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Towards a sub-regional Innovation Policy Index

Note by the secretariat

I. Introduction

1. The ECE series of national innovation reviews for sustainable development show not only a range of common issues amongst ECE transition countries, but also the strong need for concerted efforts to upgrade innovation policy and national innovation systems. These efforts include better co-ordination over efficient integration of the legacy of applied research institutions across the region, integrating an emphasis on non-technological innovation in the policymaking, and a stronger focus on technology absorption as the leading potential driver of sustainable economic growth.

2. This is particularly important in view of emerging global and regional trends. The Fourth Industrial Revolution, the digital economy, the decline of manufacturing, and the rise of global value chains open up a range of opportunities that these countries could benefit from, building on their unique advantages – including high levels of education, a well-established tradition of applied research, and economic integration opportunities through the EU, the Eurasian Economic Union, and the One Belt One Road initiative. All of these bring opportunities to unlock the significant growth potential, which would come with moving closer to the technological frontier. But countries also face the risk of missing the train. Innovation policy will play a leading role in promoting those opportunities while mitigating the risks that they pose. This will require far-reaching policy and institutional reform that tackles various constraints to technological adoption.

3. These reform efforts are in growing need of clear, measurable guidance through, inter alia, indicators, analytical research, capacity building, and policy dialogue that goes beyond what can be covered in national reviews.

II. Role and objectives of the sub-regional Innovation Policy Index

4. Leading benchmarking instruments, such as the Global Innovation Index, are necessary but not sufficient: they capture input and output measures well, but fall short on, *inter alia*, two fronts. First, they do not capture central mechanisms that translate inputs to outputs, such as institutional capacities and policy design. As innovation policy often involves targeted public support for specific projects, these issues are of utmost importance to ensure that scarce public resources are put to optimal use. Second, as they cover a large range of countries, they do not adapt the model based on a solid understanding of the economic, political, structural, historical, and institutional factors that strongly influence innovation-led development in specific regions. As many ECE countries in transition share features that set them apart from other countries at comparable output levels, such as strong institutional legacies, high levels of educational attainment, and a legacy of frontier research, there is a clear need for indicators that capture these specificities to guide policy and institutional reform efforts.

5. A sub-regional Innovation Policy Index (IPI) could fill this gap for economies in transition in the ECE region and facilitate this restructuring process with a comparative framework that captures the scope and quality of policies, the implementing institutions, and the decision-making and evaluation processes at different levels. IPI will serve both as a tool for assessment, for monitoring and evaluation, and for Eastern Partnership policy dialogue and peer learning.

6. This exercise would build on and complement national Innovation for Sustainable Development Reviews (I4SD). The index would cover key issues explored in further depth in the reviews, while adding a regional perspective and a set of indicators that will inform policy making, align policy dialogue, and track reform progress. Several analytical chapters will explore specific issues of common concern, such as the fourth industrial revolution or reform of public research institutions.

7. A workshop with representatives from Ukraine, Belarus, Moldova, Georgia, and Armenia (with Azerbaijan consulted separately), served to review the potential methodology and scout interest and engagement for an IPI. The discussion yielded highly useful feedback on the methodology and the assessment process. At the end, all participants expressed their interest and commitment to allocating the necessary resources to participate in the assessment process. This commitment was reconfirmed at the 2018 session of the Committee on Innovation, Competitiveness and PPPs.

8. Innovation Policy Index (IPI) is designed as a monitoring tool as well as an instrument for facilitating policy dialogue, programme coordination and the promotion of good practice in innovation policy. The IPI aims to be (i) a tool to review innovation policy developments on significant policy pillars and across countries and (ii) a framework to exchange experiences and good practices, and foster policy dialogue. Specific objectives include:

