of Innovation Agencies (TAFTIE). This research has aimed to foster links between innovation agencies in Europe and Latin America in order to strengthen relationships and create opportunities for learning to take place. Our starting place is a comparison of the ways in which TAFTIE and RELAI agencies are similar, as well as the areas where they diverge. With this report, we hope to stimulate thinking about the variety of roles that innovation agencies can take on and how they can become more effective learning organizations, capable of adapting and evolving in response to changing contexts and able to learn from the experience of their peers worldwide.

Background

This report is the final output of a yearlong study to map the characteristics and roles of innovation agencies in different regions of the world, funded and supported by the European Network of Innovation Agencies (TAFTIE) and the Inter-American Development Bank (IDB). It builds on Zolho, Glennie, and Cuello (2022) and Cuello, Glennie, and Zolho (2022), two separate studies of the TAFTIE network and the Latin American Network of Innovation Agencies (RELAI).

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Introduction

Background and Rationale

This report brings together the results of a comparative analysis of the TAFTIE network of European innovation agencies and the RELAI network of innovation agencies that operate in Latin America and the Caribbean (LAC). Although there is a growing body of research that looks at the roles and practices of innovation agencies—defined here as **government-funded or managed institutions that provide financial and other support to catalyze private sector innovation**—there are still many open questions about how they can and should evolve to meet the demands of an increasingly unpredictable innovation environment.

There is no single model for an effective innovation agency (see Glennie and Bound, 2016; Glennie, 2019; Aridi and Kapil, 2019). The mission they take on and the range of instruments they use depends greatly on the political and economic environment they operate in and on innovation policy priorities within these systems. Many innovation agencies were originally set up to address particular technical deficiencies or gaps within their own systems, such as to drive the development of particular high-growth sectors or to compensate for a lack of private sector investment in early-stage research and innovation. However, they are increasingly being called upon to play a part in responding to complex societal challenges and to deliver what is often referred to as "transformative innovation" (Schot and Steinmueller, 2018).

This brings a different dynamic to the relationships between these agencies worldwide. In an era where the primary mandate of most innovation agencies was to stimulate innovation in high-growth potential businesses as a source of national competitiveness, there was likely a higher degree of ambivalence about openly sharing information with peers in other countries. Agencies would want to know what their counterparts were doing "better" than them but also be reluctant to share the "secrets" of their own success. However, in a world where innovation policy is being asked to deliver solutions to global challenges, such as those related to climate change, poverty, and inequality, there is much to be gained by learning from and collaborating with others.

This research has aimed to foster links between innovation agencies in Europe and Latin America in order to strengthen relationships and create opportunities for learning to take place. Our starting place is a comparison of the ways in which TAFTIE and RELAI agencies are similar, as well as the areas where they diverge. With this report, we hope to stimulate thinking about the variety of roles that innovation agencies can take on and how they can become more effective learning organizations, capable of adapting and evolving in response to changing contexts and able to learn from the experience of their peers worldwide.

Research Approach

The two studies that inform this report build a general picture of the current state of play for innovation agencies across TAFTIE and RELAI. The research projects were developed in parallel and designed to be complementary. Research for both studies was conducted between April 2021 and April 2022. They followed a similar methodology, combining both quantitative and qualitative research. However, there are a number of caveats and distinctions to be aware of:

- A baseline survey was developed for both TAFTIE and RELAI agencies that captures a comparable set of data with respect to five key areas. Many of the questions in each section were identical, but the wording of some was adapted to fit the specific context or terminology of each network. Some bespoke questions were also added to each survey. As such, it has been difficult to make fully valid comparisons in some areas.
- TAFTIE is a network of 34 agencies that are located in the European region and four partner agencies that are located in different parts of the world (including North America, LAC, and East Asia).[1] Two of these partner organizations (one in Canada and one in Japan) completed the survey administered to TAFTIE agencies. As such, this work is a comparison between the TAFTIE and RELAI networks, rather than a direct comparison between Europe and LAC.
- There is a difference in survey completion rates between the two networks. Just under 75 percent of TAFTIE agencies and partners responded to the survey (including 26 TAFTIE members and two international partners). Comparatively, more than 90 percent of RELAI agencies (13 out of 14 members[2]) responded. This does not significantly affect the general trends identified, but it is important to note that there is a slightly more complete dataset for RELAI.
- The qualitative methodology differed somewhat between studies. In each case a set of stakeholder interviews were conducted, but only 10 TAFTIE agencies were selected for interviews, chosen on the basis of distinctive characteristics they possessed that we wanted to investigate further. In contrast, all 13 RELAI agencies that answered the survey were interviewed. All interviews were semi-structured rather than following a fixed template, so this process captured very similar but not always directly comparable information about agencies. In addition, a set of participatory workshops were conducted with members of the TAFTIE network to explore their current and emerging roles. These workshops were not replicated with RELAI, reflecting the slightly different focus of the qualitative research in each project.

As a result of these methodological considerations, this report should be read as a general guide to similarities and differences between agencies in the TAFTIE and RELAI networks, rather than a complete comparison or formal evaluation between them. The intention of the research was in any case not to create a ranking, but rather to identify opportunities for dialogue and learning and to start building a more global community of innovation agencies.

1. A full list of TAFTIE members and international partners is available at https://taftie.eu/members/.
2. A full list of RELAI members is available at https://www.relai.lat/partner-companies/view-all.

Structure of This Report

Part 1 of this report looks in detail at **the current state of play** by exploring the similarities and differences between innovation agencies in the TAFTIE and RELAI networks, comparing them across five domains: (i) organizational structures, (ii) roles and responsibilities, (iii) instruments and activities, (iv) skills and capabilities and (v) learning and evaluation.

For each area, the comparative data is accompanied by some thoughts and hypotheses on what it shows. Questions are also presented that highlight areas where further research or exploration would be valuable.

Part 2 **looks to the future**, identifying common challenges and opportunities facing agencies across both networks and beyond, and identifying areas for future collaboration and learning between TAFTIE and RELAI.

1 The Current State of Play

Research of this kind tends to be a snapshot of a moment in time, as innovation agencies and their environments are in a constant state of evolution. Nonetheless, this study allows us to identify common trends emerging from each network and their respective regions and to compare results. This section focuses on similarities and differences, exploring areas where the TAFTIE and RELAI network agencies seem to align as well as where agencies in each network might be able to learn from the approach being taken elsewhere. We also consider some of the nuances present within these areas of similarity and difference.

Summary of key Findings

- **TAFTIE and RELAI agencies play comparable roles in their ecosystems.** TAFTIE and RELAI agencies take on a similar range of roles within their innovation ecosystems and deploy similar instruments to support innovators. For agencies in both networks, grant funding is the dominant type of support that is provided. However, TAFTIE agencies are increasingly moving away from providing only financial support to innovators in specific sectors, whereas RELAI agencies are comparatively more focused on vertical sector-specific support. We also see different interpretations of what constitutes innovation policy across TAFTIE and RELAI, with a greater focus within RELAI agencies on supporting research and innovation (R&I) rather than on business support policies.

- **Agencies from both networks focus on a broadly common set of thematic priorities.** There are similarities between the thematic priorities for each network, although they are weighted differently in TAFTIE and RELAI. For example, clean energy and sustainability is a big priority for many agencies in the TAFTIE network, whereas the focus of RELAI agencies is more equally spread across digitalization, health tech, food, and agriculture. This presents an opportunity for the two networks to learn about what is being focused on in different parts of the world, as well as what is driving innovation in these fields.

- **There is a growing focus on evaluation for agencies in both networks.** Both TAFTIE and RELAI agencies regularly use a range of evaluation methods to monitor and assess the outcomes and impacts of their programs. Agencies in the RELAI network tend to have a stronger focus on evaluation driven by the need to report on their programs, while TAFTIE is more balanced in the use of evaluation for reporting as well as for informing the design of new programs or modifying existing programs.

- **There is a greater diversity of organizational models within TAFTIE.** The data suggest that there is a wider variety of organizational models within TAFTIE, with a small but growing number of agencies that are set up as limited companies (to allow agencies to directly invest in the firms they support) or as fully autonomous government agencies (with greater safeguards over their operations). In general, RELAI agencies have a higher dependency on government structures and institutions, as well as international funders such as the IDB.

- **TAFTIE agencies have a more international outlook than their RELAI counterparts.** The level of engagement with international activities surpasses 90 percent for agencies within TAFTIE, versus only 67 percent for RELAI agencies. TAFTIE agencies are also more likely to have international offices, while RELAI agencies have almost none. Similarly, exports is a key focus for over 10 percent of TAFTIE agencies, while it is not a thematic focus for most RELAI agencies.

