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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

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Item 9(h) of the provisional agenda

**ISSUES THAT NEED CONSIDERATION AND  
REQUIRE DECISIONS BY THE COMMITTEE**

**Transport and competitiveness**

**Note by the secretariat**

**I. MANDATE**

1. In September 2008, the Working Party on Transport Trends and Economics (WP.5) approved a proposal by the secretariat to launch a project aimed at developing an evaluation framework for the assessment of supply chain challenges in the transport sector. This decision was confirmed by the Inland Transport Committee at its seventy-first session in February 2009 (ECE/TRANS/206 para. 67). Following this decision, WP.5 considered at its twenty-second session in September 2009, the Informal document No. 23 which outlines the Project "Supply chain challenges for national competitiveness through transport". The Working Party approved the objectives, project scope, indicative timeline and terms of reference of a Task force to be established under its auspices and entrusted to provide guidance and oversee the project until its completion (see Annex). The background to this project was set out in Informal document No. 10 "Supply chain challenges for national competitiveness through transport prepared by the United Nations Economic Commission for Europe (UNECE), which was presented for discussion at the seventy-first session of the Inland Transport Committee in February 2009.

2. The Committee may wish to consider the progress of the above-mentioned project so far, and approve the outline of the next phase as put forward in this document, as well as the indicative timeline and Terms of Reference of the Task Force as contained in the Annex to this document.

## **II. "SUPPLY CHAIN CHALLENGES FOR NATIONAL COMPETITIVENESS THROUGH TRANSPORT" PROJECT PROGRESS AND OUTLINE OF THE CONTINUATION**

### **A. Introduction**

3. Transport as a driver of national competitiveness has increased considerably over recent decades, due mostly to the increasingly complex demands by the international economy. This growing complexity is attributed to several key trends:

- (a) Increasingly integrated global manufacturing, production and trade networks;
- (b) Growing use of intermodal transport involving several transport modes;
- (c) Rising need for just-in-time logistics;
- (d) Increasing specialization of companies in specific parts of value chain;
- (e) Specialization and more outsourcing; and,
- (f) Security considerations.

4. As the nature of transport demand has become more complex, processes required to complete trade transactions, involving multiple steps, numerous actors and a range of legal and regulatory frameworks have also become more complex. With costs added at each step of the process, the quality, cost and efficiency of transport and logistics services have considerable effect on the value of goods at their final destination, and consequently, on overall national competitiveness on a global scale.

5. Transport industry contributed to the changes driven by development of supply chains by developing more reliable transport and value-added logistics services. This provided the backbone of direct distribution and enabled businesses in Europe and elsewhere to reduce inventory levels. In addition, transport industry started to invest heavily in improved communication and planning systems, harmonization of transport units, fleet management, automating of back-office functions and Information Technology (IT) systems which led to a continuous increase in productivity and operational efficiency. Also, consolidation within the transport industry and horizontal and vertical integration during the last ten years have increased the efficiency of transport through the formation of larger transport companies, alliances and cooperative networks.

### **B. Need for a new evaluation framework**

6. Although many indicators for the transport and logistics market have been developed, these indicators have almost all focused on the transport supply side (generally infrastructure). Where the demand side is considered in existing indicators, this tends to be through subjective surveys. None of the current measures reflect the recent developments in the pattern of demand for transport or the quality requirements that exist in a globalized, competitive economy.

7. The gap analysis carried out by the secretariat identified a clear need to develop a new evaluation tool which can:

- (a) Assess transport contribution to national competitiveness based on the new role of transport as an important part of global supply chains;
- (b) Capture the new challenges for the transport sector and take into account its role as the most important link in international supply chains.

8. The proposed new evaluation tool for supply chain challenges from the transport perspective should be able to:

- (a) Take into account both direct and indirect aspects which affect transport networks and systems operating in international supply chains; and
- (b) Adopt a balanced approach incorporating analysis of both the demand and the supply sides.

9. The existing micro and macro indicators are inadequate for assessing the performance of supply chains. Micro indicators are difficult to aggregate to the supply chain level. The macro-level supply chain indicators tend to focus on particular concerns in isolation, rather than present a comprehensive review of all supply chain aspects of interest to policy makers. Therefore, there is a need to develop a multi-criteria assessment system at a meso-level for conducting a comparative evaluation of transport systems with emphasis on services in different countries which will cover total transport costs, quality of transport services, and impacts on socio-economic factors (please see ITC Informal document No. 10 presented to the ITC in February 2009).

