

## REFERENCES

- ABRAMOVITZ M., 1952, Economics of growth, in B. HALEY (Ed.), *A survey of contemporary economics*, Vol. 2, Homewood, IL: Richard D. Irwin, for the American Economic Association, pp. 132-178.
- ADAM M.-C. AND A. FARBER, 1994, *Le financement de l'innovation technologique - Théorie économique et expérience européenne*, Presse Universitaire de France, 195 p.
- ADAMS J., 1990, Fundamental stocks of knowledge and productivity growth, *Journal of Political Economy*, 98(4), pp. 673-702.
- ADAMS J., 1993, Science, R&D, and invention potential recharge : U.S. evidence, *American Economic Review*, 83(2), pp. 458-462.
- AGHION P., DEWATRIPONT M. AND P. REY, 1997, Corporate governance, competition policy and industrial policy, *The European Economic Review*, 41, pp. 797-805.
- AGHION P. AND P. HOWITT, 1990, A model of growth through creative destruction, *Econometrica*, 60, pp. 323-351.
- ANTONELLI C., 1989, A failure-inducement model of research and development expenditures, Italian evidence from the early 1980s, *Journal of Economic Behavior and Organization*, 12(2), June, pp. 159-180.
- ARCHIBUGI D., 1997, The economics of innovation and technological change: two handbooks and two masters, *International Review of Applied Economics*, 11(2) , pp. 303-9.
- ARELLANO M. AND O. BOVER, 1995, Another look at the instrumental variable estimation of the error-components models, *Journal of Econometrics*, 68, pp. 29-51.
- ARROW K., 1962, The economic implication of learning by doing, *Review of Economic Studies*, 29(2), pp. 155-173.
- BADULESCU P., 1996, Inter-country knowledge and research transfers, paper presented at the New England Conference on Efficiency and Productivity, Department of Econometrics, University of New England, Armidale, Australia, November 23-24, 1995, 23 p.
- BALDWIN W. L. AND J. T. SCOTT, *Market structure and technological change*, Chichester: Harwood.
- BASANT R., 1993, R&D, foreign technology purchase and technology spillovers in Indian industry: some explorations, *UNU/INTECH Working Paper*, N°8.
- BEASON R. AND D. E. WEINSTEIN, 1996, Growth, economies of scale and targeting in Japan (1955-1990), *Review of Economics and Statistics*, 78(2), pp. 286-295.
- BECCARELLO M., 1996, Time series analysis of market power: Evidence from G-7 manufacturing, *International Journal of Industrial Organization*, 15, pp. 123-136.
- BELSLEY D. A., KUH E. AND R. WELSCH, 1980, *Regression diagnostics: Identifying influential data and sources of collinearity*, New York: John Wiley & Sons.
- BERGERON S. AND C. LE BAS, 1997, Redistribution technologique et diffusion intersectorielle de l'innovation, Working Paper, Laboratoire d'Economie et Statistique Appliquées (LESA), Université Lumière - Lyon 2.
- BERNARD A. B. AND C. I. JONES, 1996, Productivity across industries and countries: time series theory and evidence, *Review of Economics and Statistics*, 78(1), pp. 135-146.

- BERNSTEIN J. I., 1988, Costs of production, intra- and interindustry R&D spillovers: Canadian evidence, *Canadian Journal of Economics*, 21(2), pp. 324-347.
- BERNSTEIN J. I., 1989, The structure of Canadian inter-industry R&D spillovers and the rates of return to R&D, *Journal of Industrial Economics*, 37(3), pp. 315-328.
- BERNSTEIN J. I., 1995, International R&D spillovers between U.S. and Canadian industries, *Canadian Journal of Economics*, Papers and Proceedings.
- BERNSTEIN J. I., 1997, Interindustry R&D spillovers for electrical and electronic products: The Canadian case, *Economic Systems Research*, 9(1), pp. 67-80.
- BERNSTEIN J. I. AND P. MOHNEN, 1995, International R&D spillovers between U.S. and Japanese R&D intensive sectors, *NBER Working Paper*, N° 4682.
- BERNSTEIN J. I. AND M. I. NADIRI, 1988, Interindustry R&D spillovers, rates of return and production in high-tech industries, *American Economic Review*, 78(3), pp. 429-434.
- BERNSTEIN J. I. AND M. I. NADIRI, 1989, Research and development and intraindustry spillovers: An empirical application of dynamic duality, *Review of Economic Studies*, 56, pp. 249-267.
- BERNSTEIN J. I. AND M. I. NADIRI, 1991, Product demand, cost of production, spillovers and the social rate of return to R&D, *NBER Working Paper*, N° 3625.
- BERNSTEIN J. I. AND X. YAN, 1995, International R&D spillovers between Canadian and Japanese industries, *Mimeo*.
- BHANICH SUPAPOL A., 1990, The commercialization of government sponsored technologies: Canadian evidence, *Research Policy*, 19(4), pp. 369-78.
- BLADES D. W., 1991, Capital measurement in the OECD countries: an overview, in OECD, *Technology and productivity - The challenge for economic policy*, TEP, The Technology and Economy Programme, pp. 157-170
- BLOOM N., GRIFFITHS R. AND J. VAN REENAN, 1997, Do R&D tax credit work? Evidence from an international panel of countries 1979-94, Paper presented at the TSER Conference, Innovation, Competition and Employment, August 21-22, Chania,
- BOSWORTH, 1978, The rate of obsolescence of technical knowledge - A note, *Journal of Industrial Economics*, 26(3), pp. 273-279.
- BRANCH B., 1974, Research and development activity and profitability: A distributed lag analysis, *Journal of Political Economy*, 82(5), pp. 999-1011.
- BRANSTETTER B., 1995, Are knowledge spillovers international or intranational in scope? Microeconomic evidence from the U.S. and Japan, *Mimeo*, Harvard University, January, 37 p.
- BREUSH T. AND A. PAGAN, 1980, The LM test and its applications to model specification in econometrics, *Review of Economic Studies*, 47, pp. 239-254.
- BROOKS H., 1994, The relationship between science and technology, *Research Policy*, 23, pp. 477-486.
- CANTWELL J., 1989, *Technological innovation and multinational corporations*, Oxford and Cambridge, Mass., Basil Blackwell.

