

Box 20: Manuscripts

Box 20A. Manuscripts (1920-29)

Semi-invariants et moments d'ordre supérieur. MS1925-1

(72 pp., undated presumed 1925. The topic is related to the published papers with similar titles in 1925 and 1926, but longer and more comprehensive treatment. File also contains ms *Sur les moments de la distribution binomiale* (handwritten, > 50 pp., undated), from 1920s. Could it be related to the dr.philos. dissertation?

Théorie analytique de la valeur. Introduction à une Econométrie générale MS1926-2

Undated, presumed 1926. Plan (in Norwegian) for a major work which was never implemented (17 pp.), outlining the content as comprising 8 "books", each book consisting of chapters, each chapter of articles.

Socialøkonomien som videnskap og som praktisk disiplin [Economics as a science and a practical discipline] MS1926-3

Handwritten ms (42 pp., undated, presumed 1926) for lecture in Yngre Socialøkonomers Forening. Unknown date for the lecture. Also contains a draft ms titled *Socialøkonomi som videnskap* (handwritten, 23 pp., undated).

Nogen anvendelser av halvinvarianter og momenter på statistikken over legemshøyden hos rekrutter. MS1926-4

Handwritten ms (in Norwegian, 47 pp.), dated Sept. 1926.)

Verdi og penger [Value and money] MS1926-1

Handwritten ms (17 pp.) for lecture in "Kom og hjelp oss" 11 May 1926.

Løste og uløste problemer i sannsynlighetsregningen. MS1926-5

Handwritten ms (33 pp.), lecture given to Matematisk Forenings generalforsamling 19.02.1926. Contains also draft ms, notes with references to Mises 1919.

Beregninger av momentene i statistiske fordelinger. MS1927-1

Handwritten ms (15 pp.), lecture to Det Forsikringstekniske seminar 10.02.27.

A note in the ms. states that two lectures were to be given.

Værdi og pris [Value and price] MS1924-1

Handwritten ms for two lectures in *Folkeakademiet* (adult education) given 19 and 26 Nov. 1924. Also some notes.

The Mathematical Analysis of Statistical Time Series. MS1928-1

Typewritten ms and draft (19 pp.) for lecture at the School of Hygiene and Public Health, Baltimore, Ohio, 31.01.1928. Contains also a two pp. note which may be the first draft of the plan for the ESEM Leyden lecture in 1933, and a four pp. note titled "Theiss 7 May 34" (in English), perhaps related to an *Econometrica* ms.(?).

De økonomiske love fra statisk og dynamisk synspunkt [Economic laws from static and dynamic viewpoint] MS1929-1.

Handwritten ms (13 pp.) for lecture given in Statsøkonomisk forening, 17 Dec. 1929. A simplified version of the 1928 lecture in Copenhagen, published as RF1929d.

Transportproblemet for en vare som strømmer ut fra et gitt punkt [The transportation problem for a commodity flowing out from a given point] MS1929-2

Handwritten ms (10 pp.) undated, presumed 1929?. A theoretical sketch of transportation of localization theory. Has references to Engländer.

Box 20B. Manuscripts (1930-39) (1)

Memo 3: On the choice of key operations. MS1930-1

Typewritten (6 pp.), dated 04.05.30. Related to time series studies with reference to the *Changing Harmonics* ms. The memo is one of the Yale memos, cf. Box 15.

On deterministic and stochastic relations MS1931-2

Handwritten (8 pp., undated, presumed 1931). File also contains:

Method of least squares. Solution of normal equations (handwritten, 19 pp., undated);

Sammenhengen mellom scatter coefficients i et gitt set (handwritten, 3 pp., 24.04.31).

Nye metoder til måling av grensenytten [New methods for measuring marginal utility] MS1931-3

Handwritten ms (incomplete) for a lecture in Sosialøkonomisk Samfund, 19. Sept. 1931.