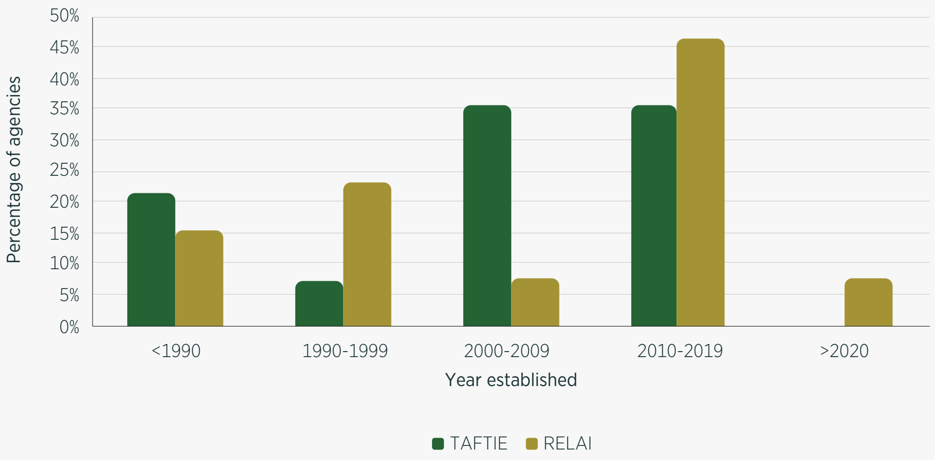
- **RELAI agencies have much shorter and politically influenced budget cycles.** All RELAI agencies operate in yearly budget cycles, putting significant pressure on their ability to plan and deliver long-term strategies. However, these constraints have led some agencies within the RELAI network to diversify their funding to include other fee-based services. This is something we see less of in the TAFTIE network, despite financial instability that also affects many agencies.

- **Collaboration differs across the innovation systems of TAFTIE and RELAI agencies.** There are more formal coordination mechanisms within the systems of TAFTIE agencies, but RELAI agencies work with a greater range of innovation actors beyond government ministries, international partners, and innovation intermediaries. This may be reflective of the size of the ecosystems, or it may result from incentives to seek other collaborators outside of formal structures.

Organizational Profiles

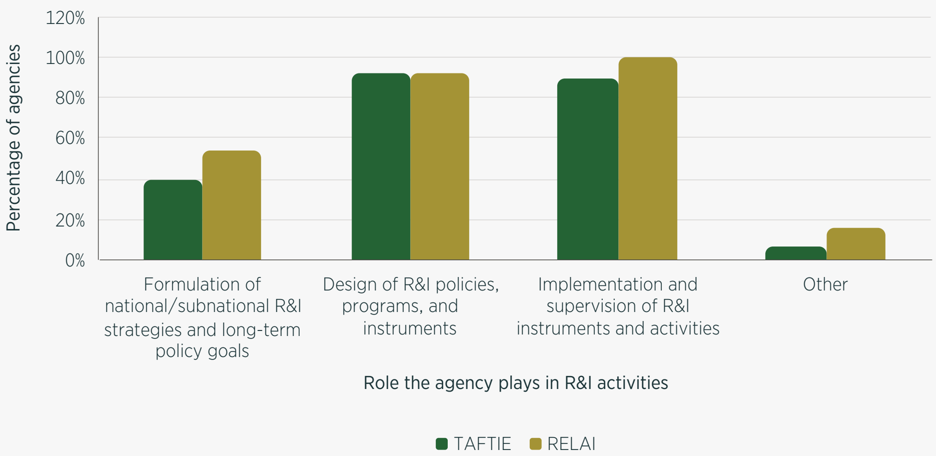
The organizational profile of innovation agencies considers information about the structure, size, and scale of agencies and looks to identify significant transformations experienced in recent years. The majority of agencies in both the TAFTIE and RELAI networks were found to have been established in their current form in the last 10–20 years, with a third of agencies operating in the same form for more than 20 years (Figure 1.1).

FIGURE 1.1 YEAR AGENCY WAS ESTABLISHED IN ITS CURRENT FORM



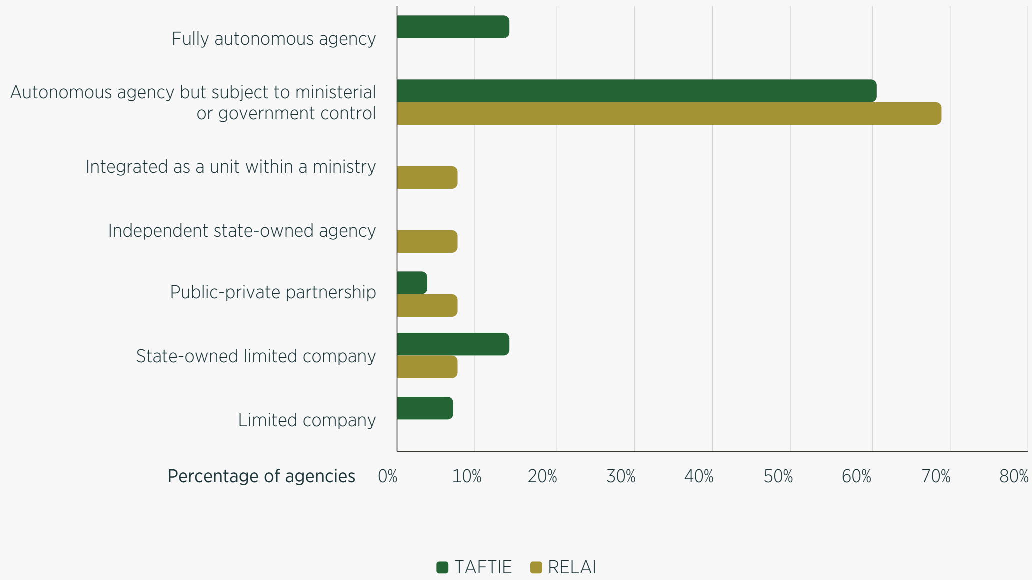
In both networks, the proportion of R&I activities agencies are involved in is the same. However, a slightly higher proportion of RELAI agencies state that they are involved in the formulation of national/subnational R&I strategies and long-term policy goals (Figure 1.2).

FIGURE 1.2 R&I ACTIVITIES THE AGENCY PLAYS A ROLE IN



The majority of agencies are set up as separate entities, subject to ministerial or government control (Figure 1.3). The least common type of agency structure (including less than a third of agencies in both networks) is agencies set up as companies (state-owned or other) or as private-public partnerships, pointing to the traditionally close relationship all agencies have with government and ministries responsible for R&I.

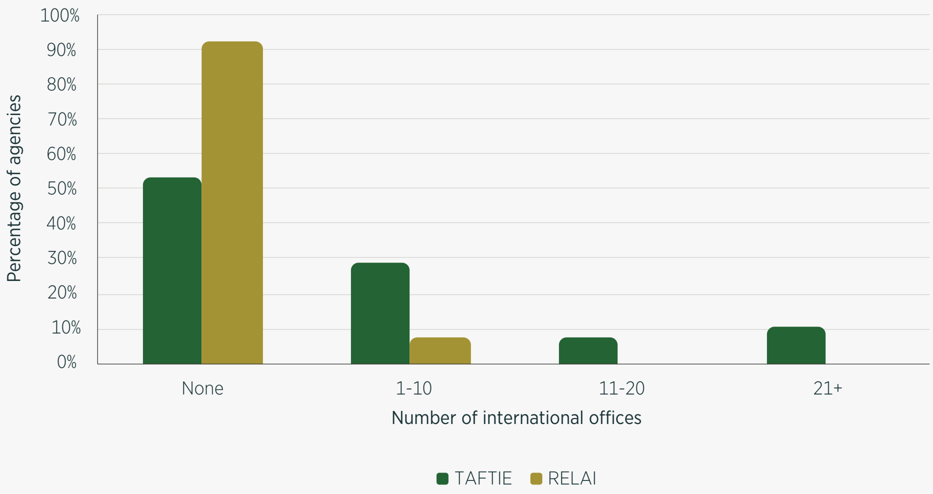
FIGURE 1.3 GOVERNANCE MODELS



Nonetheless, the growing number of new agency structures that are institutionally more distant from government points to changes on the horizon. In interviews conducted across both networks, agencies set up as companies or public-private partnerships noted that there were benefits to being able to directly invest in firms as shareholders, and that this desire to support firms at all stages of their growth required agencies to be legally structured differently.

