

## **Box 19: Published Scientific Works.**

### ***Box 19A. (1923 - 25)***

#### **RF1923b Remarque sur le calcul numérique des fonctions symétriques élémentaire**

*Norsk Matematisk Forenings Skrifter*, Oslo, Serie 1 nr 14, 83-86. Contains notes (in Norwegian) and reprint (4 pp.).

#### **RF1923c Statistiske iakttagelser av fjær-fæholdet i Schweiz [Statistical observations of poultry keeping in Switzerland]**

Published in *Tidsskrift for Fjærfæavl*, Kristiania (Oslo). Folder contains the original journal issue. An outlier in Frisch's production, based on observations when Frisch travelled from Paris to Italy in the summer of 1923.

#### **RF1924a Solution d'un problème du calcul des probabilités (Premier problème de Simmons) Skandinavisk Aktuarietidskrift, Vol 7, 153-174. /**

**RF1924b Sur un problème du calcul des probabilités (Premier problème de Simmons) Comptes rendus des séances de l'Académie des Sciences, Séance du 17 novembre 1924, Paris, 1031-1033.**

The two publications are largely identical. The folder contains typewritten ms, handwritten drafts for both publication together with notes and offprints of both papers (22 pp. and 4 pp.). RF1924a states the author's name as Ragnard Frisch.

#### **RF1925a En ny metode i sandsynlighetsregningen: The paper is a review of Stanislas Millot; Théorie nouvelle de la probabilité des causes. Gauthier-Villars, Paris 1925, 35 pp.**

*Norsk Matematisk Tidsskrift*, Vol 7, 50-56.  
Folder contains two reprints (8 pp.).

#### **RF1925b Recurrence formulae for the moments of the point binomial**

*Biometrika*, Vol 17, 165-171.

Contains typewritten ms., handwritten draft, notes, reprint (7 pp.) and submission letter addressed to K. Pearson dated 29 November 1924.

#### **RF1925c Sur les semi-invariants de Thiele**

*Comptes rendus des séances de l'Académie des Sciences*, Séance du 15 juillet 1925, Paris, Tome 181, 274-276.

Contains typewritten ms. (2 ex), notes (in Norwegian), submission letter dated 30 April 1925, and offprint (3 pp.). See also MS1925-1.

## **Box 19B. (1926)**

### **RF1926a Impossibilité de reserrer l'inégalité de Markov dans le cas general**

*Den sjette skandinaviske matematikerkongres i København, 31 aug. - 4 sept. 1925, Copenhagen, Det Hoffensbergske Etablissement, 203-206.*

Contains handwritten ms. (in French) for the proceedings, an earlier version (in French), the original note (in Norwegian) written down after A. Guldberg's paper at the congress on Markov's lemma, and a reprint (4 pp.). Thus Frisch's paper was not on the agenda for the congress.

### **RF1926b Kvantitativ formulering av den teoretiske økonomikks lover**

#### **[Quantitative formulation of the laws of economic theory]**

Statsøkonomisk Tidsskrift, Vol 40, 299-334. The paper is based on trial lecture no. one at the dissertation, see Box 7. (During his visit at Yale in 1930 Frisch initiated an abbreviated translation into English but left it incomplete, see Yale box).

### **RF1926f Semi-invariants de Thiele et moments d'ordre supérieur**

*Den sjette skandinaviske matematikerkongress i København, 31 aug.- 4 sept. 1925, Copenhagen, Det Hoffensbergske Etablissement, 365-374.*

Folder contains the handwritten ms for the Scandinavian Mathematicians Congress in Copenhagen 1925, titled *Thieleske halvvarianter og momenter av høiere orden*, and an earlier draft with same title, various congress documents, the handwritten ms. (in French) for the proceedings and three reprints (10 pp.).

### **RF1926g Sur les semi-invariants et moments employés dans l'étude des distributions statistiques**

Doctoral dissertation, published by the Norwegian Academy of Science and Letters in 1926. The defence took place on 13 October 1926. Dissertation documents, drafts, correspondence et al. are filed in Box 7.

### **RF1926h Sur un problème d'économie pure**

Published in *Norsk Matematisk Forenings Skrifter*, Serie 11. Nr. 16 (1-40)

Folder contains Trygce Haavelmo's copy of the original publication (40 pp.).

Republished as RF1957d. Ensih translation by John Chipman was published as RF1971d

## ***Box 19C. (1927 - 29)***

### **RF1927a The analysis of statistical time series (121 pp.)**

Mimeo (127 pp.), New York, 1927. Circulated by Frisch with help of W. C. Mitchell.

