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Multi-year Expert Meeting on Enterprise Development Policies and Capacity-building in Science, Technology and Innovation

Fourth session

Geneva, 16–18 January 2012

Report of the Multi-year Expert Meeting on Enterprise Development Policies and Capacity-building in Science, Technology and Innovation on its fourth session

Held at the Palais des Nations, Geneva, from 16 to 18 January 2012

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I. Chair's summary

Pro-poor technology, innovation and entrepreneurship policies

(Agenda item 3)

1. The fourth session of the Multi-year Expert Meeting on Enterprise Development Policies and Capacity-building in Science, Technology and Innovation (STI) was chaired by Mr. Bozkurt Aran, Ambassador and Permanent Representative of Turkey to the World Trade Organization. Ms. Luz Caballero, Chargé d'Affaires a.i. of the Permanent Mission of Peru to the International Organizations in Geneva, was elected Vice-Chair-cum-Rapporteur. Mr. Aran said that entrepreneurship and STI were indispensable for strengthening productive capacities and had, until recently, often been sidelined in the policy sphere. This year's topic was timely and followed up on many of the important issues that had been discussed at the United Nations Conference on the Least Developed countries in May 2011.

A. Opening statements

2. In his opening remarks, the Deputy Secretary-General of UNCTAD congratulated the experts for their participation and contributions throughout the four-year expert meeting cycle that had begun in January 2009. Referring to the Report of the Secretary General of UNCTAD to UNCTAD XIII (document UNCTAD (XIII)/1), he said that one of its recommendations was that countries should move away from the current trend of finance-led globalization towards development-led globalization. The former had given rise to uneven and unstable growth in both developed and developing countries, while the latter strove to rebalance the global economy by means of sustainable and inclusive development. The development of productive capacities in developing countries was one of the main pillars for creating a development-led globalization model that was essential if the recent growth spurts were to be transformed into sustainable development paths. Both entrepreneurship and STI played a central role in strengthening productive capacities.

3. The directors of the Division on Investment and Enterprise and of the Division on Technology and Logistics of UNCTAD presented document TD/B/C.II/MEM.1/12, Pro-poor technology, innovation and entrepreneurship policies, and stressed the importance of proactive policies for promoting entrepreneurship and STI to support and speed up the process of achieving sustainable development. Further, this could take place only if policymakers made efforts to consider the specific needs of the most vulnerable groups of society at the policy development, implementation and monitoring stages. Such groups could be powerful change factors and were therefore key to structural transformation and the diversification of economies.

4. The director of the Division on Investment and Enterprise introduced the Entrepreneurship Policy Framework, which had been created to guide and support developing-country policymakers and those from economies in transition in the design of initiatives, measures and institutions to promote entrepreneurship. The director of the Division on Technology and Logistics reviewed the lessons from the discussions on STI over the previous four years and launched the new UNCTAD publication, *A Framework for Science Technology and Innovation Policy Reviews* (STIP Reviews). The STIP Framework had been developed over the past year, partly on the basis of a series of discussions at the multi-year expert meeting, as a guide for UNCTAD's technical assistance programme on building STI capacity, the STIP Review Programme.

B. Entrepreneurship and innovation policies for development

5. The keynote speaker said that progress in entrepreneurship and innovation policy had been made in recent decades in many countries. Innovation and entrepreneurship were crucial for both developed and developing countries in overcoming challenges, including that of promoting growth and employment, and dealing with issues such as climate change, and food and energy security. Countries needed to get the basic framework conditions right in the innovation system, including the appropriate role of government and institutions, fiscal and monetary conditions, investment in education and universities, and appropriate intellectual property protection. Implementing entrepreneurship-friendly policies was also important, including ease of firm creation and exit, fair and enforced tax regimes and sound bankruptcy laws. National policies should support both STI and entrepreneurship. They should consider the role of a modern university as including applied research in collaboration with industry, in addition to teaching and basic research. The potential role of science parks in stimulating innovation also merited policy attention. Public innovation awards, such as the Small Business Innovation Programme in the United States of America, had also proven very effective to help entrepreneurs launch new projects. Funding for proof of concept and proof of prototype had enabled nascent entrepreneurs to cross the “Valley of Death”, where start-ups often got trapped.