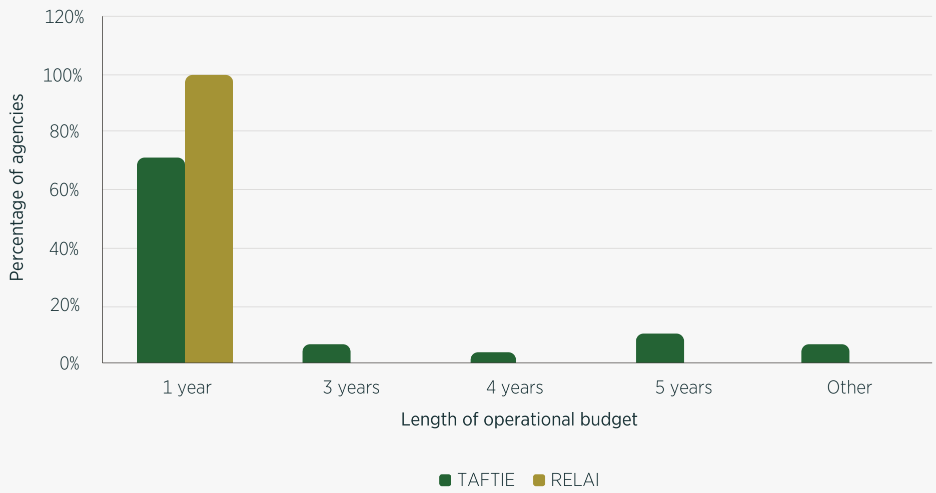
The analysis also found that while the mix of old and newly established agencies is similar for both networks, and the kinds of activities they are involved in also aligned, there are a number of differences between the networks when it comes to organizational profiles. For example, innovation agencies within the TAFTIE network have developed a stronger tradition of establishing multiple offices both nationally and internationally. The majority of RELAI agencies do not have more than one head office, and only one agency has a formal international presence (Figure 1.4).

FIGURE 1.4 NUMBER OF INTERNATIONAL OFFICES



In terms of budget, TAFTIE has more agencies within it that have longer-term budget cycles (close to a third of agencies have secured budgets for more than one year), while all RELAI agencies have budgets lasting only one year (Figure 1.6).

FIGURE 1.5 LENGTH OF OPERATIONAL BUDGET



As well as having shorter budgets, more RELAI agencies also have their budgets connected to political cycles. Short-term budget cycles impact an agency's capacity and ability to plan multi-year strategies and hinder their ability to play more of a system-shaping role. This is compounded if these same budgets are linked to the political cycle, making agencies in the RELAI network with this profile more vulnerable. However, it is worth noting that a number of LAC agencies have diversified their funding to include fee-based services, pointing to a positive trend where agencies are finding ways to create more financial stability for themselves.

Finally, another notable difference relates to the significant changes that agencies in both networks have experienced in the last five years, not including the recent COVID-19 pandemic. While in both networks most agencies indicated that they had experienced significant changes, the kind of changes most TAFTIE agencies referred to were related to increasing budgets. Within the RELAI network, most agencies saw predominantly governance changes (that are for the most part described as positive), closely followed by strategy and staff changes (which we can infer are also a by-product of governance changes).

QUESTIONS TO EXPLORE FURTHER:

1. What kind of structural or governance innovations might be needed to help agencies respond to evolving needs within their innovation ecosystems?
2. How are entrepreneurial approaches incentivized in more and less stable innovation systems?
3. How do innovation agencies ensure they are equipped to deal with turbulence and uncertainty, both positive (rising budgets) and negative (weakened mandates)?

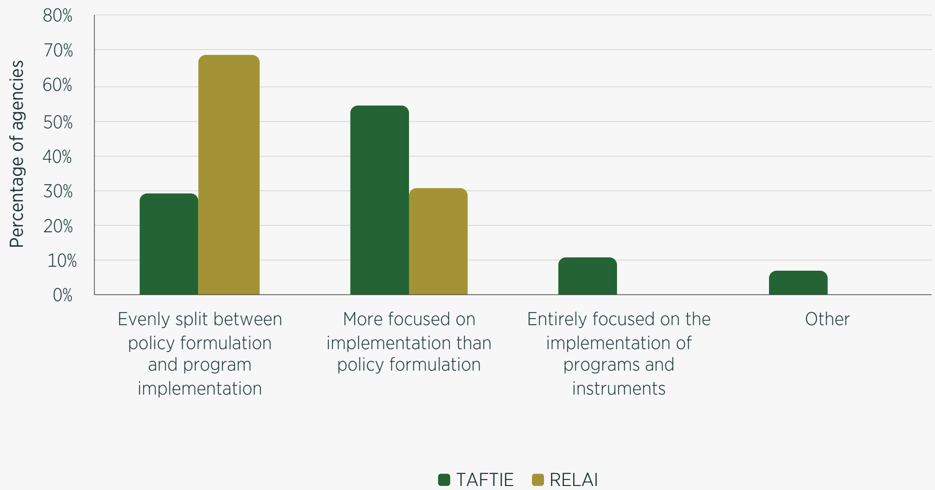
Roles and Responsibilities

When considering the roles of agencies in the innovation ecosystem with respect to R&I and in relation to other actors, even within regional networks it is difficult to compare findings. The particular context of an agency in one country will differ tremendously from that of another, even if many factors appear to be the same. Therefore, for both the RELAI and TAFTIE networks, the general trends identified in this section should be considered as indicative insights.

From the comparative data gathered, the relative size of the innovation system appears to be similar for the two networks, with both TAFTIE and RELAI having a close to 50 percent split in agencies operating with 1–5 actors (small ecosystems) versus those in systems with more than five R&I agencies. For both networks there is also an approximately 50 percent split in agencies that are the primary agency supporting R&I versus those who are not. Few agencies dominate their system and all must coordinate activities with other actors.

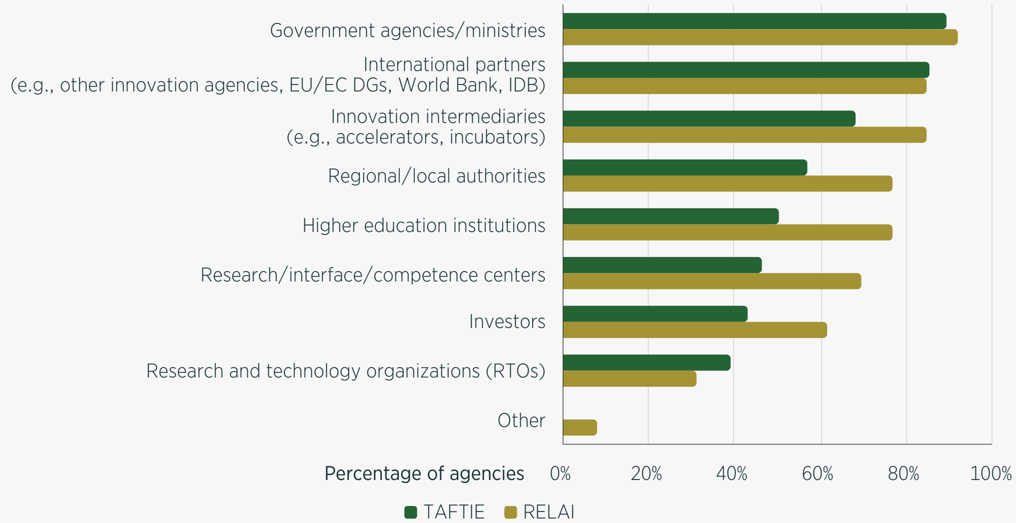
The TAFTIE network has more agencies focused entirely or primarily on implementation, while RELAI has more agencies that are evenly split between implementation and policy formulation, with less than a third focused only on implementation (Figure 1.6).

