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DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS  
STATISTICS DIVISION

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**Seminar  
Creation, Recognition and Valuation  
of  
Intellectual Assets**

**New York, 13 – 14 July 2006**  
United Nations, Conference room 6

**Report of the meeting**

## **Introduction**

1. This seminar on the creation, recognition and valuation of intellectual assets was opened by Mr. Paul Cheung, Director of United Nations Statistics Division (UNSD), Department of Social and Economic Affairs (DESA) and Mr. Bob Shearer, Program Director of the Taskforce on National Knowledge and Intellectual Property Management. The seminar brought together senior statisticians, accountants, academics, leaders of the business community and representatives from other International Organizations with the objective to share experience and building consensus on the conceptual framework for intellectual assets (IA). In their opening statements, both speakers expressed the importance of measurement of IA in macro statistics and business accounts, respectively, with the growing knowledge and recognition of the role of IA in corporate management and as value driver of economic growth. More generally, both speakers asked the participants to explore whether a regular international coordination mechanism should be established for sharing information on the latest developments of business practises, accounting standards and statistical standards on macroeconomic accounts like the 1993 System of National Accounts.

## **Discussions**

2. The keynote was delivered by Professor Baruch Lev from the Stern Business School at the New York University. He elaborated that intangible assets are now widely recognised and that they increasingly become commodities. However, these assets are unique, not traded in organized markets, subject to hazy property rights and can not readily be valued. Consequently, there are information asymmetries between managers and investors and ignorance about the contribution of these assets in the business. These asymmetries result in a no-win situation with excessive high cost of capital and low investment in intangibles. In financial accounting, internally generated intangibles are ignored, but acquired intangibles are capitalized. Corporations use these asymmetries to manipulate information and managers are not willing to give up their information advantage and likewise, analysts do not want to lose their competitive advantage. Lev suggested working with industry groups to develop information templates on intangible assets. Lev regards reporting on the capitalization of intellectual assets improbable. However, he believes that markets in intangibles can be fostered by strengthening intellectual property rights, encouraging markets in intellectual property and by fighting infringements on property rights vigorously. Moreover, given users' demand, corporations may be more willing to disclose information on investment in intangible assets than currently reported on their balance sheets.

3. Professor Charles Hulten from the University of Maryland discussed the role of intangible capital in economic growth. He argued that the recognition of R&D as capital formation by the SNA is an important step forward, in face of the fact that its capitalization has not been recommended by the business accounting standards. Hulten said that the capitalization of R&D is not only favoured by macro economic theory, but also at the micro economic level. The capitalization of intangible assets leads to a more accurate understanding of how firms and economies actually evolve. Hulten showed

convincingly how the capitalization of intellectual assets adds to the top line of corporate income, gross domestic product and eventually gross domestic income. He recommended that the boundaries of R&D should be carefully defined; that the cost-based approach of valuation is probably more relevant than a stock market approach; and price deflators for R&D expenditures should be developed. The calculation of capital stock values for R&D should be based on the same principles used to calculate capital stock for fixed assets. In addition, an internal rate of return should be used to calculate capital services and externalities should be excluded. Hulten also wants to capitalize non-scientific R&D and worker training, marketing and management capital.

4. Participants argued that it is difficult to separate R&D from marketing expenditure. Some view IP/R&D as to receive rent and not rentals. Hulten said that the omitted values of IA shift the production function. Lev argued that corporations do not want to capitalize IA as it is used as a profit manipulation tool. In addition it would be very difficult to enforce accounting rules that nobody want to follow. He prefers disclosure rather than reporting. Although the view of accountants is that the standard disclosure as footnotes is very low.

5. Herman Smith from the UNSD discussed the role of intellectual assets in the update of the 1993 SNA. He gave an overview of the SNA update process and the asset boundary in the 1993 SNA. He reported on the recommendations of the Advisory Expert Group on National Accounts to capitalize R&D and goodwill, the latter only when transacted on the market, and the proposed new asset classification which groups together intellectual property products under one umbrella. Smith informed the participants about the work undertaken by the OECD in writing manuals to guide the process of implementing the capitalization of R&D and software development. Regarding the issue of freely available R&D, the participants agreed that freely available R&D should be capitalised if the owner controls and manages it to his benefit and he can exclude others from taking ownership of the R&D.