- CAPRON H., 1990, Implementation of macromodels with endogenous technological change, in T. Khalil and A. Bayraktar (eds), *Management of Technology II, the Key for Global Competitiveness*, Industrial Engineering and Management Press, Georgia, pp. 535-544.
- CAPRON H., 1992, *Economic quantitative methods for the evaluation of the impact of R&D programmes - A state-of-the-art*, Commission of European Communities, Brussels, 241 p.
- CAPRON H., 1992b, A state-of-the-art of quantitative methods for the assessment of R&D programmes, in Tharek M. Khalil and Bulent A. Bayraktar (Eds.), *Management of Technology III*, Institute of Industrial Engineers, pp. 1195-1204.
- CAPRON H., 1992c, The applied econometrics of R & D public funding : What's that for ?, in Capron H. (Ed.), *The Quantitative Evaluation of the Impact of R & D Programmes*, Monitor-Spear Series, European Community Commission, Brussels, pp. 90-126.
- CAPRON H., 1994, Science and technology policy: New trends, in THAREK M. K. AND BULENT A. B., (Ed), *Management of technology IV*, Institute of Industrial Engineers, pp. 39-48.
- CAPRON H. AND M. CINCERA, 1997, Exploring the spillover impact on productivity of world-wide manufacturing firms, *Annales d'Economie et de Statistiques*, forthcoming.
- CAPRON H., ODAGIRI H. AND B. VAN POTTELSBERGHE DE LA POTTERIE, 1996, Inter-industry technological spillovers: An international comparison, paper presented in the international conference on The Economics and Econometrics of Innovation, June 3-5, in Strasbourg.
- CAPRON H. AND B. VAN POTTELSBERGHE DE LA POTTERIE, 1997a, Public support to business R&D: A survey and some new quantitative evidence, in *Policy Evaluation in Innovation and Technology*, OECD, 1997, pp. 171-188.
- CAPRON H. AND B. VAN POTTELSBERGHE DE LA POTTERIE, 1997b, Public support to business R&D: An integrated assessment scheme, in *Policy evaluation in innovation and technology*, OECD, 1997 (forthcoming). OECD, 1997, pp. 35-48.
- CARMICHAEL J., 1981, The effects of mission-oriented public R&D spending on private industry, *Journal of Finance*, 36(3), pp. 617-27.
- CAVES R. E., 1974, Multinational firms, competition and productivity in host-country markets, *Economica*, 41, pp. 176-193.
- CHESNAIS F., 1986, Science, technology and competitiveness, *OECD STI Review*, pp. 86-124.
- COE D. T. AND E. HELPMAN, 1995, International R&D spillovers, *European Economic Review*, 39, pp. 859-887.
- COE D. T., HELPMAN E. AND A. HOFFMAISTER, 1995, North-South R&D spillovers, *NBER Working Paper*, N°5048.
- COHEN W., 1995, Empirical studies of innovative activity, in P. STONEMAN (Ed.), *Handbook of the economics of innovation and technological change*, Blackwell Handbooks in Economics, pp. 182-264.
- COHEN W. AND R. LEVIN, 1989, Empirical studies of innovation and market structure, in R. Schmalensee and R. Willig (Eds.), *Handbook of Industrial Organization*, North Holland, Amsterdam, pp. 1059-1107.
- COHEN W. AND D. LEVINTHAL., 1989, Innovation and learning: The two faces of R&D: Implications for the analysis of R&D investment, *Economic Journal*, 99(397), pp. 569-596.
- COOK R. D., 1977, Detection of influential observations in linear regression, *Technometrics*, February, pp. 15-18.

- CRÉPON B. AND E. DUGUET., 1993, Research and Development, competition and innovation: An application of pseudo maximum likelihood and simulated maximum likelihood to count data models with heterogeneity, INSEE, Direction des Etudes et Syntheses Economiques, document de travail G 9314.
- CROTT R., 1995, *Evaluation de l'impact des aides publiques directes à la recherche industrielle: une étude empirique sur entreprises wallonnes et belges*, Thèse de Doctorat, Université Catholique de Louvain, Nouvelle série N°246.
- CUNÉO P. AND J. MAIRESSE, 1984, Productivity and R&D at the firm level in French manufacturing, in Z.GRILICHES (Ed.), *R&D, Patents and Productivity*, Chicago, University of Chicago Press, pp. 419-462.
- DEBRESSON C., 1990, Analyse inter-industrielle et le changement technologique, *Revue d'Economie Politique*, 100(6), pp. 833-869
- DEOLALIKAR A.B. AND R. E. EVENSON, 1989, Technology production and technology purchase in Indian industry: An econometric approach, *Review of Economics and Statistics*, 71(4), pp. 687-692.
- DOLLAR D. AND N. WOLFF., 1993, *Competitiveness, convergence and international specialization*, The MIT Press, Cambridge, Massachusetts, pp. 230.
- DUNNING J. H., 1981, *International production and the multinational enterprise*, London, George Allen and Unwin.
- DUNNING J. H., 1994, Multinational enterprises and the globalization of innovatory capacity, *Research Policy*, 23, pp. 67-88.
- DUVEAU G., 1946, *La vie ouvrière en France sous le second empire*, 2nd ed. Paris, Gallimard.
- EATON J. AND S. KORTUM, 1994, International patenting and technology diffusion, *NBER Working Paper*, N° 4931.
- EATON J. AND S. KORTUM, 1995a, Trade in ideas: patenting and productivity in the OECD, *NBER Working Paper*, N° 5049.
- EATON J. AND S. KORTUM, 1995b, Engines of growth: domestic and foreign sources of innovation, *NBER Working Paper*, N° 5207.
- ENCARNATION D., 1992, *Rivals beyond trade: America versus Japan in global competition*, Ithaca, NY: Cornell University Press, 350 p.
- ENCARNATION D., 1994, Investment and trade by American, European and Japanese multinationals across the Triad, in ENCARNATION D. AND M. MASON (Eds), *Does ownership matter? Japanese multinationals in Europe*, Clarendon Press, Oxford, pp. 205-233.
- ENCARNATION D. AND M. MASON, 1994, Does ownership matter? Answers and Implications for Europe and America, in Encarnation D. and M. Mason (Eds), *Does ownership matter? Japanese multinationals in Europe*, Clarendon Press, Oxford, pp. 441-449.
- ENCARNATION D. AND M. MASON, 1994, *Does ownership matter? Japanese multinationals in Europe*, Clarendon Press, Oxford, 456 p.
- ENGLANDER A., EVENSON R. AND M. HANAZAKI, 1988, Recherche, développement, innovation et fléchissement de la productivité totale des facteurs, *Revue Economique de l'OCDE*, 11, pp. 7-47.
- ERGAS H., 1987, The importance of technology policy, in Dasgupta P. and P. Stoneman, (Eds), *Economic policy and technological performances*, Cambridge University Press, pp. 51-96.