Table 1:
Objectives of index of innovation policy

<i>Structured assessment</i>	<ul style="list-style-type: none"> - Evaluate progress in innovation policy and institutional reform on a comparative, regional basis - Assess and compare countries' performance across multiple areas
<i>Targeted support for improvement</i>	<ul style="list-style-type: none"> - Identify, monitor, and evaluate policy priorities and support needs
<i>Regional collaboration and policy dialogue</i>	<ul style="list-style-type: none"> - Encourage more effective policy dialogue through a common evaluation framework thereby enabling peer learning and sharing good practices - Foster inter-ministerial and inter-agency co-ordination
<i>Public and private sector involvement</i>	<ul style="list-style-type: none"> - Offer a transparent and straightforward communication tool for all innovation policy stakeholders - Establish public/private consultation
<i>Planning and resource allocation</i>	<ul style="list-style-type: none"> - Facilitate medium-term planning, particularly for pillars that require multi-year programs - Provide a tool for resource mobilisation and allocation

9. The focus will not be to create country rankings, but rather a sub-regional framework for understanding and discussing the current state of innovation policy and institutions that should result in actionable suggestions for improvements of innovation policy. The results will be presented and used as a comprehensive 'dashboard' for policy makers, with a structured picture of the key weaknesses, challenges and success factors of national innovation policy.

10. The IPI methodology is designed explicitly for the specificities, advantages, and challenges that most ECE countries in transition have in common. The focus covers adoption, absorptive capacities, diffusion, demand and linkages rather than just R&D and frontier innovation activities. This means that assessment of individual policy instruments and issues should be always evaluated in the context of development of innovation capacity. For example, venture capital instruments may be of quite different importance for countries where most firms operate at technology frontier compared to economies that have only isolated islands of high tech excellence. Within this perspective, the assessment by the Index is much more about functions (cf. innovation finance) rather than about instruments per se (cf. venture capital).

III. Structure of the proposed Index

11. The proposed structure of the IPI covers policy and institutional features that are essential in building functioning national innovation systems and has been tailor-made to fit the context of ECE transition countries, taking into account the countries' economic legacy and stages of development.

12. The IPI is structured around three overarching, complementary *Pillars*:

- I. Innovation Governance
- II. Policy Process for Innovation

III. Innovation Policy Instruments

13. Each Pillar is divided into several *Sub-pillars*, which in turn contain around 50 measurable and precise performance *Indicators*. For example, the Policy Process for Innovation Pillar, contains a Sub-pillar on Policy Design, which contains indicators measuring countries' performances regarding ex-ante evaluations, planning, private sector consultation, and performance requirements.

14. The indicators aim to capture the complete innovation policy cycle. They assess central underlying issues surrounding innovation policy governance and the policy making process *in addition* to capturing existing input and output measures. The indicators are quantifiable and consequently enable comparisons among Pillars and among countries.

15. Further detail on the three Pillars is provided next, including how they relate to innovation policy guiding principles and good practices, followed by a table displaying an overview of the sub-pillars covered.

16. The **first Pillar, Innovation governance**, assesses the overarching strategic, institutional, and legal framework for innovation policy, as well as the competences of and co-ordination between key government bodies holding a stake in innovation policy. It reveals, if the governance of innovation policy is sound and well structured.

17. In particular, this pillar relates to the following overarching policy guiding principles / policy good practices:

(a) Innovation policy is an inter-ministerial and inter-sectoral activity which cuts across several functional areas. Although formally innovation as policy area can be the responsibility of a specific ministry this does not change the fact that innovation in reality is affected and innovation policy shaped by the activities of many public policies and bodies.

18. The **second Pillar, Policy process for innovation**, examines the underlying process for innovation policy. It looks at the details and, even more importantly, the evidence of data-driven consequences in decision-making and subsequent policy design. It follows the policy making path from its outset (agenda setting and rationale) through policy design, implementation, and evaluation/learning.

19. In particular, this pillar relates to the following overarching policy guiding principles / policy good practices:

(a) Innovation policy involves not only long-term planning but also active and continuous engagement of business, government and non-government stakeholders in correcting market/linkage/capacity failures/imperfections but also in shaping markets for new products and processes.

