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Team of Specialists on Innovation and Competitiveness Policies

First session
Geneva, 8-9 March 2007
Item 4 of the provisional agenda

KEY ISSUES TO BE ADDRESSED IN 2007-2008

**Summary of the main results from the survey of experts
on innovation and competitiveness policies**

Note by the secretariat

I. INTRODUCTION

1. One of the main expected outcomes of the first meeting of the Team of Specialists on Innovation and Competitiveness Policies (TOS-ICP) is to arrive at a common understanding of the content and focus of the deliverables it is mandated to produce in 2007 and 2008 in accordance with its Terms of Reference and to identify concrete steps for the activities that need to be done in order to deliver this output.
2. In accordance with the Programme of Work of the UNECE Committee for Economic Cooperation and Integration (CECI) for 2007-2008 in focus area “Creating a supportive environment for innovative development and knowledge-based competitiveness” and the TOS-ICP Terms of Reference adopted by CECI, the Team is mandated to contribute to the following main activities and outputs in 2007-2008:
 - (a) Comparative review of the effective organizational models of innovation development and competitiveness, and of the channels through which the results of technological development

* Other languages will be available at a later stage after the meeting.

- and innovation diffuse in the modern economy and their role in national economic development and competitiveness (2007);
- (b) Synopsis of good practices in facilitating the generation and diffusion of innovation (2007);
 - (c) Comparative review of government policies facilitating technological development and innovation (2008); and
 - (d) Synopsis of policy options for creating a supportive environment for innovative development (2008).

3. Within the CECI Programme of Work, the TOS-ICP will promote the exchange of experience gained, and will facilitate knowledge sharing, policy dialogue and consultations among member States in the field of innovation and competitiveness policies. One of the key objectives of the TOS-ICP will be to identify good practices and policy options in innovation and competitiveness policies and to support their broad dissemination in UNECE member States, including capacity building in requesting countries. Given that the thematic area “Creating a supportive environment for innovative development and knowledge based competitiveness” is rather broad and in view of the limited time and resources available, the TOS-ICP can initially address only a limited number of issues within this wide area. Therefore, the Team needs first of all to identify those aspects of innovation and competitiveness policies where multilateral cooperation could add the most value and where national experiences and good practices can be more easily adopted by other countries.

4. To facilitate the process of focusing the Team’s work on the issues that member States consider most important, the UNECE secretariat undertook a survey among the members of the TOS-ICP and other experts on innovation and competitiveness policies in UNECE member States. The survey was conducted through a questionnaire that was circulated by email to a wide and representative group of experts (more than 200 in all) that represent the CECI expert network in this thematic area. This network covers various categories of experts working in the broad area of innovation and competitiveness policies, with different backgrounds and affiliations. The surveyed group includes not only experts officially nominated by their Governments as members of the TOS-ICP but also a wider community of experts coming from government agencies, academic or research institutions, the private sector, other international organisations, etc.

5. The questionnaire was designed by the UNECE secretariat on the basis of the TOS-ICP mandate formulated in its Terms of Reference, after a comprehensive overview of how the substantive issues covered in the mandate are treated in the existing extensive body of related analytical and policy documents and reports, including the note *Competitiveness and Innovation* (documents ECE/CECI/2006/3 and ECE/CECI/2006/3/Add.1), prepared by the UNECE secretariat and presented at the first session of CECI held on 27-28 September 2006. After a careful assessment, 16 main sub-topics that fall under the thematic area “innovation and competitiveness policies” were selected to be included in the questionnaire. It should be noted that some issues that may be relevant to innovation and competitiveness policies but are expected to be covered in other thematic areas of CECI Programme of Work were not included in this questionnaire. These include inter alia those pertaining to financing for innovative development and the protection and commercialization of intellectual property rights.

6. During the survey, the experts were requested to mark only those five topics that they considered most useful and practical, namely, those topics where multilateral cooperation in the context of the TOS-ICP activities could be most useful in further promoting innovative development and knowledge-based competitiveness in the UNECE region.

7. This document summarizes the results of this survey, as referred to in Item 4 of the Agenda of the First Session of the Team of Specialist on Innovation and Competitiveness Policies (document ECE/CECI/ICP/2007/1).