FIGURE 1.6 BALANCE OF RESPONSIBILITIES FOR AGENCIES



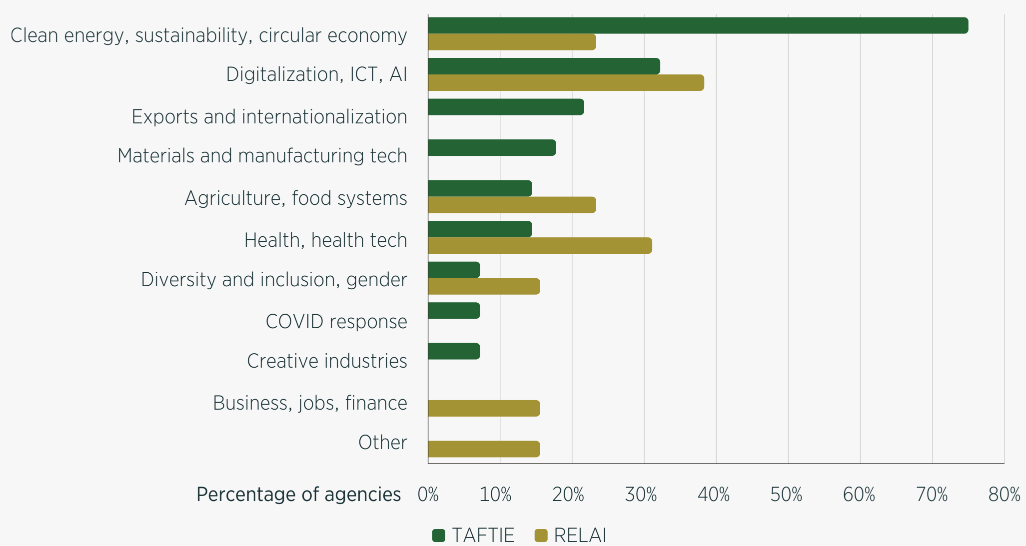
The research also shows that TAFTIE agencies have more formal coordination mechanisms than RELAI, although this may also point to the smaller size of some ecosystems in the LAC region. Nearly 75 percent of TAFTIE agencies report having these formal coordination mechanisms, compared to just under 60 percent of RELAI agencies. It is interesting to note, however, that the RELAI network works with a wider range of actors than TAFTIE agencies, indicating that less formal coordination may incentivize broader collaborations (Figure 1.7).

FIGURE 1.7 PARTNERS THAT AGENCIES DESIGN AND/OR DELIVER PROGRAMMES OR JOINT ACTIVITIES WITH



While there are some similarities in the thematic priorities of both networks, there are clear differences in distribution, likely pointing to the contextual differences of each region (Figure 1.8). For example, digitalization, information and communications technology (ICT), and artificial intelligence (AI) are more of a priority for agencies in the RELAI network, alongside health technology. For TAFTIE agencies, clean energy, sustainability, and the circular economy is the biggest thematic focus area, perhaps reflective of the influence of the European Union bloc that many agencies are a part of, where sustainability issues are very high on the agenda and funding is available for innovation work in this space.

FIGURE 1.8 THEMATIC PRIORITIES FOR AGENCIES



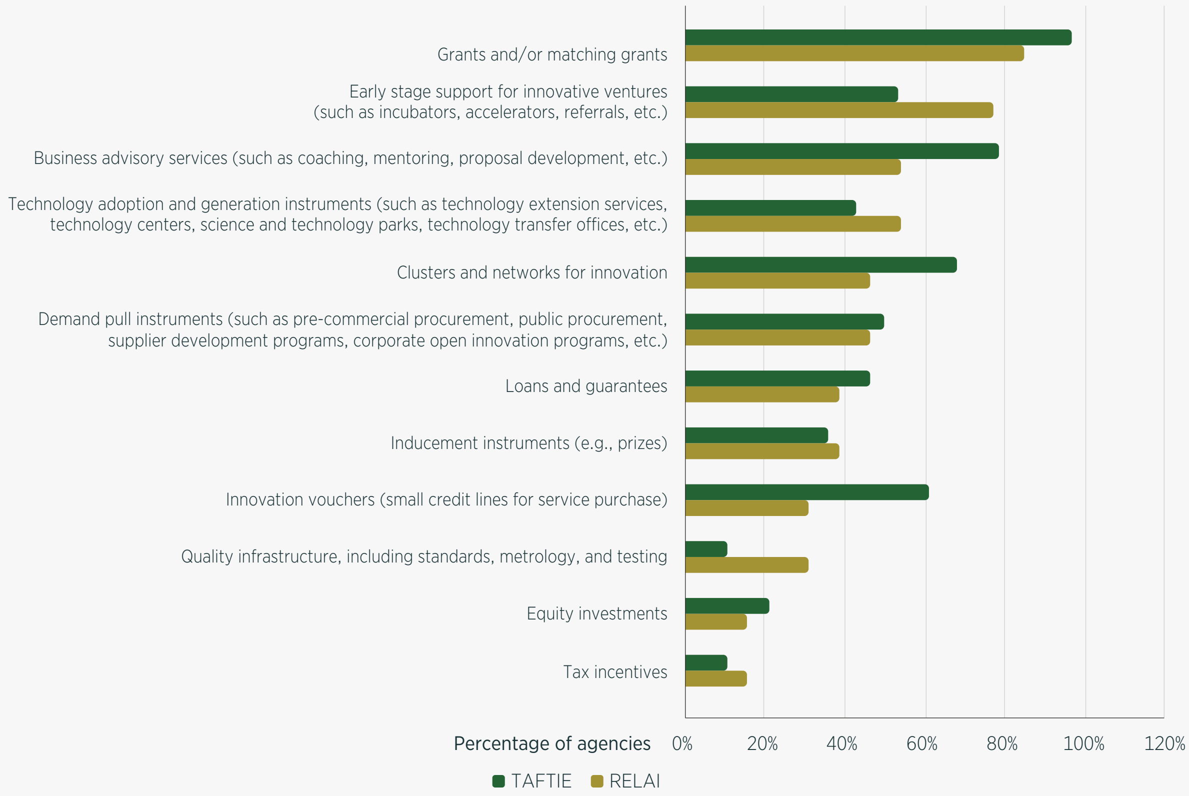
QUESTIONS TO EXPLORE FURTHER:

1. Do formal coordination instruments support or hinder more organic collaborations in innovation systems?
2. How do funder priorities affect the thematic focus of innovation agencies, influencing the activities of innovation systems?

Instruments and Activities

The research shows a number of similarities but also some divergence in the kinds of programs and support instruments that innovation agencies use, as well as the innovators they support. Unsurprisingly, grants are the most used instruments for both networks (Figure 1.9). However, TAFTIE agencies are more likely to provide business advisory services, support for clusters and networks for innovation, and innovation vouchers than their RELAI counterparts, while a higher proportion of RELAI agencies provide early-stage support for innovative ventures as well as technology adoption and generation services.

FIGURE 1.9 INSTRUMENTS USED BY AGENCIES



These differences in the types of instruments used may reflect the different ways in which innovation policy is understood and pursued in TAFTIE and RELAI agencies. Our research suggests that innovation agencies across the LAC region are more focused on stimulating early-stage invention and innovation than on upgrading firm capabilities to use new technologies.

Small and medium-sized enterprises (SMEs) are the type of entity most likely to receive support from both TAFTIE and RELAI agencies. However, differences are evident when looking at the other types of beneficiaries supported by agencies across both networks, with RELAI agencies much more likely to support universities and researchers, and TAFTIE agencies focused more on firms of different sizes and levels of maturity (Table 1).

TABLE 1 RANKING OF THE TYPES OF ENTITY MOST LIKELY TO RECEIVE SUPPORT FROM AGENCIES

RANK	TAFTIE	RELAI
1	SMEs	SMEs
2	Large companies	Start-ups
3	Start-ups	Micro-enterprises
4	Spin-offs	Research institutions
5	Mid-caps	Universities
6	Micro-enterprises	Large companies
7	Universities/research institutions	Mid-caps
8	Research technology organisations	Individual researchers
9	Clusters	Clusters
10	Individual researchers	Spin-offs
11	Investors	Research technology organisations
12		Investors

Some further differences in emphasis are evident in the types of support provided by TAFTIE and RELAI agencies (as defined in Box 1).

BOX 1 TYPES OF SUPPORT PROVIDED BY INNOVATION AGENCIES

Direct support involves a direct influence from the agency on the firm-level innovation activity (such as by choosing which projects to support in a competitive grant scheme).

Indirect support is provided to any innovation activity eligible under the rules of the program (such as R&D tax incentives and loan guarantees), without the agency being involved in the choice of which project to support.

Financial support involves a transfer of money or financing to beneficiaries.

Non-financial support involves advisory and other non-monetary support services that may be provided to beneficiaries.

Vertical programs involve measures intended to induce innovation among firms operating in a particular sector (such as textiles, manufacturing, tourism, etc.).

Horizontal programs involve measures aimed at inducing innovation in firms, regardless of the sector in which they operate (non-sector-specific funds, general digitalization programs, etc.).

Supply-side measures aim to create incentives among firms by reducing the costs and risks of innovation (technology extension services, R&D, support for education and training, etc.).