- FECHER F., 1990, Effets directs et indirects de la R-D sur la productivité: une analyse de l'industrie manufacturière belge, *Cahiers économiques de bruxelles*, 128, pp. 459-83.
- FECHER F., 1992, Croissance de la productivité, rattrapage et innovation: une analyse des secteurs manufacturiers de l'OCDE, *Economie et Prévision*, 102-103(1/2), pp. 117-127.
- FREEMAN C. (Ed.), 1990, *The economics of innovation*, Aldershot, Edward Elgar.
- FREEMAN C., 1992, Formal scientific and technical institutions in the national system of innovation, in B.-A. LUNDVALL (Ed.), *National systems of innovation - Towards a theory of innovation and interactive learning*, Pinter Publisher, pp. 167-187.
- FÖLSTER S. AND G. TROFIMOV, 1996, Do subsidies to R&D actually stimulate R&D investment?, *Mimeo*, The Industrial Institute of Economic and Social Research.
- GITTLEMAN M. AND E. WOLFF, 1995, R&D activity and cross-country growth comparisons, *Cambridge Journal of economics*, 19, pp. 189-207.
- GLOBERMAN S., 1972, The empirical relationship between R&D and industrial growth in Canada, *Applied Economics*, 4, pp. 181-195.
- GLOBERMAN S., 1979, Foreign direct investment and 'spillover' efficiency benefits in Canadian manufacturing industries, *Canadian Journal of Economics*, 12, pp. 42-56.
- GOTO A. AND K. SUZUKI, 1989, R&D capital, rate of return on R&D investment and spillover of R&D in Japanese manufacturing industries, *Review of Economics and Statistics*, 71(4), pp. 555-564.
- GRAHAM E. M. AND P. R. KRUGMAN, 1991, *Foreign direct investment in the United States*, Washington, Institute for International Economics, 195 p.
- GRANSTRAND O., HÅKANSON L. AND S. SJÖLANDER, 1993, Internationalization of R&D - A survey of some recent research, *Research Policy*, 22, pp. 413-430.
- GREENE W. H., 1993, *Econometric analysis*, second edition, Macmillan Publishing Company, 791p.
- GRILICHES Z., 1964, Research expenditures, education and the aggregate agricultural production function, *The American Economic review*, 54(6), pp. 961-974.
- GRILICHES Z., 1973, Research expenditures and growth accounting, in William Z. (Ed.), *Science and technology in economic growth*, Macmillan, London, pp. 59-95.
- GRILICHES Z., 1979, Issues in assessing the contribution of research and development to productivity growth, *The Bell Journal of Economics*, 10(1), pp. 92-116.
- GRILICHES Z., 1980a, R&D and the productivity slowdown, *The American Economic review*, 70(2), pp. 343-348.
- GRILICHES Z., 1980b, Returns to research and development expenditures in the private sector, in Kendrick J. and Vaccara B. (Eds.), *New developments in productivity measurement and analysis*, University of Chicago Press, N°105, pp. 419-54.
- GRILICHES Z., 1984, *R & D, Patents and Productivity*, University of Chicago Press, Chicago.
- GRILICHES Z., 1986, Productivity, R&D and basic research at the firm level in the 1970's, *The American Economic Review*, 76(1), pp. 141-154.
- GRILICHES Z., 1988, Productivity puzzles and R&D: Another nonexplanation, *Journal of Economic Perspectives*, 2(4), pp. 9-21.

- GRILICHES Z., 1992, The search for R&D spillovers, *Scandinavian Journal of Economics*, 94, pp. 29-48.
- GRILICHES Z., 1994, Productivity, R&D and the data constraint, *American Economic Review*, 84(1), pp. 1-23.
- GRILICHES Z., 1995, R&D and productivity: Econometric results and measurement issues, in Stoneman P. (Ed.), *Handbook of the economics of innovation and technological change*, Blackwell Handbooks in Economics, pp. 52-89.
- GRILICHES Z. AND M. D. INTRILIGATOR (Eds.), 1983, *Handbooks in Economics - Volume I*, North-Holland Publishing Company.
- GRILICHES Z. AND F. LICHTENBERG, 1984a, R&D and productivity growth at the industry level : Is there still a relationship?, in Z.GRILICHES (Ed.), *R&D, Patents and Productivity*, Chicago, University of Chicago Press, pp. 465-496.
- GRILICHES Z. AND F. LICHTENBERG, 1984b, Interindustry technology flows and productivity growth: a reexamination, *The Review of Economics and Statistics*, 66(2), pp. 653-659.
- GRILICHES Z. AND J. MAIRESSE, 1983a, Comparing productivity growth: An exploration of French and U.S. industrial and firm data, *European Economic Review*, 1983, 21, pp. 89-119.
- GRILICHES Z. AND J. MAIRESSE, 1983b, R&D and productivity growth: Comparing Japanese and US manufacturing firms, in *NBER, Productivity growth in Japan and the United States*, N° 1554, pp. 317-40.
- GRILICHES Z. AND J. MAIRESSE, 1984, Productivity and R&D at the firm level, in Z.GRILICHES (Ed.), *R&D, Patents and Productivity*, Chicago, University of Chicago Press, pp. 339-373.
- GRILICHES Z. AND J. MAIRESSE, 1995, Production functions: The search for identification, *NBER Working Paper Series*, N° 5067, 35p.
- GRILICHES Z. AND V. RINGSTAD, 1971, *Economies of scale and the form of the production function*, Amsterdam: North Holland, 1971.
- GROSSMAN G. AND E. HELPMAN, 1989, Comparative advantage and long run growth, *American Economic Review*, 89, pp. 769-815.
- GROSSMAN G. AND E. HELPMAN, 1991, *Innovation and growth in the global economy*, Cambridge: MIT Press.
- GUELLEC D., 1991, *Innovation et Compétitivité*, INSEE-Méthode No 37-38, *Economica*, 246 p.
- HALL B. H., 1992, R&D tax policy during the eighties: Success or failure?, *NBER Working Paper*, N° 4240, 49p.
- HALL B. H., 1993, New evidence on the impacts of R&D, *Brookings Papers on Economic Activity*, Microeconomics.
- HALL B. H., 1993, Industrial research during the 1980s: Did the rate of return fall?, *Brookings Papers: Microeconomics 2*, pp. 289-343.
- HALL B. H. AND MAIRESSE J., 1995, Exploring the relationship between R&D and productivity in French manufacturing firms, *Journal of Econometrics*, 65, pp. 263-293.
- HALL R. E., 1988, The relation between price and marginal cost in U.S. industry, *Journal of Political Economy*, 96(5), pp. 921-947.
- HANDLIN O., 1952, International migration and the acquisition of new skills, in Hoselitz B.F. (Ed.), *The progress of underdeveloped areas*, Chicago, University of Chicago press.