### **RF1927b Sammenhengen mellom primærinvestering og reinvestering**

Contains handwritten ms. 30 pp., notes and calculations, drawings (2 ex), notes (in Norwegian), submission letter and reprint (36 pp.). Also a letter from Schönheyder with attached proof pages of the first part of Schönheyder's paper. Within can also be found a translation by Einar Hope edited by J.S. Chipman.

### **RF1927c Sur le calcul numérique des moments ordinaires et des moments composés d'une distribution statistique**

Contains typewritten ms., two handwritten drafts, notes and two reprints (11 pp.).

### **RF1927d Sur le théorème des déterminants de M. Hadamard**

*Comptes rendus des séances de l'Académie des Sciences*, Séance du 5 décembre 1927, Paris, Tome 185, 1244-1245.

### **RF1928a Changing Harmonics and other General Types of Components in Empirical Series**

*Skandinavisk Aktuarietidskrift*, Vol 11, 220-236. Folder contains a copy of the published paper with several marginal notes by RF.

### **RF1929a and RF1929b Correlation and scatter in statistical variables**

Published both in *Nordisk Statistisk Tidsskrift* (Vol 8, 36-102) and in the English version *Nordic Statistical Journal* (Vol 1, 36-102). Contains notes and reprint (67 pp.). RF often cited this work as published in 1928.

### **RF1929c On approximation to a certain type of integrals**

Contains reprint (53 pp.). Note: This paper is further work on a problem dealt with in the doctoral dissertation and is related to work by Steffensen and Pólya.

**RF1929d Statikk og dynamikk i den økonomiske teori [Statics and dynamics in economic theory]**

*Nationaløkonomisk Tidsskrift*, 1929, Vol 67, 321-379.

Contains notes (in Norwegian) and reprint. Contains detailed typewritten notes for revising the paper, also handwritten drafts.

**RF1929e Sur un formule générale de moyenne**

*Comptes rendus des séances de l'Académie des Sciences*, Séance du 22 avril, Paris, Tome 188, p 1081 (3 pp).

**RF1929f Økonomisk teori [Economic theory]**

Contains two copies of reprint (44 pp.), one with extensive marginal notes, and letter exchanges in 1930-31 between RF, Oskar Jæger, Kristian Schönheyder and Oscar Engländer.

Note: The paper was a reaction to a by Oskar Engländer, which it sharply criticized. The title could be given in English as *Certain erroneous propositions in price theory*. RF must have expected according to footnote 1 in the paper that a version in German would be published by *Zeitschrift für Nationalökonomie*, edited by Oskar Morgenstern. It seems likely that RF never submitted.

***Box 19D. (1930 - 31)***

**RF1930c Necessary and sufficient conditions regarding the form of an index number which shall meet certain of Fisher's tests**

Published in *Journal of the American Statistical Association*, Vol 25, No 172, 397-406.

Contains one photo copy.

**RF1931a Der Einfluss von Veränderungen des Preisniveaus auf den Grenznutzen des Geldes**

*Zeitschrift für Nationalökonomie*, Vol 2, 625-631.

**RF1931b The interrelation between capital production and consumer-taking**

Published in *Journal of Political Economy*, Vol 39, No 5, 646-654. The article was followed by the exchange with J. M. Clark. Frisch wrote **RF1932a capital production and consumer-taking - A rejoinder** and **RF1932b Capital production and consumer-taking: A final word.**

Reprint of RF1932a and RF1932b.

**RF1931c Johan Åkerman: Om det ekonomiska livets rytmik [Johan Åkerman: On the rhythm of economic life]**

*Statsvetenskaplig Tidskrift*, Vol 34, 281-300.

Review of Johan Åkerman's doctoral dissertation in 1928 based on remarks by Frisch in the capacity of faculty opponent.

**RF1931d Konjunkturbevegelsen som statistisk og som teoretisk problem**

Contains a reprint (21 +11 pp.) and a ms titles *Konjunkturstatistikkens metode* (typewritten, folio, undated), which seems likely to have been written in 1928 or 1929, but drawn on in the Stockholm presentation. See also MS1931-5.

**RF1931e A method of decomposing an empirical series into its cyclical and progressive components**

Based on lecture at joint meeting of AAAS, AMS and ASA, 29 Dec. 1931 in Cleveland, Ohio. File comprises partly typewritten, partly handwritten manuscript, handwritten draft and typewritten ms. for the lecture and a reprint. (5 pp.).

**RF1931g Statistical correlation and the theory of cluster types**

*Journal of the American Statistical Association*, vol 26, no 176, 375-392.