II. SUMMARY OF THE MAIN RESULTS

8. The UNECE secretariat received responses to the questionnaire from a total of 117 experts from 38 countries and three international organisations, which implies a very high response rate of more than 50 per cent. Officially nominated TOS-ICP members accounted for 43 per cent of the answers received. The questionnaire was filled in by nominees from 28 out of the 30 countries that have until now officially designated their representatives in the TOS-ICP. The effective closing date for the collation of responses was 28 February 2007.

9. Table 1 presents the overall results of the survey. One of the main outcomes of the survey is that the responses are in general fairly concentrated, which could facilitate the process of identifying priorities. Thus there are five issues that have attracted the interest of 40 per cent or more of all respondents (column 4). These are the topics (in the order in which they appear in the questionnaire):

- (a) *Structure of national innovation systems and functional specialization of agencies promoting innovation;*
- (b) *Mechanisms and incentives of implementing long-term national R&D and innovation policies;*
- (c) *Public policy measures aimed at enhancing the innovative and absorptive capacities of firms;*
- (d) *Good practice in the establishment of seed-and-breed innovating institutions (science/technology parks, centres of excellence, technology incubators, innovation centres, etc.), and*
- (e) *Creating supportive framework conditions for innovation (tax policy, labour market, infrastructure, education, etc.).*

10. Another group of five topics has obtained the support of some 30-35 per cent of all respondents. These are (in the order in which they appear in the questionnaire):

- (a) Coordination among public institutions and agencies entrusted with promotion of innovation and competitiveness;
- (b) Public support to private institutions that promote technological development, innovation and competitiveness;
- (c) Good practice in partnerships promoting innovative development and competitiveness;
- (d) Regional institutions and initiatives promoting innovative development and competitiveness; regional clusters, and
- (e) Policy measures aimed at facilitating the technology transfer to innovating firms and the diffusion of innovation.

11. The rest of the issues in the questionnaire have received fewer affirmative responses.

12. Among the top group, the highest rated issue is "Creating supportive framework conditions for innovation (tax policy, labour market, infrastructure, education, etc.)", which has been

identified as useful and practical by more than 50 per cent of respondents. This strong result suggests that the consideration of initiatives in other policy areas cannot be separated from the assessment of the overall framework conditions in which these more specific initiatives would take place. Moreover, it also indicates that the gains from policy intervention may be higher when addressing any bottlenecks that exist at this framework level.

13. Two of the other most frequently cited topics (“Structure of national innovation systems and functional specialization of agencies promoting innovation” and “Mechanisms and incentives of implementing long-term national R&D and innovation policies”) have received slightly lower approval rates of more than 45 per cent. These are “top-down” issues, which are broadly concerned with the architecture of national innovation systems, including the institutional set-up and interactions, the system of incentives and the resources devoted to innovation and knowledge. The other two most popular topics, which are mentioned by more than 40 per cent of respondents, pertain to intervention policies operating at a lower level, targeting firms (“Public policy measures aimed at enhancing the innovative and absorptive capacities of firms”) or creating specific institutions to promote innovation (“Good practice in the establishment of seed-and-breed innovating institutions”).

14. Responses from a reduced sample, which only includes the experts officially designated by their Governments as TOS-ICP members, show similar results to those observed in the overall sample, but there are also some differences in emphasis (second column of table 1). Thus the preferences of TOS-ICP members for the two “top-down” type of topics (“Structure of national innovation systems and functional specialization of agencies promoting innovation” and “Mechanisms and incentives of implementing long-term national R&D and innovation policies”) are more clearly articulated, and these topics have been identified as among the five most important by around 55-60 per cent of the experts. The topic addressing framework conditions is also highly supported (by more than 45 per cent of the experts) but not quite as widely as in the overall sample. TOS-ICP members also give relatively high importance to the topic “Good practice in partnerships promoting innovative development and competitiveness”, which was not so highly rated by other experts.

15. Similarly to the overall results, the TOS-ICP members also stress the importance of public policy measures targeting firms. However, in this group this is not limited only to the innovative and absorptive capacity of firms, as was the case for the overall sample. TOS-ICP members assign an even higher rate of importance to measures that aim to facilitate the technology transfer to innovative firms and the diffusion of innovation.

III. ADDITIONAL CROSS-SECTIONS OF THE SURVEY RESULTS

16. The survey provides an opportunity to analyze the results in additional cross-sections, namely by the institutional affiliation of respondents and by their countries of origin.