- HANEL P., 1988, L'effet des dépenses en R&D sur la productivité du travail au Québec, *Actualité Economique*, 64(3), pp. 396-415.
- HANEL P., 1994, Inter-industry flows of technology: An analysis of the Canadian patent matrix and input-output matrix for 1978-1989, *Technovation*, 8, Octobre.
- HARHOFF D., 1994, R&D, spillovers and productivity in German manufacturing firms, paper prepared for the CEPR Workshop on R&D spillovers, January 1995.
- HATANAKA M., 1974, An efficient estimator for the dynamic adjustment model with autocorrelated errors, *Journal of Econometrics*, 2, pp.199-220.
- HAUSMAN J.A., 1978, Specification tests in econometrics, *Econometrica*, 46(6), pp. 1251-1271.
- HEJAZI W. AND A. E. SAFARIAN, 1996, Trade, investment and United States R&D spillovers, University of Toronto, *miméo*, Canada, 21 p.
- HENDERSON W. O., 1954, *Britain and industrial Europe, 1750-1870*, Liverpool, Liverpool University Press.
- HOLEMANS B. AND L. SLEUWAEGEN, 1988, Innovation expenditures and the role of government in Belgium, *Research Policy*, 17, p. 375-379.
- HSIAO C., 1986, *Analysis of panel data*, Second Edition, Cambridge University Press, pp. 246.
- HUMBERT M., 1994, The globalization of technology as a challenge for national innovation systems, Paper presented at the EAEPE Conference Copenhagen, October 28-30, pp. 36.
- JAFFE A. B., 1986, Technological opportunity and spillovers of R&D: Evidence from firm's Patent, profits and market value, *The American Economic Review*, 76(5), pp. 984-1001.
- JAFFE A. B., 1988, Demand and supply influences in R&D intensity and productivity growth, *Review of Economics and Statistics*, 70(3), pp. 431-437.
- JANKOWSKI J. E., 1991, Do we need a price index for industrial R&D?, *Research Policy*, 22, pp. 195-205.
- JONES C. I., 1995a, Time series tests of endogenous growth models, *Quarterly Journal of Economics*, 110(2), pp. 495-526.
- JONES C. I., 1995b, R&D-based models of economic growth, *Journal of Political Economy*, 103(4), pp. 759-784.
- JONES G. AND H. G. SCHRÖTER, 1993, *The rise of multinationals in Continental Europe*, Edward Elgar, 217 p.
- KAUKO., 1996, Effectiveness of R&D subsidies - a sceptical note on the empirical literature, *Research Policy*, 25, pp. 321-23.
- KEANE M. P. AND D. E. RUNKLE, 1992, On the estimation of panel-data models with serial correlation when instruments are not strictly exogenous, *Journal of Business & Economic Statistics*, 10(1), pp. 1-9.
- KELLER W., 1996, Are international R&D spillovers trade-related? Analyzing Spillovers among randomly matched trade partners, University of Wisconsin-Madison, *miméo*.
- KELLER W., 1997, Technology flows between industries: Identification and productivity effects, *Economic Systems Research*, 9(2), pp. 213-220.
- KLETTE T., 1992, On the relationship between R&D and performance when innovative opportunities differ between firms, paper presented at the NBER Summer Institute.