6. One expert argued that the world economy was now at the start of a sea change in the nature and direction of innovation, shifting from a pro-rich focus towards a more pro-poor one. This held out hope for more effective poverty reduction in the future. Recent attempts to do so had been disappointing in many countries and regions, with the major exception of China. The problem was not a deficiency in the rates of economic growth or innovation, but rather with their nature. The two had simply not delivered effective poverty reduction. This was a consequence of the inherent inequality of globalization, the insufficiency of jobs worldwide, the financialization of economic activity and the pro-rich trajectory of innovation. The changing focus of innovation towards meeting the needs of the poor in emerging and developing countries was due to the high growth rates in emerging and developing countries and the shifting patterns of global demand.

7. During the discussions, several speakers argued that STI was crucial for economic progress and for meeting local and global challenges. Some delegates supported the idea that although innovation and entrepreneurship were often addressed by separate government ministries, administrative arrangements should be designed so that the two were closely coordinated. They recommended linking the research and education systems to industry. One good example was the creation of a high-level innovation board headed by a country’s head of State. Innovation policy continuity across political administrations was also important.

8. Many experts noted that there were important roles for both markets and governments. Market forces alone were inadequate to stimulate the innovation that was needed to overcome many challenges, particularly climate change. Both high- and low-technology innovations could be useful in reducing poverty. Recent high-technology innovations, such as smart phones and other frontier technologies, were worthwhile, and were enabling improvements in social welfare, including for the poor in both developed and developing countries. Innovations such as solar panels were also helping by providing energy to those in remote areas. With the prospect of continued high prices for hard and soft natural resource in the coming decades, it would be challenging to ensure that poor farmers benefitted from such increasing economic opportunities.

9. The benefits that entrepreneurs brought to economies were many – jobs, increased market competition, taxable wealth and welfare-enhancing technologies. Over time, the composition of the economy could be transformed. Experts agreed that there were key principles and mechanisms for promoting entrepreneurship and innovation that were similar for all countries, regardless of their level of development. These included an enabling

regulatory environment for companies to start, grow and close a business; public programmes that provided the first seed capital for start-ups; tax regimes that allowed successful entrepreneurs to reap the rewards of success; and flexible labour markets.

10. The representative of the former Yugoslav Republic of Macedonia shared his country's experience in implementing a series of reforms that optimized the regulatory environment in which entrepreneurs operated and flourished. As a result, the country had recently been ranked among the top reformers in the World Bank's *Doing Business* report. Recognizing the link between education, entrepreneurship and innovation, his Government was striving to move towards a knowledge-based economy by investing between 5.5 per cent and 6 per cent of gross domestic product in education and launching a series of information and communications technology programmes. It was important to strengthen the workforce with technological and commercial capabilities that were required by the market. For example, innovative initiatives, such as information and communications technology training for unemployed persons, had proven to have a high value in the private sector.

11. Despite the many benefits they brought to economies and the key role they played in introducing new products and services into the market, entrepreneurs continued to face daunting obstacles, such as the lack of access to finance in many countries. Promoting angel investors was presented as one of the policy actions governments could implement to facilitate funding for nascent entrepreneurs. Business angels were important to increase the access of entrepreneurs to capital, as well as to knowledge and specialized skills. Venture capital was not necessarily the most important source of financing for entrepreneurs; therefore, policymakers should look beyond it, while still recognizing the important role that it could play because it was often accompanied by tacit and technical knowledge provided by qualified analysts. The example of Turkey was given to illustrate the important, and often unacknowledged role of credit cards with flexible three- to six-month repayment periods and low interest rates in providing a source of funding for entrepreneurship and boosting entrepreneurship.

C. Pro-poor entrepreneurship policies

12. The next session focused on the role of pro-poor entrepreneurship policies in promoting sustainable economic development, poverty alleviation and inclusive growth, particularly for disadvantaged groups such as women and youth. The term pro-poor related to both necessity-driven entrepreneurs and other entrepreneurs operating in economically poor areas. It also entailed increasing the market participation of both of these types of entrepreneurs through the creation of sustainable business linkages between domestic firms and subsidiaries of transnational corporations (TNCs).

13. Many experts highlighted the need for comprehensive policies to focus on innovative and high-growth entrepreneurship, recognizing that many technologies had pro-poor characteristics. Some impact-evaluation studies showed that the type of entrepreneurship mattered. How it was regulated both internally (business ethics) and externally (good governance and global coordination) could have a more significant impact than isolated measures in specific areas such as entrepreneurship education or financial support policies. A broad approach to entrepreneurship promotion was suggested, along with a wider impact-assessment of policies, which needed to be tailored to a country's context and objectives. Some experts said that the main benefit to be derived from a healthy entrepreneurial population was breaking the culture of dependency on governments or donors.