17. The questionnaire contains a general question on the institutional affiliation of respondents, on the basis of a classification that distinguishes between government, private business, academic and research institutions, international organisations and others. Academic and research institutions account for almost half of the total sample, with government officials representing more than one third. Most of the remaining answers come from experts working in organisations classified as “others”. The category “others” mostly corresponds to organisations that have been set up with public support but which are not part of government institutions.

18. A possible way to differentiate between the patterns of responses is to break down the overall sample into government officials and all other categories (Table 2). It is worth noting that not all officially nominated members of the TOS-ICP are actually government officials working in government institutions. Conversely, within the overall sample, some responses were received from government experts outside of those who were officially nominated as TOS-ICP members. Thus the breakdown presented in table 2 is different from that in table 1.

19. Government experts show an even stronger support than other groups for two of the top issues: “Structure of national innovation systems and functional specialization of agencies promoting innovation” and “Mechanisms and incentives of implementing long-term national R&D and innovation policies”. Both issues have been indicated as important and relevant by around half of the respondents belonging to this group. Although “Creating supportive framework conditions for innovation” is also highly rated, government officials do not seem to assign to this issue the very strong importance attached to it by other experts: in the non-government sub-group, more than 55 per cent of respondents choose this topic as important and relevant. Government experts assign this issue a similar same rate of support to that given to “Good practice in the establishment of seed-and-breed innovating institutions” (around 40-45 per cent of responses).

20. There are important differences in other areas as well. While a significant number of government officials (around 40 per cent) have given preference to the consideration of regional institutions and initiatives promoting innovative development and competitiveness, the level of support for this topic is significantly smaller among non-government experts. The contrast is even more pronounced on public policy measures aimed at enhancing the innovative and absorptive capacities of firms. This issue has been identified as important and relevant by almost 50 per cent of the non-government experts, which makes it the second most important one within this subgroup. However, only around 30 per cent of government officials favour this topic, which is not among their top choices.

21. In accordance with its Terms of Reference, CECI will devote a special emphasis in its activities to the UNECE countries with economies in transition. The latter are strongly represented in the responses to the questionnaire, accounting for around one third of the total. Table 3 presents a breakdown of responses by the country of origin of the experts, differentiating between two main groups of countries: Eastern Europe, Caucasus, and Central Asia and the rest of the UNECE region.

22. Within the responses of the sub-group of experts from Eastern Europe, Caucasus and Central Asia, the top three issues receiving the highest support are: “Structure of national innovation systems and functional specialization of agencies promoting innovation”; “Good practice in the establishment of seed-and-breed innovating institutions” and “Creating supportive framework conditions for innovation (tax policy, labour market, infrastructure, education, etc.)”. All of them have been supported by more than 50 per cent of the experts from this region. These are broadly coincident with the preferences observed in the other group of countries, but it seems that experts from transition economies assign a much stronger emphasis on seed-and-breed institutions.

23. A more significant difference is the importance assigned by experts from the “Rest of the UNECE region” to “Public policy measures aimed at enhancing the innovative and absorptive capacities of firms”, which by far exceeds the support received from experts coming from Eastern Europe, Caucasus and Central Asia. Instead, experts from this latter subgroup appear

more interested in “Policy measures aimed at facilitating the technology transfer to innovating firms and the diffusion of innovation”.

24. While both subgroups appear similarly interested in “Mechanisms and incentives of implementing long-term national R&D and innovation policies”, experts from Eastern Europe, Caucasus and Central Asia give also rates of approval of 40-45 per cent to two others topics: “Public support to private institutions that promote technological development, innovation and competitiveness” and “Good practice in partnerships promoting innovative development and competitiveness”. These two topics are not rated so highly by the experts from the “Rest of UNECE region”.

IV. IMPLICATIONS FOR THE TOS-ICP WORK PROGRAMME IN 2007-2008

25. The distribution of responses suggests relatively well-defined preferences for a narrow set of topics, among a wide and representative group of experts on innovation and competitiveness policies. In the main, the results of the survey do not provide evidence of large dispersion in the answers received. In particular, it appears that there emerges a broad agreement among the surveyed experts on the most important and relevant topics where multilateral cooperation under the TOS-ICP framework could add the most value and where national experiences and good practices can be more easily adopted by other countries. This outcome could facilitate the more detailed specification of the deliverables it is mandated to produce in 2007 and 2008 by focusing the TOS-ICP work programme onto a more narrow topical orientation.