Contains one photo copy.

***Box 19E. (1932)***

**RF1932a Capital production and consumer-taking - A rejoinder**

Reprint with RF1931b.

**RF1932b Capital production and consumer-taking: A final word.**

Reprint with RF1931b.

**RF1932c A correction**

*Journal of the American Statistical Association*, Vol 27, 187-187.

With Bruce D. Mudgett. A correction to RF1931g. Reprint with RF1931g.

**RF1932d Einige punkte einer Preistheorie mit Boden und Arbeit als Produktionsfaktoren**

Folder contains reprint (43 pp.).

**RF1932e Konjunkturrene [The business cycles]**

Keilhau, Wilhelm, Ingvar Wedervang, and Ragnar Frisch: *Verdensøkonomien i efterkrigstiden The world economy in the post-wartime*], Oslo, Universitetets radioforedrag Serie B Nr. 6, H., Aschehoug & co (W. Nygaard), 79-139.

A slightly revised version was later published as part of RF1947d.

Folder also contains one reprint.

**RF1932f Méthodes nouvelles pour mesurer l'utilité marginale**

*Revue d'Économie Politique*, Vol 46, 1-28.

Co-author Jacques Moret. Handwritten ms for Frisch's presentation at the very first meeting in Econometric Society in Lausanne, 1931, cf. the report from the meeting in the first issue of *Econometrica*. The ms was later used in the article, preceded by an introduction to Frisch's work by Jacques Moret. Contains parts of it photo copy and ms..

**RF1932g En metode til å beregne lokale trafikkintensiteter [A method of calculating local traffic densities]**

*Nordisk Järnbanetidskrift*, Vol 58, 1-16.

Contains one reprint.

**RF1932h New methods of measuring marginal utility**

Folder contains the original publication, and also contains illustrations used in the book, incl. original drawings, and handwritten data files used in table 1 (p.30) in the book (possibly the same data used in RF1926h). Also a long note written by Carl Thomas to Carl Snyder (both of the Fed. Res.). Finally a letter exchange between Frisch and Abraham Burk after Frisch received ms for Burk's article cum review of RF1932h in REStud 1936, folder contains as well a letter exchange with Dr Erich Reigrotzki in 1948.

**RF1932i New orientation of economic theory. Economics as an experimental science**

*Nordic Statistical Journal*, Vol 4, 97-111.

Contains reprints in English and Norwegian.

The inaugural lecture RF1932j translated, see the annotations.

**RF1932j Nyorientering av den økonomiske teori. Økonomikken som eksperimentalvitenskap [New orientation of economic theory. Economics as an experimental science]**

*Statsøkonomisk Tidsskrift*, Vol 46, 1-15.

The inaugural lecture delivered at the University of Oslo 8 February 1932. Reissued as RF1932k. An English translation issued as RF1932i.

**RF1932k Nyorientering av den økonomiske teori. Økonomikken som eksperimentalvitenskap [New orientation of economic theory. Economics as an experimental science]**

*Nordisk Statistisk Tidsskrift*, Vol 11, 97-111.

Reissue of RF1932j. See the annotations.

**RF1932l On the use of difference equations in the study of frequency distributions**

Contains reprint.

**RF1932m Verdensøkonomien i etterkrigstiden [The world economy in the post-war time]**

Published as Universitetets radioforedrag Serie B Nr. 6, H. Aschehoug & co (W. Nygaard) Oslo, 140 pp. With Wilhelm Keilhau and Ingvar Wedervang. See RF1932e.

***Box 19F. & Box 19G. (1933)***

**RF1933b Depresjonens problem [The problem of the depression]**

*Statsøkonomisk Tidsskrift*, Vol 47, 95-100.

Rejoinder to Åkerman 1933 (*Statsøkonomisk Tidsskrift*, Vol 47, 54-76).

**RF1933d Monopole - Polypole - La notion de force dans l'économie (Missing)**

*Tillægshäfte til Nationaløkonomisk Tidsskrift*, Vol 71, 241-259.

Reissued in English as RF1951c. In German as RF1965b and RF1968b.



Festschrift at the eightieth anniversary of Harald Westergaard. (An assessment of Frisch's work is given by Keppler, J. 1994: Monopolistic competition theory, Baltimore and London, The Johns Hopkins University Press, pp 92-93.)

The publication is missing, but contains a sketch from 1932.

### **RF1933f Partial time regressions as compared with individual trends**

*Econometrica*, Vol 1, No 3, 387-401.