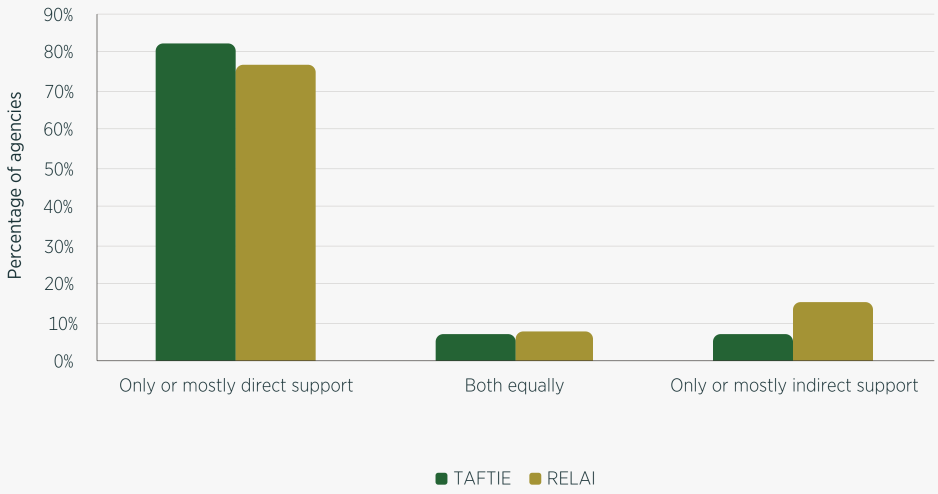
Demand-side measures aim to increase demand for innovations by improving conditions for their uptake (such as public procurement, and information and advocacy measures).

Science, technology, and innovation (STI) instruments are measures that promote the production, diffusion, and transfer of technological innovations through R&D support and funding.

Firm-level instruments are measures that primarily aim to build the necessary capabilities of firms to increase competitiveness, exports, productivity, etc.

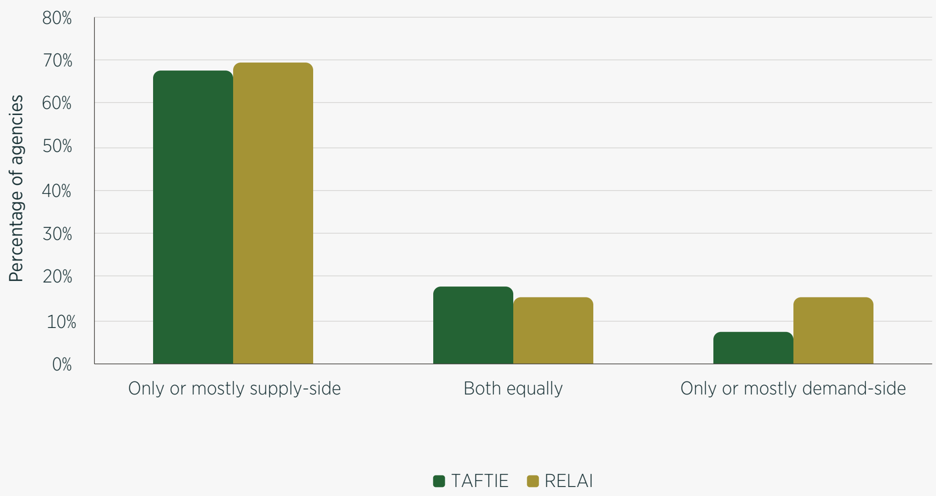
While agencies from both networks primarily use direct support, a slightly higher proportion of TAFTIE agencies provide only or mostly direct support, while a higher proportion of RELAI agencies provide only or mostly indirect support (Figure 1.10).

FIGURE 1.10 BALANCE BETWEEN THE PROVISION OF DIRECT AND INDIRECT SUPPORT



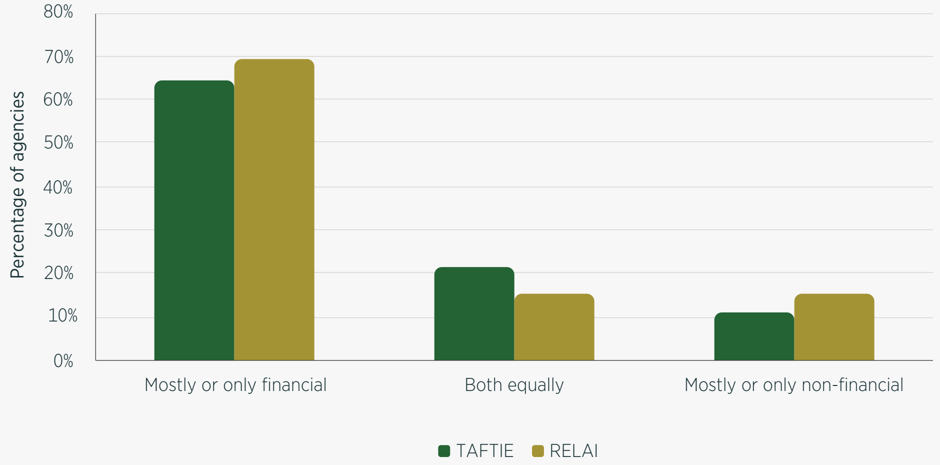
Agencies from both networks are overall more likely to use supply-side instruments (such as technology extension services) than demand-side instruments (such as pre-commercial procurement), but a higher proportion of RELAI than TAFTIE agencies make use of demand-side instruments (Figure 1.11).

FIGURE 1.11 BALANCE BETWEEN THE USE OF SUPPLY-SIDE AND DEMAND-SIDE INSTRUMENTS



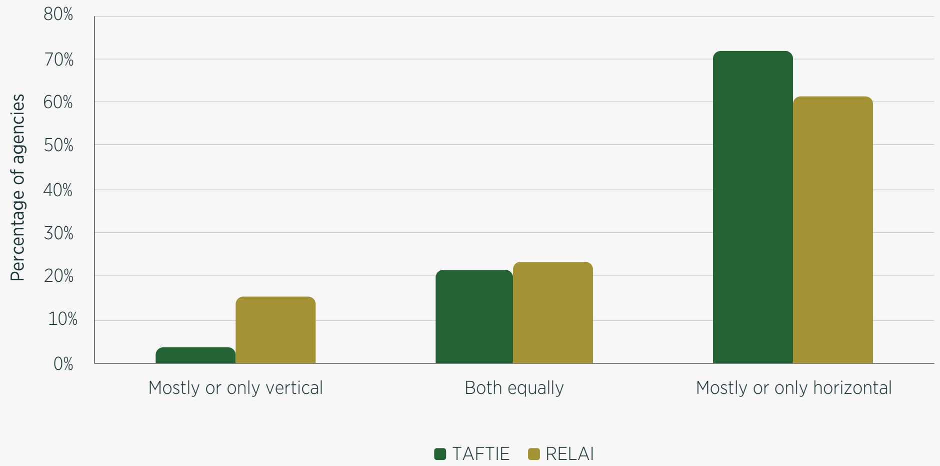
A slightly higher proportion of RELAI agencies provide only or mostly financial support, while TAFTIE agencies provide mostly financial support alongside some non-financial instruments (Figure 1.12).

FIGURE 1.12 BALANCE BETWEEN THE PROVISION OF FINANCIAL AND NON-FINANCIAL SUPPORT



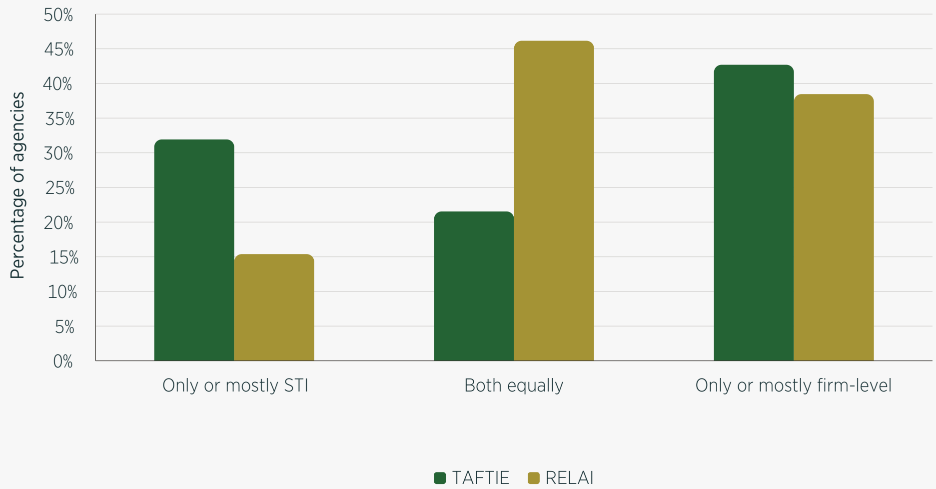
When looking at whether agency instruments are aiming to stimulate innovation within sectors or across them (covering all firms regardless of sector), it appears that RELAI agencies are proportionally more likely to use vertical measures to stimulate innovation in particular sectors, while TAFTIE agencies are more likely to use horizontal instruments (Figure 1.13).

