

Chapter 5. Conclusion

This study aims to provide ECA policy makers with policy options to increase and maintain productivity and growth by creating an environment conducive to innovation. The countries in the ECA region, including those that are already members of the European Union or are on its doorstep, will increasingly be competing with countries that have a comparative advantage in innovation, as well as with countries with very low wages that specialize in low value added manufacturing.

Investing in knowledge should not stem only from the threat of competition, but also from the opportunities this investment provides. The tradition of learning and research in socialist economies, although with weak linkages to commercial applications, provides a basis for hope that basic research and commercial innovation could be restructured, revised, and built “on the shoulders” of the past, making a transition to an economy based on knowledge, innovation and technology creation easier than in other countries in which such foundations do not exist.

The current report (part I of the ECA Knowledge Economy Study—ECAKE I) focuses on the rationale, instruments (primarily financial instruments, such as matching grants and VC), and institutional requisites for effective public support for commercial innovation. The follow-up study, ECAKE II, will cover issues dealing with absorption and diffusion of knowledge.

We have to re-emphasize at this late stage that the focus of this study is not to assess ECA countries in relation to their readiness to start innovation support programs or which reforms in their national innovation systems are most urgent. Some discussion on this is presented in chapter 4, but merely for the purpose of identifying key policy areas that also have to be

addressed and to stress the heterogeneity in the region that will certainly call for a differentiated approach. NIS diagnosis in ECA countries as well as the design of policy instruments to support innovation will certainly need an in-depth analysis on a country-by-country basis.

As mentioned in chapter 4, the region has a fairly high human capital stock and well-developed research institutions. However, there is an obvious mismatch between the research being undertaken in the region and private sector needs. Spending on applied research that has higher commercial potential is very low when compared with the world’s most developed countries. The financial instruments recommended in this study aim at addressing these problems by encouraging private R&D in companies and by incentivizing collaboration by cofunding “consortia” of firms and universities/research institutes to implement innovative projects.

The study provides a theoretical framework for examining the rationale for public participation in funding of private industrial R&D and commercialization of innovative ideas. This is based on the fact that knowledge has a public-good character with positive externalities (social rents being higher than private rents), and therefore the amount of knowledge created by the private sector will be suboptimal (from a social point of view) without public intervention.

Failing the possibility of internalizing excess rents (e.g., via intellectual property rights), government intervention could increase the amount of knowledge created toward a “socially optimal” amount. Issues concerning asymmetric information (inherent in knowledge creation) also mean that funding levels for knowledge creation will be below what would be socially desirable. Clearly, government intervention might be a

necessary, but by no means sufficient, condition for innovation. There is the danger that government interventions badly designed or badly implemented could make things even worse than they are.

Given the justification for government intervention, we discussed the most effective and least-distortive instruments for public support for commercial innovation. We analyzed different support mechanisms in OECD countries and their applicability to the ECA region as well as key principles for the design of any support system. After a careful review of the policy instruments used in OECD countries, this study suggests three types of instruments to support innovation: (1) minigrants, (2) matching grants, and (3) VC support.

According to a country's characteristics, certain types of instruments might be better suited than others, and this type of continuum of instruments may not hold. A further instrument, largely discredited but that should still be taken into account, is the provision of business services—partly in the form of incubators. The fact that these instruments are largely discredited may stem from their current design, and a more careful design as well as anchoring them as part of a public support program for innovation would ensure better performance.

In this study we have also stressed that a country's national innovation capacity will depend on a certain number of requisites. This set of requisites (human capital, information infrastructure, the innovation system, as well as the economic incentives regime), further elaborated in the revised literature, forms different pillars

that allow a country to articulate its transition into a knowledge economy and use its resources efficiently in the absorption and creation of new knowledge. In the fourth chapter we compared the KEI with a set of different indicators that have been developed to assess a country's innovation capability.

Although we find some differences in the way our sample of countries score with the different indicators, there is consistency in which countries are shown to be at the top of the S&T (Science and Technology) ladder as well as those shown to be at the bottom, with the picture becoming somewhat blurred in the middle section. That is hardly surprising, given that the different indicators emphasize different aspects of the S&T realm. Rather than dwelling on the differences in these indicators, the important aspect of this exercise is to demonstrate the importance of other aspects of the NIS, for example, the importance of an adequate economic incentives regime, hardly recognized in the literature, and the heterogeneity among ECA countries.

This heterogeneity will certainly imply the need for a differentiated approach to this problem. In that light it is important to highlight the concept of bottlenecks in the NIS. Whilst some countries have already developed most elements in their NIS and would therefore certainly benefit from public financial support for commercial innovation, some countries are less ready for these types of intervention and might be better off concentrating their efforts on reforms that improve the institutional requisites for these types of intervention.