A critical review of an article by Wassily Leontief in *Weltwirtschaftliches Archiv* 1929. Was followed by an exchange in the *Quarterly Journal of Economics* in 1934: Leontief 1935b, Ref1934c (also published as Rf1994b), Leontief 1934a and Marshack 1934. An account of the “pitfalls debate” is given in Chipman 1998 pp.78-84

Contains two reprints.

### **RF1933g Pitfalls in the statistical construction of demand and supply curves**

Contains the original paper, handwritten notes and calculations related to it. Also included are handwritten notes on Elmer Working's 1927 paper and on A.C. Pigou's 1930 paper.

### **RF1933i Propagation problems and impulse problems in dynamic economics**

Published in *Economic essays in honour of Gustav Cassel*, George Allen & Unwin Ltd, London, 171-205. Also issued as Publikasjon nr 3, Institute of Economics, University of Oslo. Folder contains neither the original publication for the Cassel festschrift, nor the manuscript but some handwritten notes and correspondence with Allen & Unwin (publishers of the festschrift) on the number of copies to be printed. Also some notes written down in Copenhagen in December 1934 are included (but why?).

### **RF1933j Propagation problems and impulse problems in dynamic economics**

*Publication no. 3*, from the Institute of Economics 35 pp.

The same as 1933i, see the annotations. Placed with RF1933i.

## **RF1933l Sparing og cirkulasjonsregulering**

Typewritten draft (20 pp.) undated. There are several draft versions of this document, which was first published as three newspaper articles and later as a pamphlet. An English translation was published in 2007 as *Saving and Circulation Regulation* in *Rivista Di Storia Economica*, Vol 23 (Nuova serie), 233 – 248.

## **RF1933m Problèmes et méthodes de l'économétrie**

Nine folders. A series of eight lectures given at Institut Henri Poincaré, Université de Paris, March-April 1933. The lectures were meant to be published but RF never submitted a final ms. Publication eventually took place translated into English in 2009, see RF2009a. The mss for the eight lectures are in separate folders with an additional folder containing correspondence. The lecture files contain typewritten drafts and handwritten additions, partly as marginal notes for the final versions. Some additional documents in the files, particularly in Lecture 1.

Lecture 1: *Fondements philosophiques de l'économetrie. La méthode axiomatique de utilité en tant que quantite.*

Lecture 2: *Exemples des théories économiques statiques et semistatiques. Monopole, polypole. La notion de force.*

Lecture 3: *Qu'est-ce qu'une théorie « dynamique » ? Propriétés des systèmes déterminés et indéterminés.*

Lecture 4: *Exemples de théories économétriques dynamiques. Oscillations des systèmes clos. La théorie des crises.*

Lecture 5: *La création des cycles par des chocs aléatoires. Synthèse entre le point de vue probabiliste et le point de vue des lois dynamiques déterminées.*

Lecture 6: *La construction statistique des fonctions économétriques. Equations autonomes et equations confluentes. Le danger des analyses à plusieurs variables.*

Lecture 7: *La technique des séries temporelles. Décomposition des series. Opérations linéaires et leur problèmes d'inversion.*

Lecture 8: *Conclusion : La signification des lois sociales et mécaniques. Invariance et rigidité. Remarques sur une philosophie du chaos.*

*Correspondence related to the Poincaré lectures.*

The folder comprise the following letters:

Letter G. Darmois to R. Frisch, 18.11.31.

Invitation to give lectures.

Letter R. Frisch to G. Darmois, 07.12.31.

Positive response, preliminary list of eight lectures.

Letter R. Frisch to G. Darmois, 21.12.31.

Have got funds from Rockefeller for establishing Institute of Economics, proposes postponement until fall term 1932.

Letter M. Fréchet to R. Frisch, 16.02.32.

About the invitation.

Letter G. Darmois to R. Frisch, 15.11.32.

About Econometrica.

Letter G. Fournier (Secrétaire) to R. Frisch, 15.11.32.

Official invitation, promises publication of the lectures.

Letter R. Frisch to G. Darmois, 24.11.32.

About Econometrica.

Letter R. Frisch to G. Fournier, 24.11.32

Suggests time for the lectures, promises new lecture titles.

Letter G. Fournier to R. Frisch, 09.02.33.

Confirms times, draft of posted enclosed.

Letter R. Frisch to G. Fournier, 20.02.33.

Final list of titles.

Letter G. Fournier to R. Frisch, 01.03.33.

Letter G. Fournier to R. Frisch, 11.03.33.

Finalizing the arrangements.

