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Strategies for Measuring the Knowledge Economy in the Caribbean
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**REPORT OF THE EXPERT GROUP MEETING ON
STRATEGIES FOR MEASURING THE KNOWLEDGE ECONOMY IN THE
CARIBBEAN**

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A. DECISIONS AND RECOMMENDATIONS

1. The overwhelming majority of ICT businesses were SMMEs, so in order to improve ICT in the economy it was important to support SMMEs, where the innovation in ICT originated from and where the main ICT businesses were.
2. It was also recognized that good business principles had not been documented. A business model that made the most of ICT tools available was required. There was common agreement on a need for a diagnosis of organizations steeped in outdated thinking and their failure to support development, and a need for re-education on the value for ICT products.
3. With regards to knowledge economies and development agendas, it was stated that specific country realities should be taken into account, bearing in mind country characteristics. A point on differentiating ICT and the knowledge economy was raised and it was proposed that countries should concentrate on national knowledge economy strategies instead of ICT strategies. It was also noted that the government measure was predominantly the impact on votes received so the prosperity of projects must be made clear and linked to the potential in terms of voter acceptance.
4. It was suggested that CARICOM should create a model that would be an externally imposed strategy, overcoming political issues of removal of power of some ministers in the creation of an ICT minister.
5. With regards to ICT as an economic sector, it was agreed that ICT should be seen as an industry and requisite policies must be designed to support ICT. There was a need to build capacity at a subregional level for advice and knowledge on the knowledge economy, instead of several individual efforts.
6. Considering the measurement and incorporation of KAM in the Caribbean, it was stated that the methodology should be aligned with OSILAC instruments through workshops and to have measurable data collected.

B. ATTENDANCE AND ORGANIZATION OF WORK

1. Place and date

7. The expert group meeting under the initiative, Strategies for Measuring the Knowledge Economy in the Caribbean, was convened by the Economic Commission for Latin America (ECLAC) subregional headquarters for the Caribbean on 22 August 2011 in Port of Spain.

2. Attendance

8. A number of experts in the field of information management and ICT for Development from member countries of the Caribbean Development and Cooperation Committee attended the meeting.

3. Agenda

1. Welcome, security briefing, introductions
2. Adoption of the agenda
3. Experience, exposure and work with knowledge economy
4. Introduction to knowledge economy and situational analysis
5. Analysis of policy responses in the Caribbean to ICT for development
6. Application of the World Bank Measurement Framework
7. Exploration of the challenges to knowledge-based economy measurement in the subregion
8. Recommendations
9. Opportunities for collaboration
10. Closing remarks

C. SUMMARY OF PROCEEDINGS

1. Opening of meeting

9. Welcome and opening remarks were made by Peter Nicholls, Chief, Caribbean Knowledge Management Centre, ECLAC subregional headquarters for the Caribbean. He explained the objectives of the meeting, namely identifying options for improving the contribution of information and communications technologies (ICT) to the development of the economy; assessing the returns to investment in, and application of, those resources in terms of national development; and enabling policy makers to identify gaps in data coverage, and utilize available ICT statistics and indicators. Participants were reminded of the eighth Millennium Development Goal which articulated the need to “develop a global partnership for development”, and included a specific target, “18: in cooperation with the private

sector, make available the benefits of new technologies, especially information and communication”. It was the intention of the expert group meeting to review recommendations aimed at furthering the achievement of that goal. Participants introduced themselves and gave short introductions on their experience, exposure and work with the knowledge economy.

2. Adoption of the agenda

10. The provisional agenda was adopted.

3. Introduction to knowledge economy and situational analysis

11. The first presentation was made by Wayne Butcher, ECLAC Consultant. The definition of a knowledge economy presented was “... one that utilizes knowledge as the key engine of economic growth. It is an economy where knowledge is acquired, created, disseminated and used effectively to enhance economic development”¹. The Caribbean interpretation of the definition was challenged since it did not include social aspects, cultural aspects or impacts on social transformation. There was a query on the definition of development and growth and that a cultural aspect was not inferred in development. What was critical was the important contribution of knowledge to the society. There was a need to test its relevance and see if it contributed and/or could contribute to the quality of life. It was mentioned that the most important part of a knowledge economy was the “exploitation of knowledge and information from both internal and external sources for development and delivery on a sustainable basis of a desired quality of life”.

12. The presentation stressed that the role of ICT in the knowledge economy was only a tool and that knowledge and information generation and use were critical to deliver value.