FIGURE 1.13 BALANCE BETWEEN THE PROVISION OF VERTICAL AND HORIZONTAL SUPPORT



Looking at the split between the provision of STI-focused or firm-level support, it appears that TAFTIE agencies are more likely to provide both of these kinds of support, while RELAI agencies are more balanced in the middle (Figure 1.14). Information from the qualitative interviews provides some more context here, since many RELAI agencies describe operating in a system where there is much more of a focus on supporting early-stage invention and R&I, rather than on upgrading the capabilities of firms (Cuello, Glennie, and Zolho, 2022).

FIGURE 1.14 BALANCE BETWEEN THE PROVISION OF STI-FOCUSED OR FIRM-LEVEL SUPPORT



In all of these cases the proportional differences between TAFTIE and RELAI agencies are quite small, suggesting the need for further research to look in detail at the types of instruments and programs used by agencies across both networks in order to better understand the nuances. As a starting place, the individual reports on TAFTIE and RELAI agencies provide more detail on the dynamics within each of these networks.

QUESTIONS TO EXPLORE FURTHER:

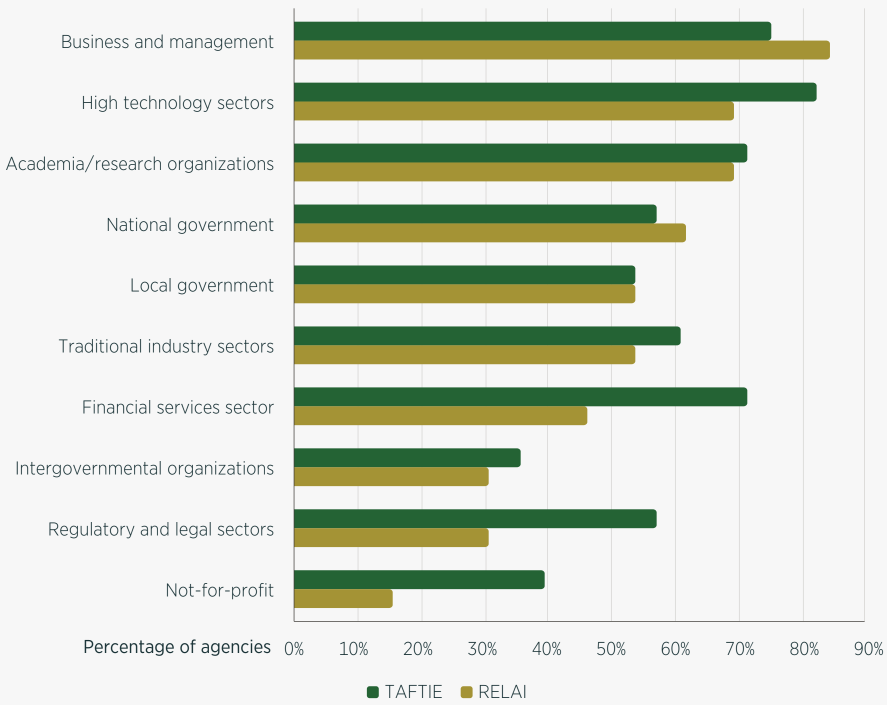
1. How are regulatory approaches influencing the kinds of instruments that agencies opt to use to support firms both directly and indirectly?
2. What implications does a broad definition of innovation have on the kinds of instruments agencies deploy? What is gained or lost by not focusing on specific sectors?
3. How can agencies build innovator-centric policy mixes, and what conditions are needed to support firms over the long term?

Skills and Capabilities

How an agency works and the skills and capabilities it holds in-house or is able to contract out can play a pivotal role in the success of its mission and operations. With almost all agencies across both networks collecting data on the backgrounds and profile of their staff, it is possible to develop a picture of the kinds of people that work in innovation agencies and where the perceived gaps are in terms of needed skills and expertise.

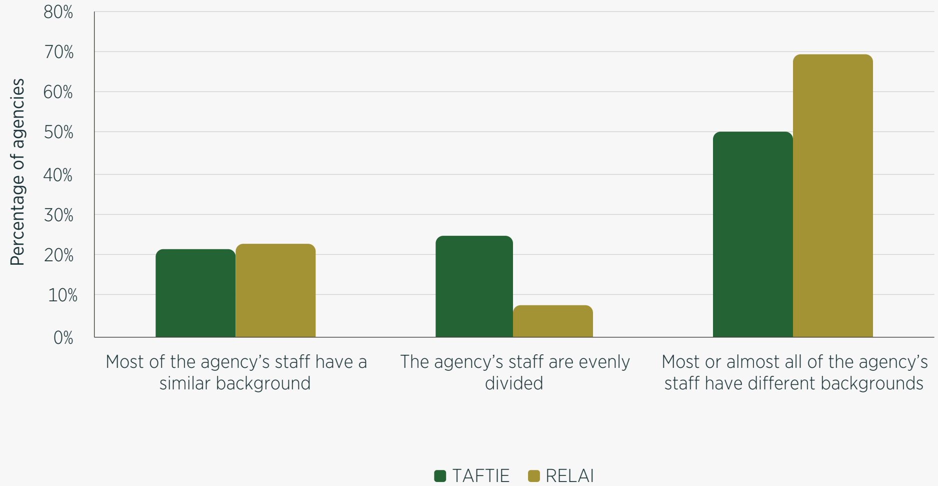
Across both TAFTIE and RELAI, there is a similar general profile for innovation agency staff. The majority of people who work in innovation agencies come from a business and management background, with RELAI agencies relying particularly heavily on this profile. A difference is seen across TAFTIE agencies (perhaps reflecting the greater number and diversity of the agencies within it), where there are higher proportions of staff that have experience in the financial services sector, high technology sectors, regulatory and legal services, and the not-for-profit sector (Figure 1.15).

FIGURE 1.15 PROFESSIONAL BACKGROUNDS OF AGENCY STAFF



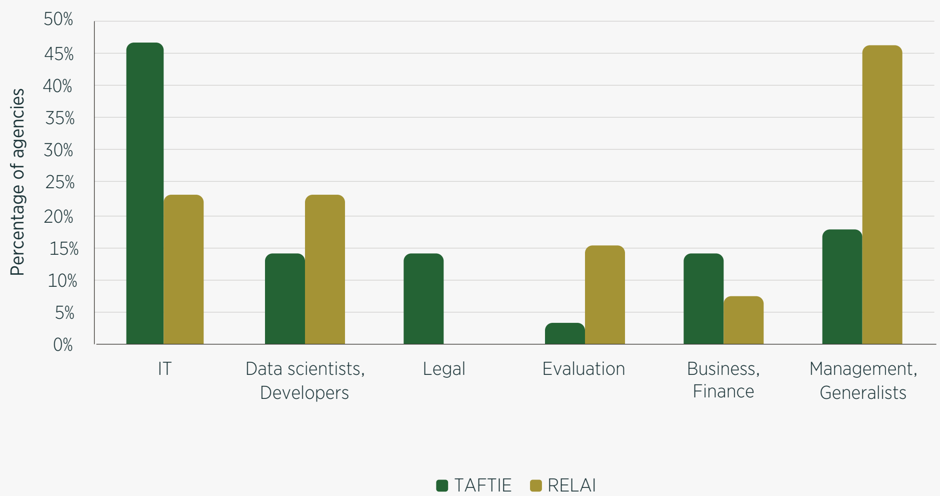
There appears to be more heterogeneity within RELAI agencies, with nearly 70 percent of agencies reporting that most or almost all of their staff have a different background, while TAFTIE agencies are more balanced (Figure 1.16). It would be interesting to explore further the impact that this diversity of skills has on the types of programs and instruments used by different agencies.

FIGURE 1.16 DEGREE OF SIMILARITY AND DIFFERENCE BETWEEN AGENCY STAFF



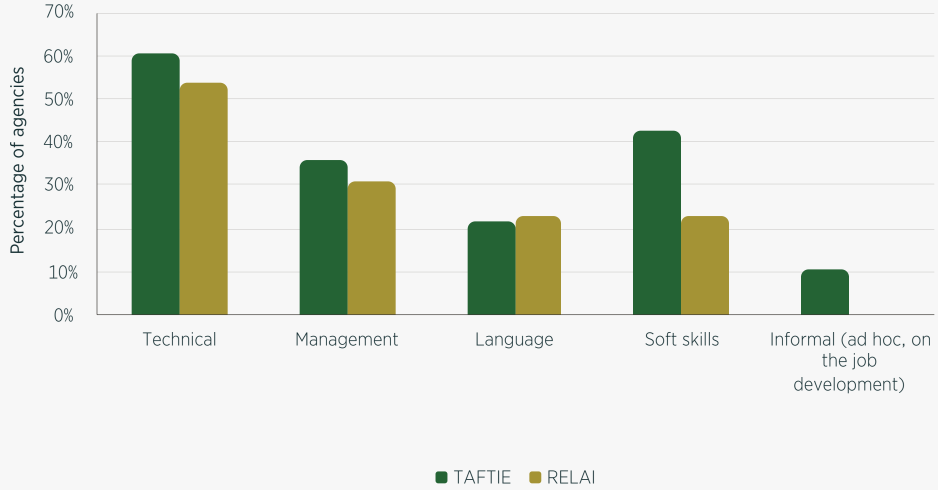
Agencies across both networks report that there are skills they struggle to recruit for (with 50 percent of RELAI agencies reporting this and nearly 70 percent of TAFTIE agencies doing so), but there are differences in terms of the types of skills needed (Figure 1.17). TAFTIE agencies find it especially difficult to recruit for high-tech skills, perhaps due to competition with the private sector. RELAI agencies have a greater shortage in evaluation and generalist and management skills.