***Box 19H. (1934 - 36)***

**RF1934a Circulation planning: Proposal for a national organisation of a commodity and service exchange**

Published in *Econometrica*, Vol 2, 258-336 and 422-435.

Contains two reprints.

**RF1934c More Pitfalls in the Construction of Demand and Supply Curves.**

Contains typewritten ms. (10 pp.) and handwritten draft (16 pp.). Contains reprint (25 pp.), draft/notes (10 pp.), two letters. Part of an exchange with W.Leontief after RF1933e.

**RF1934d Reply to Mr. Subramanian's note**

*Journal of the American Statistical Association*, Vol 29, No 187, 317-317.

See RF1930c.

**RF1934e Robert Schmidt's definition of skewness and kurtosis**

*Econometrica*, Vol 2, No 2, 221-223.

Contains two reprints.

**RF1934f Statistical confluence analysis by means of complete regression systems**

Folder contains original publication. It also contains letters in connection with the publication and proof reading;

*Utility analysis and measurements of money flexibility in the United States of America and Scandinavia*, typewritten (ca 30 pp.), which seems to be part of the ms for RF1934f (not checked in detail);

Letter exchange with Frederick Waugh 1935;

Two notebooks and additional pp. written by Coward, which seems to be lecture notes on confluence analysis prior to the preparation of the book;

Letter by French engineer Chabanier 1945 and three notebooks with French translation of the confluence analysis;

Announcements of meeting in Teknisk-økonomisk Studiekreds og Aktuarforeningen om møte i København 18.12.34 with Frisch to speak about *Statistisk Konfluensanalyse*.

**RF1935a The characteristic solutions of a mixed difference and differential equation occurring in economic dynamics**

*Econometrica*, Vol 3, 225-239

Contains two reprints.

**RF1935b The meaning of money (Missing)**

Riegel, E. C.: *Irving Fisher's world authorities on the meaning of money*, New York, Empire Books.

**RF1935d Robert Schmidt's definition of Skewness and kurtosis**

*Econometrica*, Vol 2, No 2, 221-223.

Contains two reprints.

**RF1935g Open Market Operations og deres virkninger på banksystemet**

Published as Annex 4 in *Innstilling om Markedsoperasjoner (Open market operations)* 1935. Cf. corresponding file in Box 28.

**RF1936a Annual survey of general economic theory: The problem of index numbers**

Published in *Econometrica*, Vol 4, 1-38. Errata on p 192 in Vol. 4.

Contains two reprints.

**RF1936c Konjunkturregulering og statsinngrep i bankvirksomhet  
[Countercyclical governmental interventions in banking]**

*Økonomisk Revue*, Vol 19, 524-529.

Contains two reprints.

**RF1936d On the notion of equilibrium and disequilibrium**

*The Review of Economic Studies*, Vol 3, No 2, 100-105.

Contains two reprints.

**RF1936e Plan til en Økonomisk strukturoversikt for Norge [Plan for an Economic Structural Survey of Norway]**

Oslo, Fabritius & Sønners boktrykkeri, 33 pp.

***Box 19I. (1937 - 43)***

**RF1937a General choice-field theory**

Published in *Report of the Third Annual Research Conference on Economics and Statistics*, held by Cowles Commission for Research in Economics 28 June - 23 July 1937, Colorado Springs, Colorado, 64-69.

Abstract for three lectures, given 14, 21 and 22 July 1937. A fourth lecture on choice-field theory, "Price-of-living comparisons between different countries", was given 23 July 1937 and is shortly referred to on p95.

**RF1937f Note on the phase diagram of two variates (Missing)**

*Econometrica*, Vol 5, 326-328.

**RF1937g Nuovi metodi di misura del l'utilità marginale**

In Guisepe Bottai e Celestino Arena (eds): *Economia pura della Nuova Collana di Economisti*, Torino, Unione Tipografico-Editrice Torinese, 385-512.

Contains two reprints.

### **RF1937h Price index comparisons between structurally different markets**

*Comptes rendus du Congrès International des Mathématiciens Oslo 1936*, Oslo, A. W. Brøggers Boktrykkeri A/S, Vol 2, 220-222.

Contains two reprints.

### **RF1938a The double-expenditure method**

*Econometrica*, Vol 6, 85-90.

Contains two reprints.

### **RF1938b Efterspørselen efter melk i Norge [The demand for milk in Norway]**

*Statsøkonomisk Tidsskrift*, Vol 52, 1-62.

Contains one reprint.

### **RF1938c Fra førkrigstid til efterkrisetid i sosialøkonomikken [From pre-war time to post-depression time in economics] (Missing)**

Brochmann, Georg (ed): *Studentene fra 1913*, Oslo, Bokkomiteen for studentene fra 1913, 34-39.