14. The importance of supply-chain and business-linkage opportunities to enable the emergence and growth of successful pro-poor small and medium-sized enterprises (SMEs) was also stressed. In this context, a linkage framework illustrating the role played by governments, TNCs, SMEs and enablers or business development service providers was

presented. In particular, some key aspects of each stakeholder were pointed out with a view to reducing the constraints that would hinder the creation of pro-poor opportunities. For example, governments should support pro-poor measures aimed at improving SME readiness for public and private sector procurement, monitoring and ensuring the quality of enablers and business development service providers, coordinating SME training and support programmes, and simplifying legislative and administrative compliance procedures for SMEs. Experts recalled that TNCs could generate attractive business opportunities, but their investment could be footloose. Therefore, the sustainability of the benefits that they could bring lay in investing in local entrepreneurship capacities.

15. The representative of Costa Rica shared the experience of his country's development strategy and focused on how proactive and coordinated policy in the areas of innovation and entrepreneurship were central to its success. Costa Rica provided an interesting example of a small developing country that had radically changed its development strategy, moving from a specialization in commodities with 50 per cent of exports stemming from coffee and bananas to a skill-intensive, higher value added production and diversified economy. It had become the leading high-technology exporter in Latin America. In particular, Costa Rica had been able to benefit more from globalization by deepening the integration of its local economy into global value chains. Roughly 43 per cent of its exports were related to global value chains and an average of 36 per cent of value was added domestically. Today, TNCs generated 30 per cent of the jobs in the private sector. Therefore, foreign direct investment in the development of local talent and capacities and their insertion into global value chains were essential.

16. Several experts expressed particular appreciation for the systemic approach adopted in the Entrepreneurship Policy Framework and the identification of bottlenecks for its implementation. They also cautioned governments about the challenge to operationalize these policy measures, as this required data collection and analysis to correctly assess the status of entrepreneurship in each country and resources devoted to this process. Others argued that in order to ensure that entrepreneurship and innovation policies had a long-term impact, policymakers should continually evaluate their effectiveness by working closely with entrepreneurs and understanding the dynamic challenges that they faced. Indeed, one size did not fit all, and the focus of entrepreneurship policies should be not on copying, but rather on adapting to the unique contexts and conditions of each country.

17. One of the main benefits of the Entrepreneurship Policy Framework was its emphasis on coordination among policies in different areas. Some delegates reinforced this message with specific examples. In Ghana, the Private Sector Development Board included entrepreneurs to make sure that their perspective was taken into consideration to continue pushing the reforms initiated 12 years ago with the Government's Private Sector Development strategy and Industrial Sector Support Programme. The expert from Malaysia illustrated the coordinating role of the National SME Development Council, the highest policymaking body tasked with formulating strategies for SME development across all economic sectors, in coordination with related government ministries and agencies. The expert from Senegal highlighted the central role of ADEPME (Agence de Développement et d'Encadrement des Petites et Moyennes Entreprises) in providing all non-financial services needs for SMEs to improve their productivity, technological capacity and entrepreneurial capabilities.

18. Overall, experts recommended that the issue of women should be mainstreamed in all policy areas of the Framework. The Framework rightly recognized that entrepreneurship was a private-sector activity and that the role of the government and of civil society was crucial, albeit limited, to providing favourable framework conditions for entrepreneurs to thrive. In this context, it was important to pay particular attention to the growing role of social entrepreneurship

D. Pro-poor innovation policies

19. The third session of the expert meeting, chaired by Ms. Caballero, was devoted to pro-poor innovation policies. It opened with an overview by the secretariat, highlighting the role of STI in development and in poverty reduction. According to recent experience, many developing countries that had invested in developing STI capacities had reaped significant benefits; further, STI was no longer the domain of the developed countries.

20. The presentations by experts highlighted a number of STI and development issues. Sustainability was a prime concern. Population worldwide was increasing, while resources were becoming scarce, in particular food, energy, water and forests. Many of these problems could be alleviated, if not solved, by improving technology access for the poorest sections of the population. However, wealth creation was fundamental, as sustainability was difficult to achieve at very low income levels.

21. In order to develop human capacity, developing countries needed to invest in education at all levels, including tertiary education. Examples of South–South cooperation in this area were mentioned, but the STI capacity deficits of developing countries remained very large. To enhance capacity-building, human mobility was important, with experts and academics moving to work and study in centres of excellence in their respective fields. Merit-based grants were an important stimulus in generating scientific research. Many development issues were global in nature, hence calling for global solutions and coordinated policy responses at an international level.