Business Cycles as a Theoretical and as a Statistical Problem MS1931-5

Handwritten (16 pp.) for lecture given at the Campus Club, University of Minnesota, Minneapolis, 15 May, 1931. Contains in addition two typewritten versions of the statement RF prepared for the Nordic Meeting in Stockholm in June 1931, cf. RF1931d.

Note: RF prepared the Stockholm presentation at the end of his stay in Minnesota and may have used the lecture at the Campus Club as a trial run, although there are some differences in the presentation.

The optimum regression MS1931-6

Typewritten (11 pp.) contains in addition 4 pages of handwritten notes by RF. Frisch presents and discusses a principle for selecting (as the "best") one particular of the n elementary regressions between n statistical variables, the regressions being determined by minimizing the sum-squares in each of the n directions. The principle is "an immediate outgrowth of the theory of linear regressions" developed in Frisch 1929.

Dynamic Economics and the Theory of Business Cycles MS1934-1

Handwritten ms. (34+20 pp.) for two lectures given at the London School of Economics, 7 and 8 March, 1934. Contains also a two-page mimeographed plan and notes about appointments with various people, incl. F. v. Hayek, L. Robbins, U.K. Webb, J.S Haldane et al.

Konjunkturteori og økonomisk Makrodynamikk MS1934-2

Handwritten ms (31 pp.) for lecture at Statistisk Laboratorium, København, 8 January 1934. Contains two-page mimeographed plan for the lecture (in Danish).

A Method of measuring money flexibility that does not imply the assumption of income proportionality MS1935-1

Typewritten ms, undated but presumed 1935. Is likely to be the ms Frisch submitted to *Economic Journal* in mid-October 1935 and withdrew shortly afterwards, cf. correspondence with J.M. Keynes.

Box 20C. Manuscripts (1930-39) (2)

Investment and consumption as factors in economic cycles MS1934-3

Typewritten note (6 pp.), undated, presumed 1951. RF apparently wrote this note in 1934 but did not have it typewritten until 1951. The content is a further discussion of the issues involved in 1931 controversy with Clark and in the Propagation paper. The file contains a rough handwritten draft

titled *Investment and consumption as factors in business cycles* (4 pp. undated, presumed 1934); and handwritten draft titled *Investment and consumption as factors in economic cycles* (18 pp.) undated but probably 1934. And furthermore a letter exchange with Preben Munthe 1951 (not interesting) and two letters to J. Tinbergen 1934 (one of which is also of interest wrt. editorial policy); reprints of the three JPE papers in the Clark controversy.

Den tekniske organisasjon av New York Stock Exchange MS1934-4

Mimeograph (16 pp., 1934), a description of all the functionalities of the New York Stock exchange; from the layout in the building to a short history of the rise of the free market or of the market economy. Paper for two lectures at the University of Oslo, 17 Sept. and 5 Nov. 1934.

Den tekniske organisasjon av New York Stock Exchange [The technical organization of the New York Stock Exchange] MS1934-5

Memorandum on the organising of a commodity and service exchange MS1935-2

Typewritten (11 pp.) 26.01.35, remarks on Dr Schönstein's plan for such an exchange. RF's note refers to Circulation Planning. The file also contains a pamphlet and a typewritten document on Dr. Schönstein's *Wirtschaftsring* and a Danish pamphlet of related content.

Om Varebyttentraler [On commodity exchange centrals] MS1936-2

Typewritten ms (20 pp.) for lecture given at Bergens Håndverks- og Industriforening 06.03.35. The file contains also handwritten draft and a revised ms.

Synspunkter på den svenska uppläggingen av den monetära teorien [Views on the Swedish approach to monetary theory] MS1936-5

Typewritten ms (18 pp.) for the first of two lectures at *Nationalekonomiska Klubben*, Stockholm, 28 and 29 April 1936. Handwritten scribble (ca 30 pp.) for the second lecture.

Memorandum on Methods of Measuring the Relative Cost of Living MS1937-2

Typewritten ms (29 pp.) for lecture given to group of economist and statisticians, Washington D.C., 27 July, 1937. Contains also handwritten draft (notebook format, 34 pp.).