### **RF1938d On the inversion of a moving average**

*Skandinavisk Aktuarietidskrift*, Vol 21, 218-225. Remarks on Wold, Herman 1938: *A study in the analysis of stationary time series*, Stockholm, Almqvist & Wiksell. Frisch was opponent at Wold's dissertation defence in 1938

Contains two reprints.

### **RF1938e Statistical versus Theoretical Relations in Economic Macrodynamics**

Handwritten ms (41 pp.) 17.07.38. The original ms for the famous memo for the League of Nations Conference in Cambridge, July 1938, later reprinted in Bjerkholt (1995) and Hendry & Morgan (1995).

### **RF1939a The Dupuit taxation theorem**

*Econometrica*, Vol 7, No 2, 145-150. A comment on Hotelling, Harold 1938. The general welfare in relation to problems of taxation and of railway and utility rates, *Econometrica*, Vol 6, 242-269. An exchange followed: Hotelling (Vol 7, 151-55), RF139b and Hotelling (Vol 7, 158-160). Chipman (1998) commented on the Frisch-Hotelling debate on pp 74-76

Contains two reprints.

### **RF1939b A further note on the Dupuit taxation theorem**

*Econometrica*, Vol 7, 156-157.

A reprint is placed with RF1939a.

### **RF1939d A note on errors in time series**

*The Quarterly Journal of Economics*, Vol 53, No 4, 639-640.

Contains two reprints.

### **RF1940a Befolkningsoptimum [Optimum population] (Missing)**

*Statsøkonomisk Tidsskrift*, Vol 54, 157-219.

### **RF1940b Nasjonalregnskapet [The national accounts]**

Beretning om det 3. Nordiske statistikermøte [*Transactions of the 3rd Nordic meeting of statisticians*] I Oslo den 28. og 29 juni 1939, Oslo, Grøndahl & Søns Boktrykkeri, 1940, 141-149.

### **RF1940c Sosialøkonomiske utsnitt. Originaltekster utgitt med innføringer og forklaringer [Selected economic readings. Classical texts with introductions and explanations]**

Published H. Aschehoug & co. (W. Nygaard) Oslo, 234 pp. Co-authored by Wilhelm Keilhau



### **RF1941a Forord og Innledning [Preface and Introduction]**

In Wold, Knut Getz: *Kosthold og levestandard. En økonomisk undersøkelse [Nutrition and standard of living. An economic investigation]*, Oslo, Fabritius og Sønners Forlag, i-ii and 1-23.

The nutrition project and publication was part of the Structural Survey, as is apparent from the preface. The file contains ms (tw, 4 pp.9 for RF's Preface, the ms is dated Nov. -40, exactly one year before the Preface in the book. The Preface states that the delay is due to 'various reasons' which may implicitly mean that it was due to the war in some way. The ms has 2-3 initial paragraphs not included in the printed version. These were all about the Structural Survey and are of some interest. The file also contains copies of letters that accompanied the sending of books to the many experts who had advised in the project. The delay may have been in the cover letters for sending the book to a number of experts who had given advice, and also a newspaper interview with Karl Evang about the nutrition study he was in charge of (with O. Galtung Hansen).

### **RF1941d Priskartellisk prisdannelse [Price formation under price cartels]**

*Statsøkonomisk Tidsskrift*, Vol 55, 270-274.

Contains two reprints.

### **RF1943a Byggekostnad, byggestandard og byggesum [Building costs, building standard and total building expense]**

*Forsikringstidende*, Vol 47, 108-109. Contains two reprints.

### **RF1943b En byggekostnadsindeks grunnlagt på de faktiske byggeforhold til enhver tid [A cost-of-building index based on the current building conditions]**

Published in *Statsøkonomisk Tidsskrift*, Vol 57, 1-220. Contains two issues, an exchange of letters between AS Stormbull's director Bernt Fossum and other letters pertaining to the publication of the article. The ms is not included.

### **RF1943c Økosirk-systemet (Det økonomiske sirkulasjonssystem) [The ecocirc system (The system of economic circulation)]**

Published *Økonomisk Tidsskrift*, Vol 45, 106-121.

**Box 19J. (1944 - 50)**

**RF 1945b En statistisk analyse av bakeprøver [A statistical analysis of bakery samples]**

In *Kristiania Brødfabrikk A/S og A/S Rosenborgkomplekset gjennom 25 år, A jubilee publication*, Oslo, Beretning om selskapenes anlegg, organisasjon og drift, 172-181. Also as Memo 05.05.48, re-issued as RF1954c.