22. It was necessary for STI policy to address poverty alleviation in order to be relevant in developing countries. Human capacity, financing and infrastructure were all important components. In many developing countries, STI policy needed to look at industries based on the exploitation of natural resources, in particular in developing ways to optimize their return on investment and improve value added and income earned by moving production up the value chain. For this, STI policy needed to create an enabling environment for developing local capacities and technology transfer. Ethics and safety issues were also important dimensions of a policy process that should include multiple stakeholders for its implementation to succeed.

23. Making STI relevant for the poorest sections of the population in developing countries, often known as bottom-of-the-pyramid innovation, required special attention. Such innovation need not be based on research or technology, although it did need to be commercially viable. Innovation in the areas of health, education or general well-being was particularly important, while inclusiveness was a key quality. An important problem was the “distance from market” of innovators and incomplete or fragmented knowledge and information available to establish and evaluate the usefulness, appropriateness and demand for particular products or services. This problem continued in the follow-up to the launch of a product in that it was often difficult to have sufficient information to improve product performance or the mode of delivery.

24. It was desirable to improve understanding of how to promote more pro-poor innovation. The scarcity of data and indicators made it difficult to monitor trends that might be useful for analysts and policymakers. One speaker said that policymakers should recognize pro-poor innovation as a policy goal and take a more systematic approach to encouraging it. However, since research to determine the drivers of pro-poor innovation had only recently begun, more research was necessary.

25. Another important challenge for pro-poor business was reducing the relatively higher business transaction costs. Key factors related to the ability to scale up and cut production and delivery costs, rethinking the actual innovation process in order to produce results relevant to poverty alleviation and redefining the policy environment to deal with pro-poor concerns in national STI strategies.

26. Private-public partnerships were necessary to improve the continuity of innovation policy action. This required the strengthening of local and regional development agents, while at the same time introducing international best practice. Inclusiveness was important, thus making gender policy a primary concern. Linkages among STI institutions and the improvement of information flows should inform all STI policy actions. However, this system of linkages could often be impenetrable for an entrepreneur from a poor community. Much effort was needed to design innovation systems to be useful and user-friendly for those involved in pro-poor innovation and entrepreneurship.

27. With regard to scaling up, particularly in the agricultural sector, some participants said that the certification of produce and seeds to satisfy standards was a major problem. Innovations were rarely scaled up. Developing countries were sometimes victims of innovation in agriculture where new technologies developed by large companies could negatively affect the livelihoods of rural communities. The textile and garment sector could also suffer from innovation, especially when recycling, which reduced the demand on local production, was central to the technology. However, there were many examples of good practices – international firms partnering with non-governmental organizations to improve products and service provision in the energy and insurance sectors.

28. It was erroneous to assume that one person could simultaneously have all the qualities need to be an inventor, innovator and entrepreneur. Therefore, interaction and linkages among institutions and individuals required robust policy support. Experts said that there was an unnecessary reinvention of technologies relevant for poor and rural communities and that perhaps information and the distribution of such innovations could be handled more efficiently. The role of information technologies was thus an overriding concern.

29. In addition, there were divides between institutions that focused on research on the one hand, and firms that focused on innovation on the other, particularly in pro-poor innovation. It was important that policy take on the problem of bridging this gap. STI policy needed to be oriented towards commercial goals or towards aims that had a clear economic impact or a positive effect on the well-being of the poor. One part of the solution could be found with the specification of criteria for using research and development grants. Recent experience indicated that donors were increasingly demanding that research outcomes have practical applications, while research institutions needed to improve their focus on local problems in order to improve their scope for cooperation with international grant-giving institutions. Innovation policy instruments tended to be more effective when industry was actively involved. For example, innovative performance was more satisfactory for industry-led clusters than for research-led clusters. This underlined the importance of inclusiveness and systemic approaches in order to improve the pro-poor effectiveness of STI policies.

30. With regard to practical support to policymaking, the UNCTAD STIP Reviews seemed to have stimulated positive changes in those countries where they had been implemented. In a number of them, the review process had helped bring together key actors and had triggered a national dialogue about the national priorities in STI, the capabilities that needed to be built as a matter of priority and how to promote the emergence of a national innovation system. For example, in countries such as Ghana and Lesotho, the STIP review process had helped put together national STI policy documents that articulated a vision of the role of STI in their national development and outlined practical steps to move towards that vision.