Betenkning angående efterspørselen efter øl i Norge og angående de virkninger som kan påregnes ved en nedsettelse av ølavgiften og av den pris bryggeriene får [Assessment of the demand for beer in Norway and the effects to be expected from a reduction of the beer tax and of the price the breweries receive] MS1936-7

Mimeograph (30 pp., 1936), cf. Box 20, Project: *Ølomsetningen i Norge 1935*.

The Analysis of Time Series MS1930-2

Handwritten ms (31 pp.) for lecture at The Mathematical Club, Yale University on 15 April, 1930.

Box 20D. Manuscripts (1945-54)

A Generalized version of Dr. Champernowne's theory of the income distribution MS1945-1

Handwritten ms (9 pp.) 07.10.45. A marginal note at the end states that a copy has been "given to Dr Champernowne".

Some basic principles of demand analysis MS1947-1

10 pp., hw scribble by RF for a Seminar at Harvard 10.02.47.

Pengeøkonomi og realøkonomi [Money economy and real economy] MS1948-1

Lecture on March 5, 1948 in a series of lectures by university teachers, organized by Sentralkomiteen for øket arbeidseffektivitet. Previously printed in the book *Aktuelle økonomiske problemer [current economic problems]* and published later as Memo 1961-01-18b, 1-12

Kjøpepress, prispress og kvantumspress [Purchasing pressure, price pressure and quantity pressure] MS1949-1

Mimeo (46 pp.) issued as Memo 07.03.49. The last(?) contribution by RF on the issue of "kjøpepress". The topic can be traced back to RF1933d, via *Notatene* 1941 (Excursus 16) to Memos 03.10.47, 18.01.48 and 10.05.48. The paper has an introductory reference to the "group of theoreticians" comprising Haavelmo who are discussing the issue, the outcome of the latter work was that the strict price stabilization of the post-war period was surrendered.

Remarks on multi-compensatory trade MS1949-2

Mimeo (2 pp.) issued as Memo 16.11.49. The paper is RF's intervention in a discussion on *The possibilities of the simultaneous co-existence of bilateral and multilateral trading practices and the transition to freer trade* at UN/ECE, Geneva, Sept. 1949. RF used the occasion emphasize how his scheme of multi-compensatory trade was in line with efforts to achieve freer trade. Contains also letter from Hans Staehle 01.11.49 with attached extract from records of a meeting on trade issues in Frankfurt.

Økonomisk modellkonstruksjon som nødvendig grunnlag for rasjonell økonomisk politikk [Economic model-building and necessary foundations for economic economic policy] MS1949-3

Mimeo for presentation in Socialøkonomisk Samfund, Copenhagen, 16.09.49.

Reknetoder og rekneundervisningen i folkeskolen [Mathematics in elementary school] MS1951-1

Typewritten, also handwritten draft notes, two elementary school textbooks in calculations titled *Eksamensoppgaver i regning or romlære*. Also newspaper cuttings relevant to elementary school mathematical education.

Objektivitetsproblemet i samfunnsvitenskapene [The Objectivity problem in the Social sciences] MS1951-2

Typewritten comments on presentation by Johan Vogt, 07.05.51.

Methods of Solving Linear Programming Problems MS1954-1

Memo 21.6.1954 for lecture at International Seminar on Input-Output Analysis, Varenna, June-July 1954. Also contains original typewritten ms. (**Missing**)

Dislocations in the purchasing power of the public MS1952-1

English translation of "Betalingssmiddelforskyvninger hos publikum", prepared by RF and Arne Amundsen in 1949, later issued as a supplement to report from Penge- og Finansrådet [Monetary and Fiscal Council] 1952, also as Memorandum 19.03.1952.