### **C. Objectives**

10. The project should be taken forward in three stages, with the following objectives:

- (a) Organize a round table on supply chain challenges for national competitiveness through transport;
- (b) Conduct a full audit of existing indices, with a particular focus on assessing their value for use in policy making;
- (c) Develop a unique methodological tool which could be commonly used by national Governments wishing to:
  - (i) Evaluate the contribution of the transport sector to the overall competitiveness of their particular economies;
  - (ii) Identify points of weakness in their transport system and their transport links with their main trading partners; and,
  - (iii) Identify appropriate policy interventions to improve performance and remedy problem areas;
  - (iv) Benchmark performance of transport and logistics systems against peer economies.

## **D. Project Scope**

### **1. Progress of round table**

11. In accordance with the Project's indicative timeline, the secretariat organized a round table on "Supply chain challenges for national competitiveness through transport" on 2 December 2009 (programme and presentations are available at Transport division web page: [http://www.unece.org/trans/events/2009/supplychain\\_roundtable09.html](http://www.unece.org/trans/events/2009/supplychain_roundtable09.html)). The objective of the round table was to gather experiences from UNECE member countries in which national logistics plans and strategies have been already developed or are in a process of development, and to exchange views on methodologies which have been applied in developing and considering national strategies and plans. Furthermore, international organizations had the opportunity to provide information on methodological basis used for development of their logistics and competitiveness indicators.

12. At the outset, the Director of the Transport division briefly introduced the scope and objectives of the project, the role of the planned Task Force and the expected outcome of the round table. She underlined the relevance of the Project for all UNECE member countries and stressed that the UNECE, as a bridge between EU and non-EU countries, with its experience in developing international transport regulations and having the mandate for technical assistance projects would be best subject to develop such new methodological tool. Following this introduction, the secretariat presented the subject highlighting the gaps in the existing methodologies and approaches based on the preliminary analysis of the available national and international initiatives to link supply chains and competitiveness of nations.

13. In the first session the participants to the round table were informed about the approaches used in Austria, Finland, Greece, Kazakhstan, Switzerland and the United Kingdom. They were briefly informed about the main challenges which new transport and logistics developments impose on policy planners, logistics providers and users of supply chains. National strategies to develop logistics sector and take full benefits of better performing supply chains in these countries are driven by various policy considerations.

14. In some countries, policy objectives to reduce traffic burden and congestion as well as to further the modal switch from road to rail transport and promote multimodal freight transport solutions are the main drivers which set conditions for development of national logistics sector and supply chains (Austria and Switzerland). In other countries, development of logistics and national supply chains is motivated by the aspiration to better position national logistics market and supply chains in the region and in the international market (Greece). In Finland, national logistics strategy is being drafted during 2008-2010 coordinated by the Ministry of Transport and Communications, involving a broad spectrum of private sector stakeholders. United Kingdom approach focuses on the journey of passengers and freight from an 'end-to-end' origin to destination perspective thus helping to identify the pinch points and prioritize policy interventions. Passengers and logistics chains consider journeys (in terms of speed, cost and reliability) in their entirety, not by individual transport mode.

15. In Kazakhstan, the transport strategy is focused on development of transit land-bridge between China and Europe and development of logistics centres in major population areas and key border crossing points. In Tajikistan, the program is concentrated on diversification of

transport routes, development of future logistics centres, and the need to develop logistics for agricultural products, while in Kyrgyzstan the strategy is focused on road infrastructure and maintenance, including two corridors to China, and development of logistics and marketing centres for agricultural products as well.

16. In the second session, participants were briefed about the Global Competitiveness Index of the World Economic Forum, Logistics Performance Index of the World Bank, Supply Chain Operations Reference (SCOR) Model of the Supply Chain Council, the World Competitiveness Yearbook of the International Management Institute (Lausanne), Liner Shipping Connectivity Index (LSCI) of United Nations Conference on Trade and Development (UNCTAD) and the work on promoting competitiveness and innovative development through international cooperation by the UNECE-Economic Cooperation and Integration Division (ECID).