E. Women entrepreneurship and innovation

31. Session 4, chaired by Ms. Caballero, was devoted to women entrepreneurship and innovation. At the opening of the session, the secretariat presented an overview of the work

that UNCTAD had done to ensure that gender concerns were incorporated in economic and development policies that had been championed personally by the Secretary-General.

32. The secretariat presented the main findings and recommendations of two recent UNCTAD studies. The first, entitled *Applying a Gender Lens to Science, Technology and Innovation*, had been produced by the Division on Technology and Logistics. The report examined women's roles in sectors such as agriculture, water, energy and transport, and argued that STI would not achieve its potential positive effects if policies did not specifically take into account women's needs and talents. Policy should be attentive not only to the differing impacts STI could have on men's and women's lives, but also to the significant part women played in economic growth. This approach should be followed throughout the STI policymaking process: from policy analysis and design to implementation, monitoring and follow-up. Policy recommendations included the following:

(a) The impact of STI policies should be assessed to ensure that they benefit men and women equally;

(b) STI policies should take into account the extensive work done by women in areas such as agriculture, water and energy use;

(c) The education of women in scientific and technological fields, and in entrepreneurship, should be expanded;

(d) Women's equal access to financing, land and markets should be ensured so that the businesses they founded and the scientific research they performed could produce their full developmental impacts;

(e) The participation of women in STI decision-making at all levels should be supported;

(f) Examples or case studies of successful efforts to include gender concerns in STI policies and programming should be collected and publicized. In this regard, UNCTAD was in the process of developing a survey of best practices cases in the integration of the gender perspective in STI policies;

(g) Governments' efforts to include gender concerns in their STI policies should be supported through aid programmes, for example;

(h) International and national research institutes and universities should be encouraged to develop partnerships and collaborate with non-governmental organizations, government agencies and the private sector to support the advancement of women in STI, especially in developing countries.

33. The experts discussed the UNCTAD research project on women entrepreneurship. The background study had revealed that little was known about women entrepreneurship and innovation, and that there was a need to better understand their entrepreneurial motivations and drivers, their innovative practices and the barriers to innovation. Therefore, UNCTAD had carried out a field study covering 450 women and men entrepreneurs in 6 countries (Brazil, Jordan, Uganda, Sweden, Switzerland and the United States). The study showed that a desire for independence was the key entrepreneurial driver for women entrepreneurs. Addressing a social need was a predominant driver of innovation; therefore, the achievement of social welfare benefits should also be included among the possible performance indicators of women entrepreneurs. Interesting findings also related to risk tolerance, which was seen to vary much more by the development context than by gender; engagement in social media, where women seemed to be generally more active than men, independently from the development context; and participation in trade promotion activities, where the gap between women and men was present in both developed and developing countries.

34. According to the study, the principal barriers to innovation for women entrepreneurs were the lack of access to financing, to support networks, and to a business-enabling environment, especially in developing countries. In the case of growth-oriented women entrepreneurs, these barriers were more relevant in the post-start-up growth phase, than in the start-up phase. In line with the main findings of the report, experts made the recommendations listed below.

35. To foster innovation and entrepreneurship through training – Experts stressed the need to tackle the main challenges faced by women entrepreneurs through training, since access to adequate business support programmes and financial services as well as access to technology could be considered the main impediments for women to open and expand their businesses. Training programmes should engage women in market information, trade fairs and business missions. In this regard, institutions such as Empretec Ghana and Empretec Nigeria shared their experience in implementing training and advisory services to overcome these obstacles. Some experts said that institutions supporting women entrepreneurs should coach them on how to address their concerns to the government. However, efforts were also needed to make policymakers aware of the motivations and requirements of women entrepreneurs.

36. To remove cultural barriers – Experts recognized the prevalence of important socio-cultural barriers that hindered women from engaging in an entrepreneurial activity or from being recognized as successful. Women entrepreneurs should be helped to deal with the life puzzle that often undermined their high-growth orientation, as they were burdened with heavy responsibilities or encouraged by societal rules to devote most of their time to their families. Additionally, women entrepreneurs should be more aware of the broader conception of innovation, which not only related to the development of a new product or service. The implementation of a new marketing or managerial strategy turned out to be either already implemented or within reach. Finally, it would be important to raise awareness among women of the importance and benefits of intellectual property protection.