26. More specifically, the results of the survey and the pattern of responses provide a good basis to identify the content and focus of the comparative reviews that the TOS-ICP is mandated to produce in 2007-2008. Thus the TOS-ICP programme of work for 2007 emphasises the organisational and institutional aspects of the environment for the generation and diffusion of innovation and the mechanisms that translate these into higher competitiveness. Two of the five most frequently mentioned topics by the respondents to the questionnaire clearly fit with this proposed direction. These are the topics: **“Structure of national innovation systems and functional specialization of agencies promoting innovation”** and **“Mechanisms and incentives of implementing long-term national R&D and innovation policies”**. These topics could thus be among the central to be addressed in the *“Comparative review of the effective organizational models of innovation development and competitiveness, and of the channels through which the results of technological development and innovation diffuse in the modern economy and their role in national economic development and competitiveness”* envisaged for 2007.

27. In 2008, the TOS-ICP programme of work is more closely concerned with specific policy interventions facilitating technological development and innovation. Another two of the five topics most frequently mentioned by the respondents are issues that are fully in line with this direction of the TOS-ICP work: **“Good practice in the establishment of seed-and-breed innovating institutions (science/technology parks, centres of excellence, technology incubators, innovation centres, etc.)”** and **“Public policy measures aimed at enhancing the innovative and absorptive capacities of firms”**. The first of these topics was especially strongly supported by the experts from Eastern Europe, Caucasus and Central Asia who also indicated a high degree of support for the topic **“Policy measures aimed at facilitating the technology transfer to innovating firms and the diffusion of innovation”**. These topics could thus be among the central to be addressed in the *“Comparative review of government policies facilitating technological development and innovation”* envisaged for 2008.

28. There was a general agreement that **“Creating supportive framework conditions (tax policy, labour market, infrastructure, education, etc.)”** is one of the most critical areas for the success of innovation and competitiveness policies in general. These framework conditions define the environment in which innovating agents and institutions operate and are thus of a cross-sectoral nature. They have a marked influence both on the organisational structure and institutional performance of the system of incentives that supports or hinders innovation and competitiveness. Therefore, it appears appropriate that these framework conditions be considered in both comparative reviews, in the context of the assessment of other topics.

Table 1. Breakdown of the responses to the UNECE questionnaire on innovation and competitiveness policies, TOS-ICP members and other experts
(percentage of the responses, within each sub-group, indicating interest in the respective topic)

Interest in topics for the UNECE Team of Specialists on Innovation and Competitiveness Policies	TOS-ICP members	Other experts	All respondents
Structure of national innovation systems and functional specialization of agencies promoting innovation	58.0	40.3	47.9
Coordination among public institutions and agencies entrusted with promotion of innovation and competitiveness	38.0	23.9	30.8
Mechanisms and incentives of implementing long-term national R&D and innovation policies	54.0	38.8	46.2
Public support to private institutions that promote technological development, innovation and competitiveness	26.0	31.3	29.1
Good practice in partnerships promoting innovative development and competitiveness	40.0	23.9	31.6
Regional institutions and initiatives promoting innovative development and competitiveness; regional clusters	22.0	40.3	33.3
Structured dialogue among regional stakeholders dealing with innovation (policy makers, businesses, universities)	14.0	23.9	19.7
International and cross-border initiatives to promote the diffusion of innovation; cross-border clusters	16.0	23.9	20.5
Public policy measures aimed at enhancing the innovative and absorptive capacities of firms	36.0	46.3	41.9
Policy measures aimed at facilitating the technology transfer to innovating firms and the diffusion of innovation	40.0	29.9	34.2
Policy measures targeting “unborn” and/or “infant” innovative industries or technologies	14.0	17.9	16.2
Policy measures facilitating risk sharing among stakeholders in undertaking innovative activity	12.0	10.4	11.1
Modalities of targeted public funding of R&D and innovation activities	14.0	17.9	16.2
Modalities of promoting the commercialisation of publicly-funded research	22.0	17.9	19.7
Good practice in the establishment of seed-and-breed innovating institutions (science/technology parks, centres of excellence, technology incubators, innovation centres, etc.)	36.0	46.3	41.9
Creating supportive framework conditions for innovation (tax policy, labour market, infrastructure, education, etc.)	46.0	56.7	52.1
Others	6.0	9.0	7.7
Memorandum item: Number of respondents	50	67	117

**Table 2. Breakdown of the responses, government and non-government^a experts
(percentage of the responses, within each sub-group, indicating interest in the respective topic)**