6. Carol Robbins from the BEA and Dirk van den Bergen from Statistics Netherlands presented their work of the compilation of R&D satellite accounts for the USA and the Netherlands respectively. Their work is based on the definition and boundaries of R&D as described by the Frascati manual<sup>1</sup>. Both presentations showed that it is possible to estimate capitalized R&D by adjusting data obtained from surveys based on the Frascati manual. Their results show that capitalized R&D increases the level of gross domestic product by about 1-2 per cent. Many challenges still remain such as overlaps with software, globalization of R&D, constant price measures, freely available R&D, determination of economic ownership (either the creator or financier) and related effects on the recording of transactions and international trade flows.

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<sup>1</sup> OECD. 2002. Frascati manual: Proposed standard practice for surveys on research and experimental development. OECD publication service. Paris.

7. Yoshiaki Tojo from the OECD Directorate of Science Technology and Industry presented the long history of collecting and analysing R&D data. He also argued that value creation can be achieved by management and control of investment in intellectual assets. He revealed that studies of disclosures of expenditures on intellectual assets have demonstrated the positive effect on market capitalisation as well as the gains in efficiency in the capital markets. Tojo emphasised that there is not yet a universally accepted taxonomy of IA and template for valuation of intellectual assets but best practices have emerged.

8. Halsey Bullen from the Financial Accounting Standard Board (FASB) of the United States presented an overview of the current accounting standards on intellectual assets. He emphasised that financial accounts of corporations are compiled to provide information for investment and credit decisions. However, the financial accounts as reported by the standards will never claim to report on all assets and liabilities suitable for economic analysis considering the standards' principles on recognition and measurability of assets including IA. He elaborated on the special challenges to value assets (fair value or historical cost) and also reported the reluctance of corporations to capitalize R&D and other costs to develop intellectual assets.

9. Joanna Seddon from MillwardBrown Optimor presented an overview of the extent of trademarks in the value of corporations; which show a wide variation between different industries. She argued that brands add value and that even the accounting standards are moving in the direction to capture brand value, albeit only when the company is transacted. She elaborated on how to value brands indicating that a valuation based on economic use is the method of choice. She indicated that marketing contributes to brand value but is not the main factor that builds it. Brands can be separated from its originator as in the case of franchises, therefore the need to recognise investment in brands separately.

10. Roland Burgman from AssetEconomics, Inc. presented an overview of a framework for enhanced business reporting. He argued that the market value of a company consists of three components namely, historical net capital plus the present value of economic profit (e.g., economic value added) plus the present value of future growth in economic value added. He sees reporting on intellectual capital as part of operational reporting which, when combined with financial reporting, will facilitate a more robust enterprise valuation by investors and their agents. Because intellectual capital resources have different characteristics than traditional capital, Burgman split intellectual capital into three components, namely relational, organizational and human using three types of business models, namely value chains (which transform inputs into outputs), value shops (which solve problems or exploit opportunities) and value networks (which facilitate or mediate between transactors). Based on a search in the financial reports of companies on keywords related to IA, Burgman concluded that reporting on aspects of IA in financial reports in any form is very low. Burgman proposed that a consideration of operational reporting should be compulsory and that reporting on intellectual capital should be part of that consideration. He proposed that this be regulated in frameworks such as the MD&A and "Management Commentary"

frameworks of the International Accounting Standards Board (IASB). Reporting should be principles-based rather than rules-based and the content should be based on the company's predominant business models and their value drivers where the content of operational and IC reporting is conditioned by the legal concepts emanating from law of neglect such as "standard of care", "duty of care" and "gross departure from duty of care".

11. Steve Henning again emphasised the importance of intellectual assets in corporate valuation and the lack of common standards. He is concerned on how the needs for data on the macro level can be served without infringing on proprietary rights related to the information. In the discussions, it became clear that mandatory financial reporting would only work when information is relevant to corporate business and creditors being the main stakeholders. Therefore, it seems that at present a proposal for disclosure of financial and non-financial information would render better results to capture information on the valuation process of IA. Differences in industry practices would necessitate the development of information templates by main industries. A forum such as this seminar could facilitate an international agreement on these information templates for IA based on best practices through an alliance between leading national statistical offices (NSO), corporate business, academics, business accountants and investors/creditors.

12. Mike Geoffrey from USG Corporation presented a simple business model for managing intellectual asset products. He argues that the management of intellectual assets should work at an operational level, like marketing, manufacturing and research, and be value driven in order to be a functional business tool to create value. The valuation of intellectual assets may be either qualitative or quantitative and is an ongoing process. The value of intellectual assets should be part of routine reporting customarily relied on by business managers. By building value recognition into the reporting process, the management of intellectual assets will naturally become a routine part of the business decision-making process.