13. A change in the subregion’s self image and its market independence were presented as two development opportunities. The relationship with knowledge management was considered important. Expenditure on information and technology was applied often at considerable expense with minimal financial benefit for the subregion. For example, technology from Japan and Europe were used to operate oil plants and the primary beneficiary of the product was the United States. It was stated that, historically, the subregion obtained information from outside and used it to target and benefit people outside the subregion. Rather, there should be a transformation to a knowledge economy so that the subregion could perceive itself as a creator where others could use available information and technology. It was also suggested that the subregion should not wait for others to introduce new technology and solutions rather that should be done within the subregion itself.

¹ Chen, Derek H. C. and Carl J. Dahlman (2005), “The Knowledge Economy, the KAM Methodology and World Bank Operations”, Washington DC, World Bank

14. A summary of the Regional Action Plan for the Information Society in Latin America and the Caribbean (eLAC) was presented. The 10 lines of action of eLAC 2015 identified short-term actions for countries of the region. Concern was raised that a larger focus fell on Latin American countries and less on the Caribbean. Language barriers were listed as an issue and there was a need to increase fluency of Spanish in the Caribbean subregion. It was suggested that historically the Caribbean subregion had failed to take into consideration the close geographic proximity to Latin America and to Spanish-speaking countries, with more focus being placed on China, the United Kingdom, the United States of America and Canada. It was suggested this was due to a cultural connection towards Europe and North America.

15. The Caribbean application of ICTs within the fields of socio-economic development, international development and human rights, known as ICT for Development (ICT4D), was discussed. The findings presented showed that, in general:

- (a) Implementation of policies and strategies was missing
- (b) Documents were still under review or revision
- (c) A holistic approach to ICT and ICT4D was lacking
- (d) Responsibility was distributed among several ministries and agencies
- (e) There was no focus on ICT as an economic sector with no targets or priorities
- (f) There was scarce data on the sector
- (g) There was no designated responsibility for development of the sector
- (h) ICT was not well integrated into key economic sectors, including agriculture and tourism

16. It was mentioned by participants that the Caribbean Community (CARICOM) Secretariat was progressing with a Regional Digital Development Strategy 2010-14.

17. Concern was also raised about the Millennium Development Goals and whether the Caribbean should be striving towards higher ideals and more regionally specific goals by 2015.

4. Analysis of policy responses in the Caribbean to ICT for Development

18. The Consultant next made a presentation on the analysis of policy responses and Caribbean progress with regards to the World Summit on the Information Society (WSIS) lines of action which were indicative targets to bridge the digital divide. In general, countries were at varying levels of progress with the 11 lines of action and, overall, much more work was required in the subregion.

19. With regards to WSIS Line of Action C3, namely “Access to information and knowledge”, it was stated that there was a need to provide evidence of the level of access before and what the access should be at the present time, and examples should be provided within or outside the subregion that showed the measures that worked to increase access. Comments were made that there was reluctance from the governments to implement new measures, as they were resistant to change. Evidence was given that regional bodies such as the Caribbean Centre for Development Administration (CARICAD) had been working with the Organisation of Eastern Caribbean States, however, the challenge for harmonization of standards remained.

20. With regards to WSIS Line of Action C4, namely “capacity-building”, it was stated that there was a need to revisit the curriculum at universities as some graduates could not transmit the knowledge gained at the secondary and tertiary levels. It was also mentioned that students needed to be educated on how to be innovative, to show that individuals could be transformed through education and then be able to apply those skills in the workplace. It was suggested that evidence could be collected via the Caribbean Examinations Council and the Secondary Examination Assessments and through the University of the

West Indies to address capacity-building. It was also suggested that private enterprise required more entrepreneurs' orientation.

21. With regards to WSIS Line of Action C11, "International and regional collaboration", there was concern regarding the current status of strategies and their apparent lack of implementation in the subregion. Budget allocations were seen as a major delay of implementation. It was recommended that countries needed to develop ICT and national development programmes towards implementation. To achieve that, ICT components would need to fall into the development agenda of the government. It was mentioned that not all governments and societies had stated what their development agenda was and, therefore, might need assistance where ICT could be incorporated into their development plans. Of concern to the experts was the potential for misalignment with development policies. A lack of capacity to implement ICT was also suggested as a barrier for governments with a lack of expertise on how to implement particular elements of ICT. It was recommended that regional organizations needed to educate ministers to decrease the gap with understanding on how to implement ICT.