FIGURE 1.17 SKILLS THAT AGENCIES FIND IT HARD TO RECRUIT FOR



A commitment to training and development is evident across both networks, with around 85 percent of RELAI agencies offering training to their staff and over 95 percent of TAFTIE agencies doing so. There are some differences in the types of training that are offered, though, with TAFTIE agencies more likely to provide technical training and soft skill development (Figure 1.18).

FIGURE 1.18 TYPES OF TRAINING OFFERED



Finally, while almost half of TAFTIE agencies have audited the skills they will need for the future, almost all RELAI agencies say they have not. There is a strong case for agencies in both networks to be more intentional about developing their skills mix and investing in future as well as current skills.

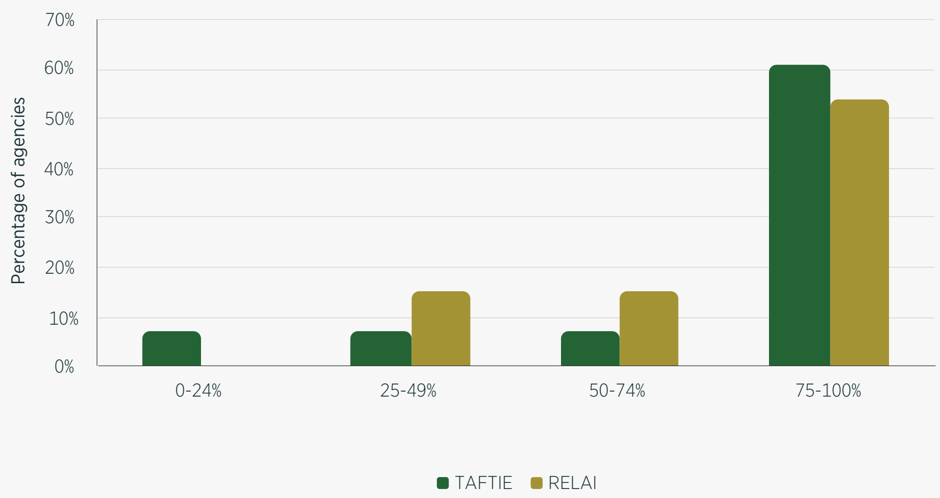
QUESTIONS TO EXPLORE FURTHER:

1. What practices and tools are required to help innovation agencies proactively consider and invest in their future skills mix?
2. What strategies can be used to overcome skills shortages in particular areas? Are there opportunities for exchange and learning between agencies here??

Learning and Evaluation

Gathering data, measuring and evaluating impact, and using evidence to inform the design of programs and instruments is an essential practice for all innovation agencies, and is something that almost all TAFTIE and RELAI agencies do. However, building the skills, capabilities, and processes to create thriving learning cultures is an area where there is room for improvement for both networks.

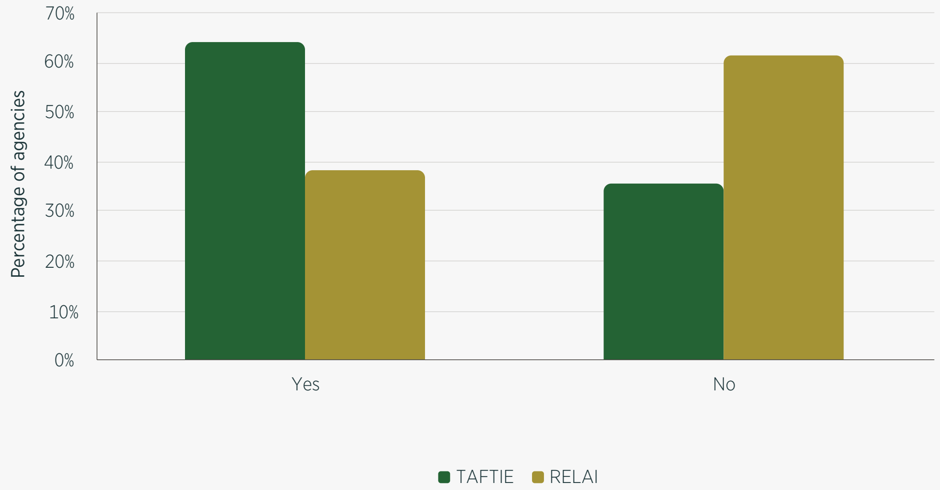
FIGURE 1.19 WHAT PERCENTAGE OF PROGRAMS ARE EVALUATED?



As Figure 1.19 shows, proportionally more TAFTIE agencies are evaluating most of their programs compared to agencies in the RELAI network. The research found that process and results/impact evaluations are the most used form of evaluations in both networks. Ex ante evaluations (which inform the design of programs and instruments) are the least used. However, the survey data do not give a very clear picture of the different understandings that agencies across both networks may have about different types of evaluation, so this is a question that would be worth digging into more deeply. The research also indicates that there is a way to go before rigorous evaluation practices are widespread.

Nearly 65 percent of TAFTIE agencies are familiar with new scientific methods used to measure the impact of public programs in R&I, including methods such as propensity score matching, difference-in-difference, regression analysis, and randomized controlled trials (RCTs), and many agencies use these methods as part of their evaluation. There is generally less familiarity with the use of these methods among RELAI agencies, with just under 40 percent of agencies saying they are familiar with them, and only a few using them as part of their suite of evaluation methods (Figure 1.20).

FIGURE 1.20 FAMILIARITY WITH NEW SCIENTIFIC METHODS USED TO MEASURE THE IMPACT OF PUBLIC R&I PROGRAMS

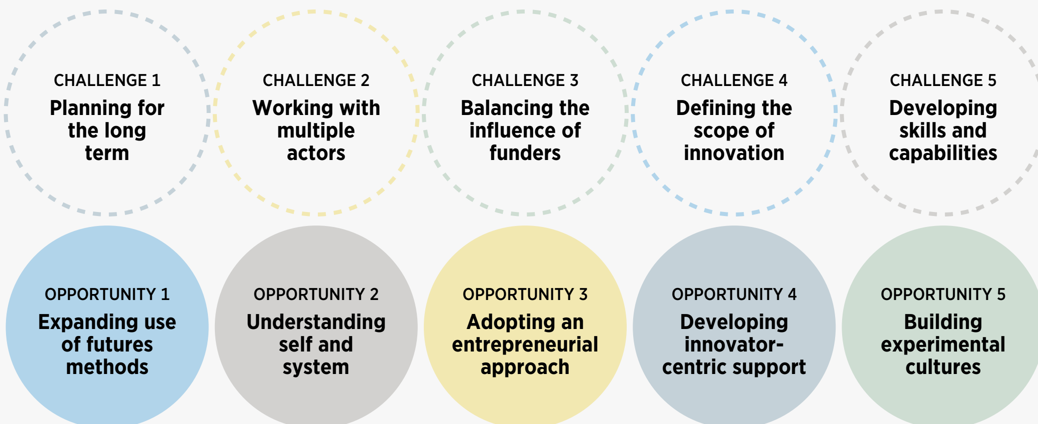


QUESTIONS TO EXPLORE FURTHER:

1. How can agencies build their impact evaluation capabilities and embed these more widely across all their programs??
2. How can the barriers to building more experimental cultures be identified and addressed?

2 Looking to the Future

Section 1 explored the current similarities and differences between agencies in the TAFTIE and RELAI networks, but what do these findings tell us about where innovation agencies are heading in the future? This section aims to clarify what we can observe about the common challenges facing innovation agencies in both the TAFTIE and RELAI networks (and, as a result, likely beyond). We explore the kinds of opportunities created by the global trends identified and present a number of areas for future collaboration and learning. Finally, we suggest some practical tools that may help innovation agencies to have more open discussions with peers from across the world.