17. In the final session, participants discussed the opportunities, possible approaches and further directions which the UNECE project could take. There was a common view that development of any new indicator of competitiveness would not add value considering the nature, costs associated with their construction and the existing competitiveness indicators (World Bank, World Economic Forum, International Institute of Management Development (IMD) Lausanne, etc.). However, the existing indicators are generally based on quantitative, static and supply oriented transport indicators and are partially derived from subjective surveys. Furthermore, they fail to fully take into account the role of transport in supply chains and implications of this new role of transport for the competitiveness of each nation, based on demand driven qualitative indicators of transport services, thus justifying development of a new evaluation framework. This new framework could provide countries with a flexible tool based on considerations which taking into account and accurately reflecting technological, commercial and regulatory changes governing transport in the context of supply chains.

18. Such a framework would need to be based on multi-criteria based tools. When assessing overall performance, non-monetary costs such as socio-economic costs (including environmental costs), need to be considered. These are often neglected by the private sector. However, society as a whole shoulders these costs, thereby reducing the total efficiency of the system. By combining these cost and quality indicators or by aggregating them into regional or national average values, a more comprehensive evaluation covering total transport costs, quality of services and impact on socio-economic factors could be performed.

19. New framework should also be based on meso-level indicators developed to assist policy making, thereby enabling policy actions to be implemented in a way that supports efforts by industry to develop competitive supply chains. The interaction between industries' objective to create competitive supply chains and public policy goals of improving industry efficiency through policy actions requires governments to understand the mechanisms affecting the performance of shippers, carriers and other service providers in the supply chain, not only domestically but also internationally. A comprehensive analysis of the economic and financial impact of the wide range of policy instruments in place could assist in determining the cost effectiveness and appropriateness of various policy options. This requires macro indicators. However, macro indicators focusing on welfare maximization are mostly decomposed into meso-level indicators focusing on welfare optimization, under the condition of subsidiarity, for sectors or regions, and not on supply chains. Policy makers need the linkage between, on the one hand, the macro and meso-level indicators and, on the other, the supply-chain indicators.

20. For governments, it is important to establish a clear relationship between transport performance indicators and the transport policy objectives they are designed to support, in order to transform indicator values into relevant action and link them to past and future development. Hence, it is necessary for governments to specify their strategic policy objectives for developing performance indicators and to communicate them to all participants involved with supply chains. In order to improve the basis of transport policy, data collection on logistics services is essential. It is also necessary to focus on data useful for international comparisons and on indicators useful for analysis associated with transport policy objectives.

21. In making international comparisons of costs, technical issues need to be addressed such as: selection of appropriate units, international normalization of cost/price elements, the need to consider that cost differences mainly depend on differences in labour cost, which is higher in developed countries, and that transport costs vary depending on several factors such as regulation, distance and type of goods.

22. In brief, for the evaluation tool indicators which are relevant, plausible and for which data can be obtained need to be selected. They should be applied in a way that provides both industry and governments with the insights necessary to determine factors contributing to inefficiencies in transport systems, supply chains, and strategies/policies to lift performance and ultimately increase the overall national competitiveness.

23. Development of the new methodology and relevant analytical tools should start from a general assumption that logistics and supply chains are fast emerging markets with the transport sector having a central role in ensuring their most optimal performance. There is, therefore, a real need to properly evaluate the transport sector's value added and the role in ensuring optimal and efficient delivery of logistical and supply chain services, as well as its contribution to the overall national competitiveness through supply of such services.

24. Development of a multi criteria assessment methodology is aimed at helping countries assess transport's contribution to their competitiveness through its role in global supply chains. Policy makers need to have at their disposal an effective and consistent methodology for the optimal assessment of the transportation market. Governments, other stakeholders and users will benefit from the application of such a methodology in several ways. Common concepts and consistent use of standardized indicators and parameters would produce information and critical elements for analytical work as well as necessary tools to facilitate the evaluation and international comparisons of the transport sector's role in supply chains, and the challenges which their development impose on transport markets.

25. The use of framework based on a logical structure will help the assessment of supply chain challenges for transport and provide the opportunity to better understand transport's role in global supply chains; more accurately assess its contribution to countries' competitiveness; contribute to development of an integrated strategy for a country supply chain market; provide tools for obtaining information and measuring the level of integration of different transport modes; create additional value-added by using results for further analysis and assessment of a country's capacity as logistics or transit hub.

## **2. Audit of existing indicators**

26. A formal audit of existing research and indicators, building on the gap analysis exercise carried out by the secretariat would provide a comprehensive analysis of the strengths and weaknesses of the different measures and their potential value to governments in developing policy analysis.