**RF1945c Økonomisk forskning og undervisning i Norge [Economic research and education in Norway]**

*Statsøkonomisk Tidsskrift*, Vol 59, 101-112.

**RF1946j The responsibility of the econometrician**

*Econometrica*, Vol 14, 1-4.

Contains two reprints.

**RF1947a Irving Fisher at eighty**

Published in *Econometrica*, Vol 15, 71-74, also published in *Stimulator*, Vol 1 No 4, 5-8 (RF1947b).

Also appeared under the title: *Tribute to Irving Fisher* in *Journal of the American Statistical Association*, Vol 42, 2-5. (RF1947g), with Fisher's response pp 7-8.

**RF1947b Irving Fisher at eighty**

*Stimulator*, Vol 1 No 4, 5-8

The same as RF1947a.

**RF1947c Mål og midler i økonomisk politikk i etterkrigstiden [Ends and means in economic policy in the post-war time]**

*Samtiden*, Vol 56, 26-38.

Contains one photo copy and one reprint.

**RF1947d Noen trekk av konjunkturlæren (Med et tillegg om levestandard og prisindeks) [Some elements of the business cycle theory (With a supplement on standard of living and price index)]**

Published H. Aschehoug & co (W. Nygaard) Oslo, (107 pp.). Contains a typewritten copy of additions planned for the article and afterwards the rest of the documents are typewritten additions planned as well. The original manuscript is included.

The bulk of the book (all but the supplement) is an updated and revised version of RF1932e.

**RF1947e On the need for forecasting a multilateral balance of payments. (17 pp.)**

Contains an exchange of letters with the editor of AER, Paul T. Homan and reprint. It appears that the original title was 'On the need for an inter-economic budget'.

Contains later comments in AER on Frisch's paper by J. J. Polak and Walter W. Haines.

Reissued as RF159b.

**RF1947f Den samfunnsmessig optimale arbeidsinnsats [The socially optimum employment]**

Published in *Stimulator* Vol 1 No 7, 5-16. Originally issued as Institute Memo, Frisch 15.08.47, see the annotations.

**RF1947g Tribute to Irving Fisher**

*Journal of the American Statistical Association*, Vol 42, 2-5.

The same, except for the title, as RF1947a.

Address at testimonial dinner of the American Statistical Association at its 106th Annual Meeting, Atlantic City, January 25 1947.

Contains two reprints. The reprint also includes Response of Irving Fisher.

### **RF1948a Den optimale arbeidsinnsats**

Published *Økonomisk Tidsskrift*, vol 50, 63-80. Contains MS, related notes, editorial correspondence with E. Lundberg, a 10-page note by L.R. Klein on Frisch's paper, a 5-page note (handwritten) by E. Sverdrup on Frisch's paper, letter from Nørregaard Rasmussen, letter to Leo Törnquist, handwritten notes.

### **RF1948b Overdeterminateness and optimum equilibrium**

*Nordisk Tidsskrift for Teknisk Økonomi*, Vol 12 No 37, 95-105.

Contains two reprints.

### **RF1948c The problem of multicompensatory trade. Outline of a system of multicompensatory trade**

*The Review of Economics and Statistics*, Vol 30, No 4, 265-271.

### **RF1948d Repercussion studies at Oslo**

*The American Economic Review*, Vol 38, No 3, 367-372.

Contains one reprint.

### **RF1949a On the zeros of homogeneous functions**

*Econometrica*, Vol 17, No 1, 28-29.

Contains two reprints.

**RF1949b Prolegomena to a pressure-analysis of economic phenomena**

Published in *Metroeconomica*, Vol 1, 135-160.

**RF1949c Work done and work planned at the University Institute of Economics**

**Oslo**

*Stimulator*, Vol 3 No 5, 4-10.

**RF1950a Marshall's theory of value**

Published in *The Quarterly Journal of Economics*, Vol 64, 495-524. The publication is an English translation of *Notatene til økonomisk teori* (1947) ekskurs 14. Within the folder a typewritten draft can be found.

**RF1950c L'emploi des modèles pour l'élaboration d'une politique économique rationnelle**

*Revue d'Économie Politique*, Vol 60, 474-498 and 601-634,

Contains two reprints.

**RF1950d On the distribution of a sum of squares over a linear subspace**

*Zeitschrift für Ökonometrie*, Vol 1, 105-110.

**RF1950e O problema dos números-índice**

*Revista Brasileira de Estatística*, Vol 11, 187-214.

Translation of RF1936a.