Shared Challenges

Despite the very different contexts that innovation agencies across the TAFTIE and RELAI networks inhabit, this research has highlighted a number of common challenges facing all agencies, which are outlined below.

The need for long-term planning

Agencies across both networks are struggling to plan long-term innovation programs, which are instrumental for effective innovation policy. The reasons behind this challenge differ from context to context but in general they fit into two buckets. The first relates to increasingly turbulent and volatile conditions that are making it harder for agencies to anticipate what kind of innovation support might be needed in the medium to long term. The second relates to short-term budgetary cycles, sometimes the result of political instability and other times related to existing governance structures that do not provide agencies with predictable or sustained funding. If there is an increased need for innovation policies to respond to complex societal challenges in the future, as seems likely, then long-term but flexible planning and budgeting systems will be required.

Working with multiple actors in the innovation system

All innovation agencies work in systems with multiple actors, with varying degrees of collaboration required. As no agency is likely to dominate an entire system, there is a need to avoid unhelpful competition (for influence or resources) and to plug gaps that make it difficult for innovators to be supported through all stages of the process of taking ideas from concept through to market-readiness and beyond. Increasing demands for innovation to take a mission-oriented approach also calls for better coordination and collaboration at a system level. This requires working in a diplomatic and collaborative way with different kinds of actors, which some agencies are better equipped to do than others.

Balancing the influence of funders

Achieving sufficient levels of autonomy is another challenge that affects all innovation agencies to varying degrees. Innovation agencies often need to play a part in both the implementation of innovation programs and the design, formulation, and planning of these same programs in order to be able to achieve their mission. This requires them to have enough influence and autonomy to be able to shape the decisions made by government and feed in the valuable knowledge and insights they gain from working at the front line with innovators and entrepreneurs. However, many innovation agencies are currently rule followers with their priorities set (and frequently reset) in response to political shifts.

Understanding and defining the scope of innovation

How agencies understand innovation plays a determining role in the kind of activities and instruments they adopt, the groups they target, and how they view their role in the wider ecosystem. In order for agencies to maintain the right policy mix there will need to be greater harmonization within ecosystems. For some agencies this will require them to broaden the scope of their definition of innovation to include support for STI as well as firm-level capabilities (maturing innovation ecosystems warrant this broader and more nuanced approach to attain the right policy mix). Where agencies already operate in more mature ecosystems, coordinating specific roles and responsibilities becomes the primary focus.

Building dynamic skills and capabilities for the future

Finally, building the right skills and capabilities to allow for dynamic responses to the future remains a common challenge for all innovation agencies. Investing in auditing the skills that will be required of agencies in the long term, investing in staff training and retention, and building experimental learning cultures are areas for further improvement in the near future. In order for agencies to continue to deliver innovation policies that are effective and fit for the demands of a more complex environment, the cultivation of dynamic skills and capabilities will have to be an integral part of strategic planning.

Areas for Future Collaboration and Learning

These shared challenges also offer TAFTIE and RELAI the opportunity for shared learning. The following are areas where a more sustained dialogue could be established.

Expanding the use of innovation futures methods

In response to the challenge innovation agencies face when planning long-term strategies, there is an opportunity to use innovation futures methods such as horizon scanning and the development of scenarios to consider possible futures. There are a few innovation agencies that have already started to embed foresight teams within their organizations, but there is significant potential to expand the use of innovation methods. Scenarios in particular are a tool that can enable innovation agencies to make space to consider alternative future choices they may need to make. By raising "what if" questions that are both tangible and stretching, innovation agencies can become better equipped at considering a range of plausible futures that would usefully test their assumptions (Glennie, Finch, and Mahon, 2022). Speculative design methods are also helpful to explore new ideas that could become a reality and to build confidence in agencies struggling with the malleability of many possible futures.

Understanding self and system

There is a need for agencies to reflect on their roles and the innovation ecosystems they operate in, whether they are experiencing periods of transformation, are more established, or are tackling volatility. An ongoing effort to learn from the experience of other innovation agencies is helpful, but it must also be recognized that comparisons between agencies will often be artificial and miss many nuances that give a fuller picture of where an agency stands and, more importantly, where it is headed. Instead, agencies need to become better at regularly gathering the data that they need to reflect on their profile, roles, and responsibilities, instruments and activities deployed, and skills and capabilities, including learning and evaluation practices. Only then can they determine an agenda for action that is rooted in their specific context.

Adopting an entrepreneurial approach

In response to the challenge all agencies face with regards to dependency on their funders, there is an opportunity for agencies to take more of an entrepreneurial approach in order to diversify their sources of income and develop better institutional safeguards for themselves. A few agencies are already beginning to do this, so there is a lot of mutual learning that could take place between and within the TAFTIE and RELAI networks. For example, agencies being set up as limited companies or public-private partnerships have deviated from the traditional organization structure for innovation agencies (which typically involves a very close link with government ministries and funders). What conditions allowed for these agencies to develop in this way? Similarly, for agencies that have diversified their funding model by providing fee-based services, how have such strategies been received by firms and other stakeholders in the innovation system? There will increasingly be a need for agencies to adapt at a faster pace to meet changing demands, so those that succeed in becoming more agile and entrepreneurial will provide exciting case studies for what may be on the horizon for others.

Developing innovator-centric support

Signals from more mature innovation ecosystems have highlighted that in order to support firms from early-stage concepts through to scale there is a growing need for more innovator-centric support (Glennie, Ponte, and Teles, 2019). Financial instruments or incentives alone will not meet demands in the future as the entire system responds to more turbulence and uncertainty. The COVID-19 pandemic forced innovation agencies to provide different support instruments in order to quickly and effectively meet the demands of firms. If the pandemic response is an indication of how innovation agencies are likely to respond to future crises (acknowledging that there are many ways the response could have been improved despite the many success stories from around the world), it is clear that investing in developing more innovator-centric forms of support will be key.

Building experimental cultures

The opportunities outlined above will all be greatly supported by the development of dynamic skills and capabilities. Dynamic skills and capabilities refer to "the ability of an organization and its management to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments" (Kattel, 2022; see also Teece, Pisano, and Shuen, 1997). In order to integrate skills and capabilities agencies will need to have developed thriving learning cultures where there is regular investment in the training and development of staff. To build the skills and capabilities that meet the demands, innovation agencies will have to become better at auditing existing skills and identifying future capabilities needed. There are promising examples of agencies that also tap into other parts of their ecosystem so that they are not the sole investors in the skills required. Finally, to reconfigure effectively, strong learning and evaluation systems should be in place. This means investing in evaluation even when it is not driven by the need to report to funders.

Innovation policy could benefit from becoming more experimental for a number of reasons. In order to tackle the common challenges presented, experimental policymaking can help agencies to explore the unknown before investing huge resources based on hunches as opposed to evidence. Experimental and evidence-led approaches not only improve what innovation agencies know and decide to do, it also improves how innovation agencies do innovation. Becoming experimental means "exploring a wide range of ideas, testing out the most promising ones at a small scale, learning which are likely to work better, and only then scaling" (Bravo-Biosca, 2019). In turn, the culture this creates is one where all innovation agencies are continuously learning and making decisions based on evidenced insights; it supports greater curiosity at all levels of an organization and builds confidence for leadership to explore the unknown and take risks when there is uncertainty..

Concluding Remarks

There are many tools that may support innovation agencies to tackle the common challenges identified in this report and take action on the opportunities presented. Some of these are shared in the two linked reports on the TAFTIE and RELAI networks that underpinned this study. Assessment tools such as the survey developed for this project are a helpful way for agencies to collect the necessary data to make an assessment on where they currently stand (with a view to reflecting on where they are headed and what gaps may need to be addressed). The explorative profiles included in the TAFTIE report, Navigating Changing Landscapes: The Current and Future Roles of European Innovation Agencies (Zolho, Glennie, and Cuello, 2022), are a valuable tool for agencies to consider what characteristics resonate with their current profiles and which elements may still be aspirational. The indicators included in the RELAI report, Innovation Agencies in Latin America and the Caribbean: A Characterization of the RELAI Network (Cuello, Glennie, and Zolho, 2022), are useful for agencies looking to determine their current direction and to consider where they sit in comparison to others.

There is no single route or set of directions that an agency can take in order to be successful. There are many different possible paths, depending on what each agency hopes to achieve and what is possible within the environment the agency finds itself in. Nevertheless, it is valuable to have travel companions who can share what they have learned from their own journeys, and who can help chart a course through unexplored territory. We hope that the conversations sparked by this research will help innovation agencies in LAC and worldwide to deepen their relationships and jointly explore how to support innovation that will address the challenges that transcend national or regional boundaries and that we now face as a global community.

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