37. To provide new tools for women's empowerment – Many experts recommended the implementation of mentoring, networking and role model programmes. Women often did not have access to adequate networking platforms for exchanges with peers or to mentor coaching. With a view to supporting the networks of women entrepreneurs, for example, the representative of Endeavor Brazil explained that training courses in her country offered a section on networking and that it was necessary to create awareness of the importance of role models by using the media. Initiatives such as the Ambassadors for Women's Entrepreneurship Programme launched by the Swedish Agency for Economic and Regional Growth had proven to be an incentive for new business start-ups and high growth firms among women. The representative of the Cherie Blair Foundation also illustrated how it had developed an online mentoring programme to connect women entrepreneurs with mentors and role models around the world.

38. Most experts recognized the relevance of the findings and the case studies, recalling, however, that the specific social context of each country should be taken into account. There was a need to continue gathering quality data on women's business activities and statistics on the gender gap as well as to develop indicators that included social welfare benefits as a measure of success of women entrepreneurship. Experts welcomed the interest of the Women Entrepreneurship Programme of the International Labour Organization and of the OECD Gender Initiative to collaborate with UNCTAD in order to translate its research work on women entrepreneurship and innovation into concrete policy actions.

39. One expert said that the majority of poor people were women. Although they represented 66 per cent of the workforce, their share of income was only 10 per cent and that of property, even less – 1 per cent. The Chair said that this was a challenge for many developing countries, creating the need to find ways to improve the participation of women in the economy and to reduce poverty. In the discussion that followed, some experts suggested that improving the entrepreneurship capabilities of women through training, an

enabling environment and institutional capacities could be very useful. Others pointed to the need for women to influence their respective governments, in particular by sending them clear messages and taking high-level positions in the public sector.

F. Outcome of UNCTAD's multi-year expert meetings cycle

40. In the closing session, the UNCTAD secretariat described the outcomes of the four-year expert meeting cycle. The components, main policy recommendations, tools provided and issues raised in each of the frameworks were presented for comments and feedback. Both frameworks adopted a holistic approach that should not be viewed in isolation from each other or from general economic and development policies. Indeed, most of the experts noted that the work of the group of experts in the past four years had reinforced and validated the awareness that entrepreneurship and STI were key to the effectiveness of the development process and should not be placed on the fringes of policy. On the contrary, they should be at the centre of development strategies and the linkages between entrepreneurship policies and STI policies, and other development policies should be strengthened.

41. With regard to the STI Policy Framework, many experts said that the relations between STI stakeholders should be nurtured and supported in order to sustain policy action. Regarding the experience gathered from the STIP review activities, a number of experts said that government should take on a leadership role. As innovation came from a multitude of agents and relations, a systems framework was fully relevant. One expert suggested that policymakers should concentrate on the structural transformation that innovation could bring about and the impact that such transformation could have on employment opportunities. Transformation meant opening up new productive and services sectors, as well as moving up the value chain in existing sectors. In this regard, information technology was proving to be particularly important as a catalyst for transformation.

42. A number of experts said that there were fundamental problems in coordinating STI policy in relation to other policies – macro, trade, education and the like. Information flows and technologies were creating a major change in the way people, governments and firms interacted. Not only was information mobile, but all resources had become much more mobile (finance, trade, human capital). Technology was becoming increasingly available and this meant that the differentiating factor among countries and firms would be the organizational capacity to identify and use technology, rather than the technology itself. Static indicators such as the number of graduates or the percentage of children that went to school had become insufficient to assess or guide policy. Social assets such as networks and institutions had become increasingly important and were becoming the prime factor defining the uniqueness of a country or community.

43. Employment was a major concern. Increases in productivity, due to technological progress, acted to reduce employment in existing sectors, which meant that policy should focus on developing new sectors and industries to compensate and provide growth. The difference in policy responses would vary because of the nature of institutions, social networks and culture in particular countries. However, policy needed to be based on data and measurements and these needed to adapt to the changing environment of STI. An expert said that development indicators were particularly lacking for both STI and entrepreneurship activities in many developing countries. UNCTAD needed to continue working on indicators to strengthen policymaking capacity in developing countries.

44. The complex policy environment naturally led to a multi-stakeholder approach to developing STI strategies and actions. UNCTAD was well placed to engage with a broad cross-section of STI agents. Some experts referred to the multi-year expert cycle as a forum where member States had had an opportunity to engage in a policy dialogue about STI, entrepreneurship and development and stressed that it would be important that this agenda could be carried forward in UNCTAD. This was necessary in order to exploit the synergies

between programmes such as the STIP Reviews and UNCTAD's analytical work programme in STI as a platform for the disseminating of best practices and to identify new and emerging issues in technology and innovation that were relevant to the needs and concerns of developing countries. A number of participants encouraged UNCTAD to continue supporting developing countries in this area, while noting that currently available resources were insufficient to respond to all requests.