Spilldeterminerthet ved to-person null-sum spill under minimaxstrategi og valgindikator strategi [The determination of two-person zero-sum games under minimax strategy and choice indicator strategy] MS1952-2

Carbon copy of typewritten ms (15 pp., with formulae missing) dated 17.11.52. Minimax solution in the two by two case with a Frisch twist (choice indicator). Contains also typewritten ms titled *Notat om streng determinerthet ved et 2-person nullsummet spill når hver spiller følger en maximin valgstrategi etter RF's definisjon* (2 pp.) dated 15.11.52. In the latter not RF emphasized the importance of Leif Johansen working on game theory(!). Also a brief scribbled note dated 15.12.52.

Grunnbegreper til å beskrive effektivitet, produktivitet og arbeidsinnsats MS1952-3

Typewritten note (7 pp., undated, presumed 1952). Contains also a newspaper article referred to in the note.

Cost of living and Standard of Living. MS1953-2

MS for radio presentation, incomplete. Inger Østraat, RF's secretary at the time, hesitated in translating entire document lest her English be less than up to the task. There are notes written upon the typewritten document in pencil, unsure if they are Frisch's or Østraat's.

Discours de M. Ragnar Frisch á Chateau de Gif le 17. Mai 1952 MS1952-4

Mimeographed copy of the speech given on econometrics, partly in French and partly in English.

Integrabilitetsbetingelser og valghandlingsteori [Integrability conditions and choice theory] MS1953-3

Handwritten ms (46 pp.) dated 04.05.53 written by Leif Johansen. According to marginal notes by Frisch the ms is partly based on "referat" and partly on Frisch's paper *General Choice Field Theory* RF1937a.

Comment: The ms is clearly related to Frisch's interwar struggle with the integrability problem and may have represented a new attack or a summary of the problem as a training exercise for Johansen. The ms has 7 sections, of which the last "7. Spørsmålet om potensialfunksjonen for et gitt vektorfelt, i tilfelle den eksisterer, kan tolkes som en indikatorfunksjon" is empty.

Litt om å fraråde individuell sparing [A note on advising against saving] MS1953-4

Contains handwritten, typewritten and mimeographed version of ms meant for *Stimulator*.

Comments on the paper by Otto Chr. Hiorth and Petter Jakob Bjerve. Not clear why it was not published.

Matematikk og politikk [Mathematics and politics] MS1953-5

Typewritten (6 pp.) 13.12.53. a popular article, possibly published?

Box 20E. Manuscripts (1955-57)

La resolution des problemes de programme lineaire par la methode du potentiel logarithmique MS1955-1

Typewritten ms for lecture at Centre National de la Recherche Scientifique, Paris, 01.06.55. With significant notes and corrections written in pencil.

English translation of four published papers MS1956-1

RF solicited translations into English of three published papers and offered them to Eraldo Fossati (see enclosed letter from RF04.10.56) for publication in *Metroeconomica*, at Fossati's request. The papers were translated by H. M. de Graff. The papers are:

Statics and dynamics in economic theory, transl. from RF1929d;

Ricardo's doctrine of value and distribution, transl. from RF1940c, pp. 224-233;

Some comments on the general part of the theory of distribution, transl. from *Notatene*, pp. 151-167 (Ekskurs 12).

Another paper was added later:

The problem of aggregation from the point of view of production theory, transl. from RF1958a (transl. by Ronald G. Ridku(?)).

Nye synspunkter på makroøkonomisk planlægning [New ideas about macroeconomic planning] MS1956-2

Handwritten notes for lecture in Oct. 1956 at Universitetets Økonomiske Laboratorium, Copenhagen.

Lectures on planning at the Institute for Social Studies, the Hague MS1957-1

Lectures given in *March 1957*. Contains notes on input-output-analysis, incorporation of the demand side as well as monetary and financial factors, the determination of the preference function and the programming method "Electroprogramming". Contains typewritten ms, as well as , handwritten notes, copies of relevant papers, etc.

The Oslo Median Model MS1957-2

Two lectures given in René Roy's seminar in April 1957 at Institut de science économique appliquée. The lectures were taped and transcribed and includes discussion (mostly in French).