5. Application of the World Bank Measurement Framework

22. The presentation, Application of the World Bank Measurement Framework, was based on the World Bank Knowledge Assessment Methodology (KAM). It began with a description of KAM as an interactive, Internet-based diagnostic and benchmarking tool based around four knowledge pillars: an economic incentive and institutional regime, educated and skilled workers, an effective innovation system, and a modern and adequate information infrastructure. KAM was formed from the study of 109 variables. The outputs of KAM which were basic scorecard, knowledge economy index, knowledge index and custom scorecard were also listed. A flow diagram was presented showing the two main indexes knowledge economy index and knowledge index and what they constituted. That was followed by an attempt to show the correspondence between KAM and WSIS Declaration of Principles, highlighting the mainly social related areas of media, cultural diversity and identity, linguistic diversity and local content and ethical dimensions of the information society as areas not specifically addressed by KAM. There was emphasis by the presenter that KAM seemed to note more economic factors than social ones and that was an issue for completeness.

23. The presentation then faced the basis for evaluation of KAM, highlighting five key areas: completeness, validity, diagnosis, practicality and visualization. The presenter then looked more specifically at the Caribbean States in KAM, noting a data scarcity problem given that only 8 of 16 member States and only 1 of 8 associate members were included. The Caribbean ranked in the lower half of the second quartile, which indicated that Caribbean States were not yet knowledge economies. Aruba and Barbados were highlighted as the most advanced with Dominica and Trinidad and Tobago some way behind and the remaining States even further back. Noted, by means of a comparison, was that the rankings were consistent with other measures such as the Human Development Index.

24. A point was made on how the issue of a holistic approach needed to be present at the subregional level as well as at the national level.

25. It was questioned why the tourism sector had not benefited from ICT as much as expected. In response, it was stated that there was evidence of improved use of ICT in terms of marketing. Another response was that where evidence was not in patents and not a physical product, effects of ICT might not be captured despite being present.

26. A point was made about the need for outreach programmes that went beyond formal education to reach those who were uneducated in ICT. It was suggested in addition to training ICT, the technician

should also teach general literacy. The need for retraining of current workers with a continuous upgrading of skills was also mentioned.

27. In the section on evaluation of KAM, the point of affordability of ICT was raised as an issue, elaborating that access must include not only presence but powers of acquisition because ICT was often present but unaffordable. In response, it was mentioned that affordability was covered by penetration as one of the variables.

28. It was also questioned how reliable assumptions, based on royalty and license fee payments, were an indication of productive use of an information system.

6. Exploration of the challenges to knowledge-based economy measurement in the subregion

29. The next section of the presentation was centred on the challenges to measurement of the knowledge-based economy. It looked at the availability of statistics on core ICT indicators. It was noted that good coverage of information access was a positive observation. The challenges included poor coverage of measures related to creation and use of information; ICT measurement at a lower level than that of Latin America; and limited data availability for the ICT sector and trade in ICT goods.

30. Special note was made that national statistical offices were not informed of the priorities of the Caribbean governments and that there was a repeated lack of statistical resources as one of the main challenges.

7. Conclusions and recommendations

31. The final presentation was moderated by the Computer Information Systems Assistant at the ECLAC Subregional Headquarters for the Caribbean and essentially looked at the areas for improvement and ways to move ahead with the knowledge economy. It summarized four central drawbacks of the knowledge economy in the Caribbean:

- (a) ICT strategy and policy was not oriented toward implementation
- (b) ICT was not closely linked to key economic activities
- (c) There was limited emphasis on ICT as an economic sector in the development of Small, Medium and Micro Enterprises (SMMEs) as well as on the production of ICT products and services, including local content
- (d) Limited data availability was an issue which hampered attempts to measure the knowledge economy in the Caribbean.

32. The issues and areas for collaboration discussed were the knowledge economy and development agendas, the holistic approach to ICT4D, ICT as an economic sector, the regional approach and the measurement and incorporation of KAM.

33. There was a query on follow-up activities after the publication of studies and how recommendations progressed.

34. It was stated that the majority of ICT businesses were SMMEs so in order to improve ICT in the economy it was important to support those SMMEs, where the innovation in ICT originated from and where the main ICT businesses were.

35. In regard to innovation and entrepreneurship, it was noted that there were many innovators but little support for them. The Caribbean Telecommunications Union (CTU) program to support innovation resulted in success stories with the company F1 Software provided as evidence that it was possible to cultivate that type of innovators with the right support.

36. A key point made was a criticism of the long-standing innovation supporting institutions whose mindset and 'model' had not changed in years. It was stated that it was critical to break existing mindsets and traditional models that 'supported' the way business models were formed, as there were more opportunities for a new business model to make the most of new ICT resources available. It was advised that institutions for innovation needed to be constantly scanning the ensuing environment of ICT.

37. It was also recognized that good business principles had not been documented. A business model that made the most of ICT tools presently available was required. There was common agreement for a need for a diagnosis of organizations steeped in outdated thinking and their failure to support development and a need for re-education on the value for ICT products.