45. Commending UNCTAD for the relevance and usefulness of policy guidance offered by the Entrepreneurship Policy Framework and STIP Reviews, many experts said that these were a practical tool that helped policymakers set priorities and identify the action areas that should be addressed and the types of policies that needed to be implemented to foster entrepreneurship and innovation.

46. Several experts underlined the important role of UNCTAD in entrepreneurship and capacity-building through Empretec and said that the Entrepreneurship Policy Framework was very useful because of its strategic and systemic approach. Successful implementation of the Framework in their countries relied on effective coordination between its six priority areas. For example, the expert from Empretec Nigeria gave an overview of how the country stood with regard to the different priority areas for entrepreneurship presented in the framework and explained how it could be used as a powerful assessment and prioritization tool. Noting the value and relevance of the case studies on best practices presented in the document and the database, a number of experts said that it was also important to study cases of failure. One expert noted that beyond looking at case studies, countries should focus on how to effectively replicate them in their own contexts. Overall, policymakers should follow the following design principles:

(a) Consensus-building – National entrepreneurship strategies should be the result of extensive consultation between the government and representatives of all sectors of business activity, communities, education and financial institutions;

(b) Policy coherence – The role of multiple ministries, agencies and stakeholders from the private sector and civil society should be clearly defined. Stakeholders should be involved at multiple levels, namely national, regional and local;

(c) Monitoring and evaluation – The periodic measurement of policy effectiveness was essential for its dynamic management and should be carried out by working closely with entrepreneurs to better understand the challenges they faced.

47. Some experts suggested that pilots should be conducted to apply and adapt the Entrepreneurship Policy Framework to specific countries and document lessons learned. To this end, one expert recommended that the Framework be presented at UNCTAD XIII to further engage governments in follow-up implementation.

48. The representative of Costa Rica welcomed further collaboration on the Framework and requested that an Empretec centre be established in his country. The representative of Belarus, while noting the particular relevance of the Framework for economies in transition, asked UNCTAD to expand its work in his country by means of the Business Linkages Programme. Other experts called on the Organization to support the network of entrepreneurship educators in order to facilitate the mainstreaming of entrepreneurship education in formal curricula, and to build awareness among policymakers about the importance of adopting a coherent approach to entrepreneurship and innovation policies.

49. One expert lauded the commitment of the Government of Turkey to set up an international STI centre aimed at building the technological capabilities of the least developed countries and encouraged UNCTAD to work with the Turkish Government in setting up the centre and proposing activities.

50. For information, the working documents of UNCTAD and contributions of the experts and participants in this meeting, including the experiences of Brazil, Peru, Malaysia, Nigeria, Oman, Senegal and Sweden, are posted on the UNCTAD website.

II. Organizational matters

A. Election of officers

(Agenda item 1)

51. At its opening plenary meeting, on Monday, 16 January 2012, the multi-year expert meeting elected the following officers:

Chair: Mr. Bozkurt Aran (Turkey)

Vice-Chair-cum-Rapporteur: Ms. Luz Caballero (Peru).

B. Adoption of the agenda and organization of work

(Agenda item 2)

52. Also at its opening plenary meeting, the multi-year expert meeting adopted the provisional agenda contained in document TD/B/C.II/MEM.1/11 and agreed on the procedure of the organization of work. The agenda was thus as follows:

1. Election of officers
2. Adoption of the agenda and organization of work
3. Pro-poor technology, innovation and entrepreneurship policies
4. Adoption of the report of the meeting.

C. Adoption of the report of the meeting

(Agenda item 4)

53. At its closing plenary meeting, on Wednesday, 18 January 2012, the multi-year expert meeting agreed that the Chair should summarize the discussions.

54. Also at its closing plenary meeting, the multi-year expert meeting authorized the Vice-Chair-cum-Rapporteur, under the authority of the Chair, to finalize the report after the conclusion of the meeting.