(b) No individual stakeholder in innovation policy has full understanding of opportunities and constraints that hinder innovation. Hence, innovation policy should be understood as 'discovery process' and collective 'learning activity'. As learning activity, it requires continuous, multi-level, transparent monitoring and evaluation activities which are key ingredients to policy learning.

(c) The overall aim of public innovation policy is a long-term social return expressed as accumulation of technological capability, diversification of societal knowledge base to respond to social challenges, and inclusive and sustainable growth.

20. The **third Pillar, Innovation policy instruments**, takes stock of policy tools that have been put in place to support innovation demand and supply. The pillar does not merely examine the scale and scope of these policy tools, but also their quality and implementation status.

21. In particular, this pillar relates to the following overarching policy guiding principles / policy good practices:

(a) Innovation is broadly defined not only as R&D activity but as set of activities related to knowledge diffusion, generation and implementation of new products and processes. Innovation is not only technological but also organisational and social. Innovation includes also improvements in production capabilities including quality and managerial improvements.

(b) Innovation is an activity where S&T and innovation meet the market and where innovative capacity emerges as the joint outcome of commercial and business interests and demand coupled with publicly and privately created S&T opportunities, skills of labour forces and organisation of innovative firms.

22. The table below gives summary-overview of the proposed structure.

<i>Innovation Governance</i>	<i>Innovation Policy Process</i>	<i>Innovation Policy Instruments</i>
Framework	Preparation	Technology Absorption
Coordination	Design	Innovation Promotion
Cooperation	Implementation	Human Resources for Innovation
	Post-implementation	Relationships and Linkages
		Technology Diffusion
		Intellectual Property Rights Protection

IV. Process for piloting the IPI

23. After developing and validating the methodology, it would be tested in selected pilot countries to optimise it further. The IPI would be generated through a combination of data mining led by ECE, government self-assessments through detailed questionnaires, an in-depth research mission to each country, innovation stakeholder meetings and peer validation. The process draws on inputs from government agencies, the private sector and other innovation policy stakeholders.

24. A flagship report would present the data in detail, with chapters on specific areas and detailed country profiles. Three to four analytical chapters could build on the insights generated as part of a broader analysis of common concerns, global and regional trends and opportunities, and recommendations for regional co-operation. Complementary sub-regional dialogues could support countries in translating these recommendations into reforms and new policies, using the underlying indicators to measure their progress.

25. As the minutiae of the methodology still have to be tested in practice, ECE intends to roll out a pilot IPI for a smaller group of ECE member states. Extrabudgetary funding has been secured for doing so in six countries in Eastern Europe and the Caucasus: Belarus, Armenia, Moldova, Ukraine, Georgia, and Azerbaijan. This will start with a testing phase to obtain feedback on the planned research process. Based on the lessons learnt, the research process will be further developed and optimised for roll-out in the remaining five countries.

26. If the pilot is well received, the process could be repeated, as a standing feature under the Committee's intergovernmental dialogue, on a regular basis to measure progress and

foment further regional policy dialogue and cooperation. It will complement in-depth national reviews, in particular ensuring the ability to cover a broader range of countries and strengthening the framework for monitoring progress on recommendations.

27. The chart below gives an overview of the proposed process flow. The process is structured around five principal phases:

- Phase I (October 2018 – February 2019) develops the methodology and initiates and promotes the project in the region.
- Phase II (January – April 2019) consists of testing the methodology in Georgia including the project questionnaire, which forms the basis of the data mining; the test results will be used to perfect and finalise the methodology.
- Phase III (April – August 2019) is the assessment phase, where data is mined through research missions, collaborations with local research teams and government self-assessments, which are based on the project questionnaire.
- Phase IV (September – December 2019) focuses on consultations with key innovation stakeholders to discuss first findings and fill final information gaps. This phase involves another round of country missions.
- Phase V (January 2020 – July 2020) delivers the final flagship report and includes the drafting of the manuscript, consultation with stakeholders and experts, professional editing, translation, *mise-en-page*, and printing.