Interest in topics for the UNECE Team of Specialists on Innovation and Competitiveness Policies	Government experts	Non-government experts	All respondents
Structure of national innovation systems and functional specialization of agencies promoting innovation	51.2	46.1	47.9
Coordination among public institutions and agencies entrusted with promotion of innovation and competitiveness	34.1	28.9	30.8
Mechanisms and incentives of implementing long-term national R&D and innovation policies	51.2	43.4	46.2
Public support to private institutions that promote technological development, innovation and competitiveness	24.4	31.6	29.1
Good practice in partnerships promoting innovative development and competitiveness	31.7	31.6	31.6
Regional institutions and initiatives promoting innovative development and competitiveness; regional clusters	39.0	30.3	33.3
Structured dialogue among regional stakeholders dealing with innovation (policy makers, businesses, universities)	22.0	18.4	19.7
International and cross-border initiatives to promote the diffusion of innovation; cross-border clusters	17.1	22.4	20.5
Public policy measures aimed at enhancing the innovative and absorptive capacities of firms	31.7	47.4	41.9
Policy measures aimed at facilitating the technology transfer to innovating firms and the diffusion of innovation	39.0	31.6	34.2
Policy measures targeting “unborn” and/or “infant” innovative industries or technologies	22.0	13.2	16.2
Policy measures facilitating risk sharing among stakeholders in undertaking innovative activity	12.2	10.5	11.1
Modalities of targeted public funding of R&D and innovation activities	14.6	17.1	16.2
Modalities of promoting the commercialisation of publicly-funded research	19.5	19.7	19.7
Good practice in the establishment of seed-and-breed innovating institutions (science/technology parks, centres of excellence, technology incubators, innovation centres, etc.)	41.5	42.1	41.9
Creating supportive framework conditions for innovation (tax policy, labour market, infrastructure, education, etc.)	43.9	56.6	52.1
Others	2.4	10.5	7.7
Memorandum item: Number of respondents	41	76	117

^a “Non-government” includes the following categories specified in the questionnaire: private business; academic/research institution; international organisation; others.

Table 3. Breakdown of the responses by country of origin (major country groups in the UNECE region^a) of responding experts (percentage of the responses, within each sub-group, indicating interest in the respective topic)

Interest in topics for the UNECE Team of Specialists on Innovation and Competitiveness Policies	Eastern Europe,^b Caucasus, and Central Asia	Rest of UNECE region^c	All respondents
Structure of national innovation systems and functional specialization of agencies promoting innovation	52.6	45.6	47.9
Coordination among public institutions and agencies entrusted with promotion of innovation and competitiveness	36.8	27.8	30.8
Mechanisms and incentives of implementing long-term national R&D and innovation policies	42.1	48.1	46.2
Public support to private institutions that promote technological development, innovation and competitiveness	39.5	24.1	29.1
Good practice in partnerships promoting innovative development and competitiveness	44.7	25.3	31.6
Regional institutions and initiatives promoting innovative development and competitiveness; regional clusters	26.3	36.7	33.3
Structured dialogue among regional stakeholders dealing with innovation (policy makers, businesses, universities)	13.2	22.8	19.7
International and cross-border initiatives to promote the diffusion of innovation; cross-border clusters	13.2	24.1	20.5
Public policy measures aimed at enhancing the innovative and absorptive capacities of firms	21.1	51.9	41.9
Policy measures aimed at facilitating the technology transfer to innovating firms and the diffusion of innovation	42.1	30.4	34.2
Policy measures targeting “unborn” and/or “infant” innovative industries or technologies	15.8	16.5	16.2
Policy measures facilitating risk sharing among stakeholders in undertaking innovative activity	13.2	10.1	11.1
Modalities of targeted public funding of R&D and innovation activities	13.2	17.7	16.2
Modalities of promoting the commercialisation of publicly-funded research	21.1	19.0	19.7
Good practice in the establishment of seed-and-breed innovating institutions (science/technology parks, centres of excellence, technology incubators, innovation centres, etc.)	50.0	38.0	41.9
Creating supportive framework conditions for innovation (tax policy, labour market, infrastructure, education, etc.)	50.0	53.2	52.1
Others	2.6	10.1	7.7
Memorandum item: Number of respondents	38	79	117

^a The membership in the UNECE covers 56 member States: all European, Caucasian and Central Asian countries, the United States, Canada and the State of Israel.

^b Including the Western Balkan countries.

^c Including all EU member States.