Box 20F. Manuscripts (1958-62)

Pengenes grensenyttefleksibilitet som indifferensfunksjon [The flexibility of the marginal utility of money as indifference function] MS1958-1

Handwritten ms (22 pp.) dated 08.08.58, apparently meant as memorandum but never issued. The file also contains a untitled handwritten draft (159 pp.) dated 29.06.58, and memo 25.04.58 with marginal comments.

Comment: The ms has roots back to RF1926h and clearly written in the wake of the preparation of RF1959h.

A Complete Scheme for Computing all Direct and Cross Demand Elasticities in a Model with many Sectors MS1958-2

Typewritten ms lecture given at Meeting of Experts on Demand Analysis, Economic Commission for Europe, Geneva 09-10.05.58. Clearly related to RF1959h.

Refleksjoner om tidsregning MS1960-1

Typewritten (11pp.) written during RF's last visit to Tokyo for ISI meeting 1960. Interesting and entertaining travel report with some riddles on time zones.

Lecture on Econometrics MS1960-2

Typewritten ms for lecture at Keio University, Tokyo, 09.06.60.

Seminar on Economy and the Economics of the East European Countries- MS1960-3

Development and Applicability, NUPI, 8-9.10.1960. Typewritten notes on Leif Johansen's lecture.

Tenkningens slave, ikke dens herre. [Thought's slave, not its master]. MS1961-1

Television/broadcast presentation on electronic computers. Typewritten notes (A5), severely scribbled upon and noted in blue pen.

The Oslo Channel Model MS1961-2

Mimeo 23.09.61 for lecture, International Conference on Input-Output

Techniques, 11-15 Sept. 1961, Geneva. Also a note from a meeting in Paris 1961, International Statistical Institute, on *The Oslo REFI Interflow Table*. Contains handwritten and typewritten drafts.

Menneskefaktoren i utviklingslandene [The human factor in developing countries] MS1961-3

Seminar contribution(?) 19.01.61, Memorandum 16.02.61. Printed copy.

Arbeiderbevegelsen og innholdet I skolen [The labour movement and the school curriculum] MS1961-4

Panel discussion (12 pp.). The manuscripts are inserted in A5 mimeograph format. Panel discussion took place on 10.02.1961.

Draft of a Multilateral Trade Clearing Agency MS1962-1

Typewritten ms for lecture at the Britain-Commonwealth Conference, July 1962, co-authored by Joan Robinson. Contains also mimeographed copy of correspondence between Frisch and Jacob L. Mosak, Director at the Bureau of General Economic Research Policies.

Box 20G. Manuscripts (1963-64)

Foredrag i Sosialistisk Studentlag MS1963-1

Lecture in Sosialistisk Studentlag 29.01.63. Also presented at the conference «Towards a World Economic Conference», London 11-15.03.1963. Original printed copy of the *multilateral clearing* article, and the mathematical notes for the *multilateral clearing* article. Also, a good deal of handwritten notes .

Decisional Models for National Planning MS1964-1

Typewritten ms for lecture at Carnegie Institute of Technology, 06.03.64.

Domine, da quod jubes MS1965-1

MS for speech by RF on his 70th birthday, cf *Sosialøkonomen* nr. 3, 1965. Also contains drafts of the document and handwritten notes.

Box 20H. Manuscripts (1965-??)

Optimal Skewness in International Cooperation MS1965-2

MS for lecture 06.05.65 at ESTØ, Institute for European Studies, Graz, Austria. Discussion of the document is also included in the form of correspondence. Contains a mimeograph of the lecture as well as many handwritten notes on the matter of co-competition.

Lecture series in L'Aquila, Italia, MS1965-4

30.8-7.9.-1965. Among numerous others: *General Outlook on a Method of Advanced and Democratic Macroeconomic Planning* Memo 14.12.1965). Also a *Channel Model* paper and others on programming methods. Great amount of handwritten notes and corrections written on mimeographed copies of the documents.