13. Bo Heiden from the Center for Intellectual Property Studies (CIP) at the Chalmers University of Technology also showed the extent of intangible assets in corporate value. He split intellectual capital into human resources and intellectual assets and even includes financial assets and some elements of physical capital in this category. The exploitation of intellectual capital is through the application of human resources. He argues that the value of a firm's intellectual capital can not be separated from the competence of its management. We look at the knowledge economy through the lens of an industrial point of view. Intellectual assets need to be activated to contribute to wealth.

14. Roya Ghafele from the World Intellectual Property Organization presented WIPO's current thinking on identifying indicators for IP management practices that may positively impact public health and asked how current knowledge on asymmetries in reporting systems at the firm and national level can be translated in the context of reporting systems for health. While methodologies for this type of undertaking may be similar to those used in national and company accounts, the aim of a quantitative appreciation of that kind would have to be defined differently. She also presented PCT

(Patent Cooperation Treaty) statistics as a relevant indicator for R&D in general and health in particular, which was picked up by participants with great interest.

15. Robin Lynch, from the UK Office for National Statistics, reported that the ONS does not want to endanger the real progress by being too ambitious in the scope of IP to be included in the national accounts and risk delaying the recognition of R & D in the SNA. They will also "keep the door open" in order not to damage future attempts to widen the scope of IP to be recognized as assets in the accounts

### **Main conclusions**

16. From the presentations at the seminar the importance of intellectual assets in the valuation of market capitalisation and in explaining economic growth was again highlighted.

17. R&D assets (patents and copyrights) together with other intellectual assets such as trade marks, brand names and franchises (non-scientific intellectual assets) are actively managed and used in production processes. This development forces us to revisit our approach of analysing business and economic developments. It is a paradigm shift from an industrial economy approach to a knowledge economy approach. In this context it could imply that assets such as trade marks, brand names and franchises should be classified as produced assets providing rental income. This approach is also supported by classification statisticians who view income from trade marks and franchises as rental income generated from a production activity, which is contrary to the treatment of income from assets classified as non-produced assets. With a consistent asset valuation of the knowledge economy in mind, it should be brought to the attention of the national accounts community through the ISWGNA about the differing views on the treatment of "marketing assets" like trade marks and franchises.

18. Financial accounting rules recognise the capitalisation of intellectual assets only in a limited way. This can be attributed to the use of financial accounts to provide information for investment and credit decisions. Financial accounting information should be supplemented by operational reporting to assess the total value of assets used in production process.

19. The participants commended the national accountants for taking the first step to recognised R&D as capital formation. Although it is accepted that the valuation of R&D by input costs is not ideal, they view this as an important starting point to include all intellectual assets. The participants encouraged the national accountants to work towards the implementation of R&D capitalization, although they also recognised the challenges to do it. The proposed OECD handbook of the Canberra II group on implementation guidelines for R&D capitalization should be supported.

20. On the issue of freely available R&D participants agreed that freely available R&D should be capitalised if the owner control and manage it to his benefit and he can exclude others from taking ownership of the R&D. They viewed the notion of “intended benefit” in the proposed Canberra II clarification of this issue as subjective and therefore difficult to measure.

21. The recognition of R&D at input costs and other intellectual assets only when transacted is clearly very conservative although it is in line with the conservative reporting principles in financial statements. Macro estimates of the underlying asset base for economic performance go beyond the sale of entities. Work is needed to incorporate all intellectual assets on the balance sheet. Of particularly importance is the need to develop decision making models for asset valuation on the micro level in order to assist valuation at the macro level. In addition, the knowledge about the interaction between different types of intellectual assets and taxonomy of definitions should also be developed. It was proposed that these issues should form part of the long-term research agenda of the SNA.

22. All participants shared the assessment that the rich discussions of this clearly indicated the considerable value added of bringing different perspectives on the topic of R&D and IA together in a common forum.

23. UNSD was asked to explore with the Canberra II potential coordination mechanisms to share information on the latest developments of business management practices, accounting standards and statistical standards on macroeconomic accounts.

24. Moreover, the Canberra II group should be approached by UNSD to include in their manual on the capitalization of R&D and software, additional text (possibly in a part II of the manual) that presents the taxonomy and best practices in support of the recognition and the valuation of IA not covered by R&D and software.

25. The representative of WIPO suggested articulating the aim for improved reporting systems not only in terms of economic growth, but also in terms of producing a maximum of public health benefits. The Organization also proposed to use PCT statistics as a source for documenting trends related to innovation and suggested to continue the dialogue with UNSD and share relevant information in view of reflecting international patenting trends in national accounts.