- KOGUT B. AND S. J. CHANG, 1991, Technological capabilities and Japanese foreign direct investment in the United States, *The Review of Economics and Statistics*, 73, pp. 401-413.
- KOKKO A., 1992, *Foreign direct investment, host country characteristics and spillovers*, EFI/The Economic Research Institute, Stockholm School of Economics, 216 p.
- KRASKER W. S., KUH E. AND R. E. WELSCH., 1983, Estimation for dirty data and flawed models, in GRILICHES Z. AND M. D. INTRILIGATOR (Eds.), *Handbook of econometrics, Vol. 1*, North-Holland Publishing Company, Ch. 11, pp. 652-698.
- LAWRENCE R. Z., 1993, Japan's different trade regime : an analysis with particular reference to Keiretsu, *Journal of Economic Perspectives*, 7(3), Summer, pp. 3-19.
- LEONARD W., 1971, Research and development in industrial growth, *Journal of Political Economy*, 79(2), pp. 232-256.
- LEVIN R., KLEVORICK A. K., NELSON R. R., AND WINTER S. G., 1987, Appropriating the returns from industrial R&D, *Brookings Papers on Economic Activity*, pp. 783-820.
- LEVIN R. AND P. REISS, 1984, Test of a Schumpeterian model of R&D and market structure, in Z. GRILICHES (Ed.), *R&D, Patents and Productivity*, Chicago, University of Chicago Press, pp. 175-208.
- LEVIN R. AND P. REISS, 1988, Cost-reducing and demand-creating R&D with spillovers, *Rand Journal of Economics*, 19(4), pp. 538-556.
- LEVY D. P., 1990, Estimating the impact of government R&D, *Economic Letters*, 32(2), pp. 169-173.
- LEVY D. P. AND N. TERLECKYJ, 1983, Effects of government R&D on private R&D investment and productivity: a macroeconomic analysis, *Bell Journal of Economics*, 14(4), pp. 551-561.
- LEVY D. P. AND N. TERLECKYJ, 1989, Problems identifying returns to R&D in an industry, *Managerial and Decision Economics*, Special Issue, 1-2, pp. 43-9.
- LEYDEN D. P. AND A. N. LINK, 1987, Why are governmental R&D and private R&D complements?, *Applied Economics*, 23(10), pp.1673-1681.
- LEYDEN L. AND A. N. LINK, 1992, *Government's role in innovation*, Kluwer, Norwell Mass.
- LICHTENBERG F. R., 1984, The relationship between federal contract R&D and company R&D, *The American Economic Review*, 74(2), pp. 73-78.
- LICHTENBERG F. R., 1987, The effect of government funding on private industrial research and development : A re-assessment, *Journal of Industrial Economics*, 36(1), pp. 97-104.
- LICHTENBERG F. R., 1990, Issues in measuring industrial R&D, *Research Policy*, 19, pp. 157-163.
- LICHTENBERG F. R., 1993, R&D Investment and International Productivity Differences, in H. SIEBERT (Ed.), *Economic Growth in the World Economy*, Tübingen: Mohr.
- LICHTENBERG F. R. AND D. SIEGEL, 1991, The impact of R&D investment on productivity - new evidence using linked R&D - LRD data, *Economic Inquiry*, 29(2), pp. 535-551.
- LICHTENBERG F. AND B. VAN POTTELSBERGHE DE LA POTTERIE, 1996, International R&D spillovers: A re-examination, *NBER Working Paper Series*, # 5668, National Bureau of Economic Research, Cambridge, USA.
- LICHTENBERG F. AND B. VAN POTTELSBERGHE DE LA POTTERIE, 1997a, International R&D spillovers: A comment, *The European Economic Review* (forthcoming).

- LICHTENBERG F. AND B. VAN POTTELSBERGHE DE LA POTTERIE, 1997b, *The emerging technological boomerang, miméo*, Université Libre de Bruxelles and Columbia Business School.
- LINK A., 1982, An analysis of the composition of R&D spending, *Southern Economic Journal*, 49(2), pp. 342-349.
- NELSON R. R., 1988, Modelling the connections in the cross section between technical progress and R&D intensity, *Rand Journal of Economics*, 19(3), pp. 478-485.
- NELSON R. R. (Ed.), 1993, *National innovation systems - A comparative analysis*, Oxford University Press, 542 p.
- NELSON R. R., 1997, How new is New Growth Theory?, *Challenge*, 40(5), September/October, pp. 29-58.
- MADDISON A., 1987, Growth and slowdown in advanced capitalist economies: Techniques of quantitative assessment, *Journal of Economic Literature*, 25, pp. 649-698.
- MAIRESSE J. AND B. HALL., 1995, Estimating the productivity of research and development: An exploration of GMM methods using data on French and United States manufacturing firms, *miméo*, 32 p.
- MAIRESSE J. AND P. MOHNEN, 1990, Recherche-développement et productivité: Un survol de la littérature économétrique, *Economie et Statistique*, pp. 237-238.
- MAIRESSE J. AND P. MOHNEN, 1995, Research & development and productivity: A survey of the econometric literature, *miméo*.
- MAIRESSE J. AND M. SASSENOU, 1991, R&D and productivity: a survey of econometric studies at the firm level, *STI Review*, OECD, 8, pp. 9-46.
- MANKIW N. G., ROMER D. AND D. WEIL, 1992, A contribution to the empirics of economic growth, *Quarterly Journal of Economics*, 107, pp. 407-438.
- MANSFIELD E., 1965, Rates of return from industrial research and development, *American Economic Review*, 55, pp. 310-22.
- MANSFIELD E., 1980, Basic research and productivity increase in manufacturing, *American Economic Review*, 70, pp. 863-873.
- MANSFIELD E., 1984, Comment on the paper by Scherer, in Z. GRILICHES (Ed.), *R&D, patents and Productivity*, Chicago, IL, University of Chicago Press, pp. 461-464.
- MANSFIELD E., 1988, Industrial R&D in Japan and the United States: A comparative study, *American Economic Review*, 78, May, pp. 223-228.
- MANSFIELD E., 1995a, *Innovation, technology and the economy*, Aldershot, Edward Elgar, Vol. I, 327 pp., Vol II, 323 p.
- MANSFIELD E., 1995b, Academic research underlying industrial innovations: Sources, characteristics and financing, *The Review of Economics and Statistics*, pp. 55-65.
- MANSFIELD E. AND A. ROMEO, 1980, Technology transfer to overseas subsidiaries by U.S.-based firms, *Quarterly Journal of Economics*, December, pp. 737-750.
- MANSFIELD E., ROMEO A., AND L. SWITZER, 1983, R&D price indexes and real R&D expenditures in the United States, *Research Policy*, 12, pp. 105-112.