38. It was stated that the financial sector was not in tune with risky financing and that difficulty to access credit was stopping innovation. Banks required collateral which a young person with a new idea normally did not have. It was also stated that a bank in Jamaica had recently announced that it regarded a 'start-up' as a company which had been operating for two years. It was countered that money was not always the key and that the reorientation of the thought process of the financial sector in regards to guidance and direction could be crucial in supporting innovation.

39. With regards to knowledge economies and development agendas, it was stated that one must take into account specific country realities, bearing in mind country characteristics. A point on differentiating ICT and the knowledge economy was raised and it was proposed that countries should concentrate on national knowledge economy strategies instead of ICT strategies. It was also noted that the government measure was predominantly the impact on votes received, so the prosperity of projects must be made clear and linked to the potential in terms of voter acceptance.

40. With regards to a holistic approach of ICT4D, a point was made about the cheaper pricing of new technologies, for example, the price reduction of bandwidth in Trinidad and Tobago. The need for a single minister with responsibility for ICT was also raised due to the complications of the current predicament of who to engage with on these issues, for example, a science and technology minister, a telecommunications minister, or other.

41. It was suggested that CARICOM could create a model that would be an externally imposed strategy, overcoming political issues of removal of power of some ministers in the creation of an ICT minister.

42. With regards to ICT as an economic sector, it was agreed that ICT should be seen as an industry and requisite policies must be designed to support ICT. There was a need to provide more advice and access to information on the concept of developing into a knowledge economy at a subregional level, as this would be more efficient than several individual country efforts.

43. There was a need to bring all stakeholders in the ICT sector together, in the same way as the tourism sector, for example, transport, food production, hotels, in order to know who the stakeholders were and to create forums for collaboration. It was important to identify what was required for the development of the knowledge economy, and how were economies in the subregion supposed to get there. In addition to formal training, other modalities such as visits to successful counterparts, in order to have greater impact in domestic economy were also recommended.

44. As the largest consumer of ICT through procurement of technology, governments could provide the opportunities needed to develop SMMEs through procurement. Also recognized was the risk that the government perhaps compromised quality of ICT goods and services by being the largest purchaser. It was mentioned that CARICOM was working on a regional procurement policy, as SMMEs could not bid for the largest contracts at that time.

45. Considering a subregional approach, it was mentioned with respect to extreme environmental events that there was no hurricane-resistant land mass in the Caribbean to base a single response disaster headquarters. When hurricanes hit Caribbean countries, the entire country was impacted due to small landmass and there was a dependence on other islands for mobilizing a national response to a disaster. Collaboration amongst countries in the subregion was therefore recommended.

46. It was stated that there was a need to build capacity of the ICT industry at the subregional level, including building the human resource capacity to utilize ICT in other types of training and skills recommended.

47. In terms of competition, the need for foresight in identifying areas where competition would arise and management in a cooperative way rather than everyone taking individual paths was recognized.

48. Considering the measurement and incorporation of KAM in the Caribbean, it was stated that the methodology needed to be aligned with OSILAC instruments through workshops and to have measurable data collected. The overlapping of different ICT development related agencies in the Caribbean was identified as an issue. The CTU said that it was happy to fill the gaps that other agencies such as OSILAC had not covered and that CTU did not aim to become involved in competition, however the fact that no central coordinator existed meant that those overlaps were inevitable.

8. Opportunities for collaboration

49. The ECLAC representative summarised the areas of collaboration that were identified: submission of projects for financing; coordination; and implementation of capturing data.

50. The Caribbean Development Bank expressed an interest in discussing collaboration on a policy workshop. ECLAC and CARICAD also expressed their interest on that initiative.

9. Closing remarks

51. The representative of ECLAC thanked all experts for participating in the meeting and their contributions to a lively discussion. He looked forward to receiving further input. He stated that the ECLAC looked forward to continued cooperation and collaboration with governments and development agencies in the Caribbean, in an effort to work towards greater development in the subregion through the advancement of knowledge management.

Annex I**List of participants**

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Annex II**List of documents**

Document symbol	Document title
LC/CAR/L.251	Programme of work of the ECLAC Subregional Headquarters for the Caribbean, 2010-2011
ECLAC/POS/2011/MSKE/1	Provisional agenda
ECLAC/POS/2011/MSKE/Add.1	Provisional annotated agenda
ECLAC/POS/2011/MSKE/2	Provisional programme
ECLAC/POS/2011/MSKE/3	Draft study on “Strategies for Measuring the Knowledge Economy in the Caribbean”