27. With the support of a consultant, the secretariat will prepare a more detailed audit of the existing indicators in the form of a report which will be used as a complement to the outcome of the round table, as well as a learning material for the use of governments and research circles alike.

## **3. Development of a new evaluation framework**

28. Based on the results of the two previous stages, consultant(s) will be engaged to contribute to a draft of the new methodological framework which would be able to meet the high-level objectives set out above. In addition, the framework should ensure a strong linkage between the measures reported and real world outcomes, and will need to incorporate a better matching between supply side factors and the demands that are placed on transport systems in a highly integrated global economy.

29. The core requirements for a new evaluation framework will have to include the need to:

- (a) Reflect and relate to strategic policy objectives;
- (b) Develop multi-criteria based tools;
- (c) Collect data and compare costs appropriately.

30. Analysis will not be limited exclusively to infrastructure bottlenecks (infrastructure being considered the hard component of logistics), but will also consider the rules and procedures regulating the services (soft component) to give a holistic treatment of trade and transport facilitation issues. Transport, communications, customs and other border agencies interact closely, and the way they perform their tasks, individually and together, has a major impact on trade costs.

## **E. Governance**

31. The tasks involved in this project will be difficult to be carried out by one or more consultants. Therefore, the secretariat proposes that a task force (see Terms of Reference in the Annex) is established to support the work of the consultants. The task force will be comprised of relevant experts, interested national governments, international partners such as the World Bank, the World Economic Forum, and industry representation such as logistics associations.

32. The project will build on existing experience and expertise in the field. It will involve partners both at national and international level, and will reflect the realities of doing business. The work of consultant(s) who will be commissioned to support the project will be monitored and evaluated with clear performance standards to ensure swift progress. However, while it is important to incorporate relevant expertise, it is equally important that the core task force should be sufficiently compact as to enable it to move forward at fast pace.

## **Annex**

### **Indicative timeline**

September 2009	WP.5 to approve project outline, work programme and the establishment of the Task Force; present delegates to indicate interest of their country to be on the Task Force;  UNECE Secretariat with partner organizations and national governments to finalize the membership of the Task Force.
October 2009	Commission a consultant to substantively contribute to drafting the audit report.
December 2009	Round table to seek inputs and views from various national experiences, academia and partner organizations in order to expand and deepen the analysis.
January 2010	Commission a consultant to contribute to the development of a detailed project proposal, prepare the necessary analytical background, draft proposal of the methodology.
February 2010	Inland Transport Committee to decide on the establishment of the Task Force.
March 2010	Task Force to meet in Geneva and review first draft proposal of the methodology.
June 2010	Task Force to meet in Geneva and finalize draft proposal on the methodology.
September 2010	Presentation of the draft methodology with pilot data to WP.5.
February 2011	Inland Transport Committee to launch the new framework.

## Terms of Reference

### **Task Force on Supply chain challenges for national competitiveness through transport**

Established under the auspices of the Working Party on Transport Trends and Economics (WP.5)

The Working Party establishes the Task Force on Supply chain challenges for national competitiveness through transport.

#### **Mandate**

1. The Task Force will provide expert support to the project “Supply chain challenges for national competitiveness through transport”.
2. The Task Force will facilitate and assist in collection of national information and data on relevant aspects of the newly developed methodology.
3. The Task Force will review the first draft of the framework methodology prepared by the secretariat, and provide substantive comments and expert views on the quality and relevance of the newly proposed methodology.
4. The Task Force will carry out the final review of the draft new methodology, before recommending to the WP.5 to approve it.
5. It is proposed that the Task Force should be composed of experts having knowledge, in particular, about the link between transport, logistics and supply chain operations on one side and the critical elements of competitiveness of national economies. The members of the Task Force will be nominated by UNECE member States as well as by representatives of relevant international governmental and non-governmental organizations and industry associations, including experts from academia.
6. Pending the approval by the WP.5, the Task Force is expected to meet twice, in March and June 2010, and terminate its work at the meeting in June 2010, when it is expected to approve the final draft of the new methodological framework. The approved methodology will first be considered by the WP.5 in September 2010, before it is submitted to the Inland Transport Committee for subsequent approval and launching, at its session in February 2011.
7. The Task Force will be assisted in its work by the UNECE secretariat and will report to the Working Party on Transport Trends and Economics.

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