- MANSFIELD E., SCHWARTZ M. AND S. WAGNER, 1981, Imitation costs and patents: An empirical study, *Economic Journal*, 91, pp. 907-918.
- MANSFIELD E. AND L. SWITZER, 1984, Effects of Federal support on company-financed R and D : The case of energy, *Management Science*, 30(5), pp. 562-571.
- MANSFIELD E., TEECE D. AND A. ROMEO, 1979, Overseas Research and Development by US-based firms, *Economica*, 46, pp. 187-196.
- MARIN D., 1992, Is the export-led growth hypothesis valid for industrialized countries?, *The Review of Economics and Statistics*, 74(4), pp. 678-88.
- MARSCHAK J. AND W. ANDREWS, 1944, Random simultaneous equations and the theory of production, *Econometrica*, 12, pp. 143-205.
- MEYER-KRAHMER F., 1990, The Determinants of Investment in R&D and the Role of Public Policies : An Evaluation, in Dejiaco E., Hornell E., G. Vickery (Ed.), *Technology and Investment*, London, Pinter Publishers, pp. 73-78.
- MOHNEN P., 1990, Survol de la littérature sur les externalités technologiques, *L'Evaluation Economique*.
- MOHNEN P., 1992a, The relationship between R&D and productivity growth in Canada and other industrialized countries, Ottawa, Minister of Supply and Services Canada.
- MOHNEN P., 1992b, International R&D spillovers in selected OECD countries, *Cahier de Recherche du Département de l'Université du Québec à Montréal (UQAM)*, No. 9208, August, 49p.
- MOHNEN P., 1994, The econometric approach to R&D externalities, *Cahiers de Recherche du Département des Sciences Economiques de l'UQAM*, No. 9408.
- MOHNEN P., 1996a, Some estimates of international R&D spillovers, *miméo*, UQAM (Université du Québec à Montréal) and CIRANO.
- MOHNEN P., 1996b, R&D externalities and productivity growth, *STI Review*, 18, OECD, Paris, pp. 39-66.
- MOHNEN P., 1997, Input-output analysis of interindustry R&D spillovers, *Economic Systems Research*, 9(1), pp. 3-8.
- MOHNEN P., 1997a, R&D tax incentives: Issues and evidence, *miméo*, November, UQAM, CIRANO, and CentER, 20 p.
- MOHNEN P. AND L. - M. DUCHARME, 1996, Externalités et taux de rendements sociaux de la R&D, *Economies et Sociétés, Dynamique technologique et organisation*, W(3), juillet, pp. 193-217.
- MOHNEN P. AND J. - S. GALLANT, 1993, Foreign technology payments and international R&D spillovers, Congrès de la Société Canadienne de Science Economique, UQAM, 19-20 mai, 31p.
- MOHNEN P. AND N. LÉPINE, 1991, R&D, R&D spillovers and payments for technology: Canadian evidence, *Structural Change and Economic dynamics*, 2(1), pp. 213-228.
- MOHNEN P. AND M. I. NADIRI, 1985, Demande de facteurs et recherche-développement: estimations pour les Etats-Unis, le Japon, l'Allemagne et la France, *Revue Economique*, 36(5), pp. 943-974.
- MOWERY D. C., 1994, *Science and technology policy in interdependent economies*, Kluwer Academic Publishers, 308 p.

- MORRISON C. J., 1992, Unraveling the productivity growth slowdown in the United States, Canada and Japan: The effects of subequilibrium, scale economies and markups, *Review of Economics and Statistics*, 74(3), pp. 381-393.
- MOWERY D. C. AND N. ROSENBERG, 1994, *Technology and the pursuit of economic growth*, Cambridge University Press, 330 p.
- MULDUR U., 1991, *Le financement de la R&D au croisement des logiques industrielle, financière et politique*, Commission of the European Communities - FAST, FOP 277, 5(2), 104 p.
- MULDUR U., 1993, The role of multinational companies, Conference for the Postgraduate Programme in International Politics - CERIS/ULB, 18th November.
- NADIRI M. I., 1980, Contributions and determinants of research and development expenditures in the US manufacturing industries, in VON FURSTENBERG G. (Ed.), *Capital, efficiency and growth*, Ballinger Publishing Company, Cambridge, pp. 361-392.
- NADIRI M. I., 1991, U.S. direct investment and the production structure of the manufacturing sector in France, Germany, Japan and the U.K., *NBER Working Paper Series*, September.
- NADIRI M. I. AND S. KIM, 1996, International R&D spillovers, trade and productivity in major OECD countries, *NBER Working Paper Series*, No. 5801, October, 36p.
- NAKAMURA S., 1993, Explaining the Japan and US TFP difference, *The Economic Studies Quarterly*, 43, pp. 326-336.
- NELSON R. R., 1988, Modelling the connections in the cross section between technical progress and R&D intensity, *Rand Journal of Economics*, 19(3), pp. 478-485.
- NELSON R. R., 1993, *National innovation systems - a comparative analysis*, Oxford University Press, 541 p.
- NELSON R. R., 1997, How new is the new growth theory?, *Challenge*, 40(5), pp. 29-58.
- NEUSSER R. R., 1993, Dynamics of total factor productivities, *Revue Economique*, 2, pp. 389-418.
- NEVEN D. AND G. SIOTIS, 1993, Foreign direct investment in the European Community: some policy issues, *Oxford Review of Economic Policy*, 9(2), pp. 72-93.
- NEVEN D. AND G. SIOTIS, 1996, Technology sourcing and FDI in the EC: An empirical evaluation, *International Journal of Industrial Organization*, 14, pp. 543-560.
- NICKELL S., 1981, Biases in dynamic models with fixed effects, *Econometrica*, Vol. 49, pp. 1417-1426.
- ODAGIRI H., 1983, R&D expenditures, royalty payments and sales growth in Japanese manufacturing corporations, *Journal of Industrial Economics*, 32(1), pp. 61-71.
- ODAGIRI H., 1985, Research activity, output growth and productivity increase in Japanese manufacturing industries, *Research Policy*, 14, pp. 117-130.
- ODAGIRI H. AND S. KINUKAWA, 1997, Contributions and channels of interindustry R&D spillovers: An estimation for Japanese high-tech industries, *Economic Systems Research*, 9(1), pp. 127-142.
- O'SULLIVAN L. AND W. RÖGER, 1991, An econometric investigation of the interrelationship of R&D expenditures and technical progress, Brussels: Commission of the European communities
- OECD, 1981, *Science and technology policies for the 1980s*, 185 p.
- OECD, 1991a, *Technology and productivity - The challenge for economic policy*, 584 p.