Annex

Attendance*

1. Representatives of the following States members attended the expert meeting:

Albania	Malaysia
Algeria	Mauritius
Angola	Mexico
Armenia	Montenegro
Austria	Morocco
Azerbaijan	Nigeria
Belarus	Oman
Botswana	Panama
Cameroon	Peru
China	Philippines
Costa Rica	Poland
Côte d'Ivoire	Portugal
Dominican Republic	Saudi Arabia
Ecuador	Senegal
Egypt	Serbia
Ethiopia	Sudan
Germany	Swaziland
Ghana	Sweden
Haiti	Tajikistan
Iran (Islamic Republic of)	The former Yugoslav Republic of Macedonia
Iraq	Togo
Israel	Uganda
Italy	United Arab Emirates
Kazakhstan	United Republic of Tanzania
Kenya	United States of America
Libya	Viet Nam
Lesotho	Zambia
Madagascar	

2. The following intergovernmental organizations were represented at the session:
 - African, Caribbean and Pacific (ACP) Group of States
 - Caribbean Community (CARICOM)
 - Cooperation Council for the Arab States of the Gulf
 - European Union
 - South Centre

* For the list of participants, see TD/B/C.II/MEM.3/Inf.4.

3. The following intergovernmental organizations were represented at the session:
 - European Union
 - Organization for Economic Cooperation and Development (OECD)
4. The following United Nations organs, bodies and programmes were represented at the session:
 - International Trade Centre
 - United Nations Economic Commission for Africa
 - United Nations Economic Commission for Europe
 - United Nations Development Programme
5. The following specialized agencies and related organizations were represented at the session:
 - International Labour Office
 - United Nations Educational, Scientific and Cultural Organization
 - World Intellectual Property Organization
6. The following non-governmental organizations were represented at the session:
 - Consumer Unity & Trust Society (CUTS International)
 - Ingénieurs du monde
 - International Institute for Sustainable Development
 - Exchange and Cooperation Centre for Latin America
7. The following panellists attended the expert meeting:
 - Mr. Charles **Wessner**, Director of Technology, Innovation and Entrepreneurship, Board on Science, Technology, and Economic Policy, the National Academies
 - Mr. Ivo **Ivanovski**, Minister of Information Society, the former Yugoslav Republic of Macedonia
 - Mr. Raphael **Kaplinsky**, Development Policy and Practice Faculty of Maths, Computing and Technology, the Open University, United Kingdom of Great Britain and Northern Ireland
 - Ms. Sapphira **Nyabunwa**, Empretec Women in Business Award 2008, Safi Cleaning Services Limited, Uganda
 - Ms. Leora **Rajak**, Founder, Enterpriseroom
 - Mr. Wim **Naudé**, Professorial Fellow, UNU-MERIT and Maastricht School of Management, University of Maastricht
 - Mr. Armen **Orujyan**, Chairman, Athgo International, United States
 - Mr. Joseph **Tackie**, Acting Coordinator, National Medium-Term Private Sector Development Strategy, Ministry of Trade and Industry, Ghana
 - Mr. Erkkko **Autio**, QinetiQ-EPSRC Chair in Technology Transfer and Entrepreneurship, Imperial College London, United Kingdom
 - Mr. Thomas **Heinemeier**, Policy Officer, Policy Development for Industrial Innovation Unit, European Commission
 - Mr. Romain **Murenzi**, Executive Director, Third World Academy of Sciences, Trieste
 - Mr. Charles **Kwesiga**, Executive Director, Uganda Industrial Research Institute
 - Ms. Stefanie **Bauer**, Technical Advisor, Private Sector Development, GIZ India
 - Ms. María Belén **Sánchez Hidalgo**, Ministry for Coordination of Production, Employment and Competitiveness, Ecuador
 - Ms. Julie R. **Weeks**, President and Chief Executive Officer of Womenable
 - Ms. Amisha **Miller**, Research Manager, Endeavor Brazil

Ms. Barbro **Fransson**, Managing Director, Power Lake AB, Sweden
Ms. Giulia **Corinaldi**, Programme Manager, Cherie Blair Foundation
Ms. Gunilla **Thorstensson**, Swedish Agency for Economic and Regional Growth
Ms. Waya **Quiviger**, Director of Special Projects, Social Impact Management and
Executive Director, Master in International Relations, IE Business School
Mr. Mario **Piacentini**, Trade and Business Statistics, OECD Statistics Directorate
Mr. Sergio **Arzeni**, Director, Centre for Entrepreneurship, SMEs and Local
Development, OECD
Mr. Thomas **Andersson**, Chairman, International Organization for Knowledge
Economy and Enterprise Development
Ms. Glenda **Napier**, Manager of Policy Analysis, Danish Enterprise and
Construction Authority
Ms. Karen **Wilson**, Kauffman Foundation and Founder of GV Partners
Mr. Anthony **Gribben**, Team Leader, Entrepreneurial Learning, European Training
Foundation
Ms. Onari **Duke**, Director, Empretec Nigeria