Godt skal du dyrke [Well shall you cultivate] MS1965-5

Radio broadcast with Frederik Fostvedt. The folder contains a typewritten sketch of the conversation (which has many notes written upon it in pen). There are also a good deal of handwritten notes. There is also a typewritten copy of the document: *Sir Alec of Fellesmarkedet* [*Sir Alec and the common market*] by Einar Östgaard. Also a letter from Alfred H Haugen

Box 20I. Manuscripts (1965-66)

Economic planning in developing countries MS1965-6

Typewritten ms for lectures at the International Summer School, University of Oslo, Contains notes and mimeos. Similar lectures given 1967, 1968.

Optimal Programming and Optimal Prices in Macroeconomic Planning MS1966-1

Typewritten ms for lectures at University of Naples, December 1966. Also *Semi-advanced Methods for Economic Development*, Lecture, Naples 15.12.1966. Handwritten notes as well as an original printed version of *Planning for the United Arab Republic* RF1965d. Also, correspondence with Augusto Graziani from University of Naples.

Decision Models for National Economic Planning MS1967-1

Typewritten plan and content and handwritten notes for lectures 08.03.67 at the University of Pittsburgh. Photocopies of correspondence with Abdul G. Kahn at the University of Pittsburg. Also typewritten paper *Investment starting vs. Investment sinking*.

Inntrykk fra en studie- og foredragsreise i Sovjetunionen [*Impression from a study and lecture trip in the Soviet Union*] MS1966-2

MS for lecture Oslo Handelsstand 23.09.66. Similar lecture at Norges Handelshøyskole 02.11.66 and in Statsøkonomisk Forening 16.09.66. Handwritten notes, mimeographed of correspondence with

Professor Gerhard Stoltz from Norges Handelshøyskole. The typewritten ms has many marginal notes.

Min vitenskap i fremtiden - mål og metode. Sosialøkonomi [My science in the future – purpose and method] MS1966-3

MS for lecture 02.11.66 in Selskapet til Vitenskapenes fremme, Bergen. Handwritten notes and originals and mimeographs of correspondence with Professor Olav Harald Jensen from Norges Handelshøyskole.

En Verden Ungdom MS1966-4

Presentation about world Trade and Development for the *En Verden Ungdom* (EVU) organization. Folder contains handwritten notes for the presentation and correspondence with Terje Ormhaug – director and international secretary of EVU.

Box 20J. Manuscripts (1967-72)

Kan sosialøkonomer løse lineære ligninger? [Can economists solve linear equations?] MS1967-2

Typewritten document treating the SERB method (SE= selected elimination order, RB= Repeated back solution).

Tale på Gunnar Myrdals 70-årsdag [Speech at Gunnar Myrdal's 70th birthday] MS1969-1

Handwritten ms for the event 08.02.69.

Tallkunstnerinnen Shakuntala Devi MS1969-2

Newspaper clip of the article written by Frisch. Contains other newspaper cuttings of memory/calculation speed accounts. Some correspondence with Finn Seeberg (memory-technique inventor). The file contains the handwritten ms prepared by RF.

Bounded and unbounded maximization MS1969-3

Handwritten (12 pp.) 16.02.69 with corrections added 19.02.69. Contains also a follow-up note *Net marginal utilities of the dependent variates*, handwritten (6 pp.) 20.02.69. The notes were sent to Leif Johansen and Jan Hoem. The file also contains a response from Hoem, handwritten (4 pp.) and the handwritten cover letter to LJ and Hoem 16.02.69.

Life is service MS1971-2

Mimeo (3 pp.), 30.03.71, written at the request of a Romanian magazine (possibly published in Romania?). Contains some interesting insights from the beginning of RF's scientific career.

Answers to questions by "Successo", Milano MS1971-3

Mimeo (3 pp), 31.03.71. Answers to five scientific questions.

Halv-Europa staten, isolasjonismen og mammonismen MS1971-4

Mimeograph regarding the question of Norwegian membership to the EEC (European Economic community)

TV-Interview MS1971-5

Questions about Nixon's administration, currency rates and other questions. The folder contains a sketch of the interview and RF's answers. (2 pp.)