- OECD, 1991b, *Background report by the Secretary General, Concluding the Technology /Economy Program*, C/MIN (91) 14, Organisation for Economic Co-operation and Development, Paris.
- OECD, 1995, *Impacts of National Technology Programmes*, OECD, Paris.
- OFFICE OF TECHNOLOGY ASSESSMENT, 1986, *Research funding as an investment: Can we measure the returns*, U.S. Congress, Office of Technology Assessment, OTA-TM-SET-36, Washington.
- ORMALA E., 1989, Nordic experiences of the evaluation of technical research and development, *Research Policy*, 18(4), pp. 333-342.
- OSTRY S. AND R. R. NELSON, 1995, *Techno-nationalism and techno-globalism - Conflict and cooperation*, The Brookings Institution Washington, DC, 132 p.
- PAKES A. AND M. SCHANKERMAN, 1984, The rate of obsolescence of patents, research gestation lags and the private rate of return to research resources, in Z. GRILICHES (Ed.), *R&D, patents and productivity*, Chicago: University of Chicago.
- PAKES A. AND M. SCHANKERMAN, 1985, Valeur et obsolescence des brevets: une analyse des statistiques de renouvellement des brevets Européens, *Revue Economique*, 5, pp. 917-941.
- PANITCH A. AND B. VAN POTTELSBERGHE DE LA POTTERIE, 1997, An insight into the determinants of the private R&D investments response to R&D subsidies, in MUELLER H, PERSSON J-G., AND K. R. LUMSDEN (Eds.), *Management of Technology VI*, SMR Sweden, pp. 388-398.
- PARK W. G., 1993, International spillovers of R&D investment and OECD economic growth, Paper presented at the Western Economic Association meetings, Lake Tahoe.
- PATEL P. AND K. PAVITT, 1991, Large firms in the production of the world's technology: An important case of non-globalization, *Journal of International Business Studies*, pp. 1-20.
- PATEL P. AND K. PAVITT, 1995, Patterns of technological activity: Their measurement and interpretation, in P. Stoneman (Ed.), *Handbook of the economics of innovation and technological change*, Oxford, Blackwell Publishers, pp. 14-51.
- PAVITT K., ROBSON M. AND J. TOWNSEND, 1989, Technological accumulation, diversification and organization in UK companies, 1945-83, *Management Science*, 35(1), pp. 81-99.
- PETRELLA R., 1991, *Four analyses of globalisation of technology and economy*, Commission of the European Communities - FAST, D 9, 5(2), 100 p.
- PHILLIPS P. C., 1991, A short cut to LAD estimator asymptotics, *Econometric Theory*, 7, pp. 450-463.
- POLLARD D., 1990, Asymptotics for least absolute deviation estimator, *Econometric Theory*, 6.
- POSTNER H. H. AND L. WESA, 1983, Canadian productivity growth: An alternative (input-output) analysis, Study prepared for the Economic Council of Canada, Ministry of Supply and Services, Ottawa.
- PUTNAM J. AND R. E. EVENSON, 1994, Inter-sectoral technology flows: Estimates from a patent concordance with an application to Italy, *mimeo*, Yale University.
- REDDY N. M. AND L. ZHAO, 1989, International technology transfer: a review, *Research Policy*, 19, pp. 285-307.
- REISCHAUER E. O. AND A. M. CRAIG, 1989, *Japan, tradition and transformation*, Harvard University, Allen & Unwin.

- REISS P., 1990, Detecting multiple outliers with an application to R&D productivity, *Journal of Econometrics*, 43(2), pp. 293-315.
- ROBSON M., TOWNSEND J. AND K. PAVITT, 1988, Sectoral pattern of production and use of innovations in the U.K.: 1945-83, *Research Policy*, 17, pp. 1-14.
- ROMER P. M., 1990, Endogenous technological change, *Journal of Political Economy*, 98, pp. 71-102.
- ROSENBERG N., 1974, Science, invention and economic growth, *Economic Journal*, 84, pp. 90-108.
- ROSENBERG J., 1976, Research and market share : A reappraisal of the Schumpeter hypothesis, *Journal of Industrial Economics*, 25(2), pp. 101-112.
- ROSENBERG N., 1993, *Inside the black box: Technology and economics*, Cambridge University Press, 304 p.
- ROSENBERG N., 1994, *Exploring the black box. Technology, economics and history*, Cambridge University Press, 274 p.
- SAKURAI N., PAPAConstantinou G. AND E. IOANNIDIS, 1997, Impact of R&D and technology diffusion on productivity growth: Empirical evidence for 10 OECD countries, *Economic Systems Research*, 9(1), pp. 81-110.
- SCHANKERMAN M., 1981, The effects of double counting and expensing on the measured returns to R&D, *Review of Economics and Statistics*, 63(3), pp. 454-458.
- SCHANKERMAN M., 1991, Les statistiques sur les renouvellements de brevet: un moyen pour mesurer la valeur de la protection par brevet ainsi que la production de l'activité inventive, OECD, *STI Revue*, 18, pp. 107-131.
- SHANKERMAN M. AND A. PAKES, 1986, Estimates of the value of patent rights in European countries during the post 1950 period, *Economic Journal*, 96(384), pp. 1052-1076.
- SCHERER F. M., 1982a, Inter-industry technology flows and productivity growth, *The Review of Economics and Statistics*, 64(4), November, pp. 627-634.
- SCHERER F. M., 1982b, Inter-industry technology flows in the United States, *Research Policy*, 11, pp. 227-245.
- SCHERER F.M., 1984, Using linked patent and R&D data to measure interindustry technology flows, in Z. GRILICHES (Ed.), *R&D, patents and productivity*, University of Chicago Press.
- SCHERER F. M. AND K. HUH, 1992, R&D reactions to high-technology import competition, *Review of Economics and Statistics*, 74(2), pp. 202-212.
- SCHMOOKLER J. J., 1966, *Innovation and economic growth*, Harvard University Press, Cambridge.
- SCHOLZ L., 1989, The innovation-flow in the German economy. An input-output analysis on the IFO innovation survey data base, Paper presented at the IXth Conférence Internationale sur les Techniques d'Input-Output; Keszthely, Hongrie, 4-9 Septembre.
- SCHOLZ L., 1990, From the innovation survey to the innovation-flow matrix, in Matzner and Wagner (Eds.), *The employment impact of new technology*, Avebury.
- SCHRIEVES R., 1978, Market structure and innovation : A new perspective, *Journal of Industrial Economics*, 26(4), pp. 329-347.
- SCIENCE AND TECHNOLOGY AGENCY, 1985, New development of R&D and the era of cooperation , December, Japan.

- SCOTT J. T., 1984, Firm versus industry variability in R&D intensity, in GRILICHES Z. (Ed.), *R&D, patents and productivity*, University of Chicago Press, Chicago, chap. 10, pp. 233-248.
- SIOTIS G., 1996, Foreign direct investment strategies and firms' capabilities, *miméo*, Université Libre de Bruxelles, October.
- SJOHOLM F., 1996, International transfer of knowledge: The role of international trade and geographic proximity, *Weltwirtschaftliches Archiv*, 132(1), pp. 97-115.
- SOETE L. AND P. PATEL, 1985, Recherche-développement, importations technologiques et croissance économique, *Revue Economique*, 36(5), pp. 975-1000.
- SOETE L. AND B. VERSPAGEN, 1993, Convergence and divergence in growth and technical change: an empirical investigation, Paper presented at the AEA Conference in Mannheim, January 6.
- SOLOW R. M., 1957, Technical change and the aggregate production function, *Review of Economic Statistics*, 39(3), pp. 214-231.
- SOLOW R., 1961, Comment on Stigler, in *Output, Input and Productivity Measurement*, Income and Wealth Series, Princeton University Press, Princeton, pp. 60-63.
- SRINIVASAN S., 1996, Estimation of own R&D, R&D spillovers and exogenous technical change effects in some U.S. high-technology industries, Discussion Papers in Economics and Econometrics, University of Southampton, 46 p.
- STERLACCHINI A., 1989, R&D, innovations and total factor productivity growth in British manufacturing, *Applied Economics*, 21, pp. 1549-1562.
- STIGLER G., 1961, Economic problems in measuring changes in productivity, in *Output, Input and Productivity Measurement*, Income and Wealth Series, Princeton University Press, Princeton, pp. 47-59.
- STONEMAN P. (Ed.), 1995, *Handbook of the economics of innovation and technological change*, Oxford, Blackwell Publishers, 583 p.
- STONEMAN P., 1995a, Introduction, in STONEMAN P. (Ed.), *Handbook of the economics of innovation and technological change*, Oxford, Blackwell Publishers, pp. 1-13.
- SUZUKI K., 1985, Knowledge capital and the private rate of return to R&D in Japanese manufacturing industries, *International Journal of Industrial Organization*, (3), pp. 293-305.
- SVEIKAUSKAS L., 1981, Technology inputs and multifactor productivity growth, *The Review of Economics and Statistics*, 63, pp. 275-82.
- SWITZER L., 1984, The determinants of industrial R&D : A funds flow simultaneous equation approach, *The Review of Economics and Statistics*, 66(1), pp. 163-166.
- SYMEONIDIS G., 1996, Innovation, firm size and market structure : Schumpeterian hypotheses and some new themes, OECD Economic Department Working Paper, 61, OECD/GD(96)58, 41 p.
- TAYLOR L. D., 1974, Estimation by minimizing the sum of absolute errors, in ZAREMBKA P. (Ed.), *Frontiers in econometrics*, New York: Academic Press, Ch. 6.
- TERLECKYJ N. E., 1974, *Effects of R&D on the productivity growth of industries : An exploratory study*, National Planning Association, Washington.
- TERLECKYJ N. E., 1980a, Direct and indirect effects of industrial research and development on the productivity growth of industries, in J.KENDRICK AND VACCARA (Eds.), *New developments in productivity measurement and analysis*, University of Chicago Press, Chicago, pp. 359-385.

- TERLECKYJ N. E., 1980b, What do R&D numbers tell us about technological change?, *The American Economic Review*, 70(2), pp. 55-61.
- TORRE A., 1990, Quand les économistes mesurent l'intangible, *Revue d'Economie Industrielle*, 53(3), pp. 87-98.
- VAN MEIJL H., 1995, *Endogenous technological change: The case of information technology*, Ph.D. dissertation, University of Limburg, Maastricht, Universitaire Pers Maastricht.
- VAN MEIJL H., 1997, Measuring intersectoral technology spillovers: French evidence, *Economic Systems Research*, 9(1), pp. 25-46.
- VAN POTTELSBERGHE DE LA POTTERIE B., 1995, The role and determinants of R&D investments in high-tech industries, *Cahiers d'Economie*, X, Centre Universitaire Luxembourgeois.
- VAN POTTELSBERGHE DE LA POTTERIE B., 1996, Interindustry technological spillovers and the rate of return to R&D, - *Discussion Paper: the Research Institute of The Ministry of International Trade and Industry (MITI/RI)*, # 96-DOF-23, Japan, April.
- VAN POTTELSBERGHE DE LA POTTERIE B., 1997a, Governments' attitudes towards the globalization of economy and technology, *Hiroshima Journal of International Studies*, 3, June, pp. 53-70.
- VAN POTTELSBERGHE DE LA POTTERIE B., 1997b, Issues in assessing the effect of interindustry R&D spillovers, *Economic Systems Research*, 9(4), pp. 331-356.
- VERSPAGEN B., 1997, Measuring intersectoral spillovers: Estimates from the European and US Patent Office Databases, *Economic Systems Research*, 9(1), pp. 47-66.
- VERSPAGEN B. AND VAN MOERGASTEL T. AND M. SLABBERS, 1994, MERIT Concordance Table: IPC-ISIC(rev. 2), MERIT Research Memorandum, 94-004.
- VICKERY G., 1986, International flows of technology - Recent trends and developments, *OECD-STI Review*, 1, pp. 47-84.
- VUORI S., 1997, Interindustry technology flows and productivity in Finnish manufacturing, *Economic Systems Research*, 9(1), pp. 67-80.
- WALSH V., 1984, Invention and innovation in the chemical industry: Demand-pull or discovery push?, *Research Policy*, 13, 211-234.
- WARRANT F., 1993, *Le déploiement mondial de la R&D industrielle*, Commission des Communautés Européennes - Rapport de recherche FAST, 134 p.
- WILKINS M., 1970, *The emergence of multinational enterprises*, Cambridge, Mass.
- WOLFF E. N., 1997, Spillovers, linkages and technical changes, *Economic Systems Research*, 9(1), pp. 9-24.
- WOLFF E. N. AND M. I. NADIRI, 1993, Spillover effects, linkage structure and research and development, *Structural Change and Economic Dynamics*, 4, pp. 315-331.
- YAMADA T., YAMADA T. AND G. LIU, 1991, Labor productivity and market competition in Japan, *NBER Working Paper*, N° 3800.
- YAMAWAKI H., 1993, International competitiveness and the choice of entry mode: Japanese multinationals in US and European manufacturing industries, A CEPR Workshop, Oxford, 12-13 November, 28 p.