Contains two reprints.

**RF1950f Quelques souvenirs personnels sur un grand home**

*Économie Appliquée*, Vol 3, 407-412. In memory of Joseph Schumpeter

Contains two reprints.

**RF1950g Samfunnsøkonomi og økonomisk demokrati [Economics and economic democracy]**

*Kontakt*, Vol 4 No 9, 30-37. Reissued as (part of) RF1951g.

One photocopy is placed with RF1951g.

**RF1950h Sosialøkonomisk forskning og studium [Economic research and the study of economics]**

*Kontakt*, Vol 4 No 1, 34-37.

Contains two reprints.

***Box 19K. (1951 - 56)***

**RF1951a Erkjennelsesmåter og vurderinger [Cognitive inferences and value judgements]**

*Stimulator*, Vol 5 No 4, 5-9.

**RF1951b Krav til eksamensbesvarelser i økonomisk teori [Requirements of examination papers in economic theory]**

*Stimulator*, Vol 5 No 5, 7-10.

### **RF1951c Monopoly – Polypoly – The concept of force in the economy.**

Contains reprints and correspondence in connection with the translation and republishing of RF1933c.

### **RF1951e Rasjonell økonomisk politikk [A rational economic policy]**

*Kontakt*, Vol 5 No 2, 30-38.

See RF1951g.

### **RF1951f Some personal reminiscences on a great man**

*Econometrica*, Vol 19, No 2, 87-91.

In memory of Joseph Schumpeter.

Contains typewritten ms. and exchange of editorial letters with managing editor in *Econometrica* W.B. Simpson and editorial secretary J. Novick. The same manuscript was translated into French and published by *Economie Appliquée* (RF1950f), editorial correspondence with Pierre Pujade included. The *Econometrica* article was reprinted in S.E. Harris (ed.): *Schumpeter, Social Scientist*, Harvard University Press, 1951 (not listed separately in bibliography), editorial correspondence with S.E. Harris included. It appears that Frisch received comments from Haavelmo and Gunnar Bøe.

### **RF1951g Økonomisk demokrati [Economic democracy]**

Published as a pamphlet *Arbeidernes Aktietrykkeri*, Oslo (20 pp.) as put together from RF1950g and RF1951e.

### **RF1952c Frisch on Wicksell.**

Contains editorial correspondence with H.W. Spiegel and with John Wiley & Sons. It appears that Frisch as usual submitted very late. The article was also issued as memorandum of 15 Dec. 1951 titled 'Knut Wicksell. A cornerstone in modern economic theory'. Exchange of letters with A.L.I. Wright who sent the paper 'Saving and the rate of interest in a progressive economy', in which he had adopted Frisch's ideas in then Wicksell and regarded it as 'a new approach to the Keynesian theory of the rate of interest'. Letters to *Økonomisk tidskrift* and to *Archiv für Sozialwissenschaft und Sozialpolitik* about permissions to quote Wicksell and Schumpeter, respectively. Letter to Johan

Åkerman about the correct source for Wicksell's wooden horse metaphor (as misstated in RF1933f).  
Letter to Mrs Collinder asking about Wicksell's religious beliefs. Also letters from Frederick A. Wuori and Herman Wold and handwritten notes for the article.

**RF1952d A note on Pierre Gorra's contribution on index numbers**

*Econometrica*, Vol 20, No 4, 687-687.

Contains MS, correspondence with Pierre Borra, including his cv. Also extensive editorial correspondence, proof, etc.

**RF1952e Vitenskap og vurdering [Science and judgement] (Missing)**

*Stimulator*, Vol 6 No 2, 5-7.

**RF1953b Kortsyntheten opphøyd til juridisk kriterium [The short-sightedness raised to a juridical criterion]**

*Stimulator*, Vol 7 No 2, 6-9.

**RF1953c Replikk til Borgs foredrag i Sosialøkonomisk Samfunn 9. april 1953 [A reply to Asbjørn Borg] (Missing)**

*Stimulator*, Vol 6 No 4, 15-19.

**RF1953d Samfunnsmodell anvendt i en analyse av hvordan de økonomiske faktorer griper inn i hverandre [An economic model of the society used in an analysis of how the economic factors interact]**

*Stimulator*, Vol 7 No 3, 5-19.

Lecture given at the annual meeting in Norges almenvitenskapelige forskningsråd April 8 1953.



### **RF1954a Linear expenditure functions. An expository article**

*Econometrica*, Vol 22, No 4, 505-510.

Contains two reprints.

### **RF1954b Some basic principles of price of living measurements. A survey article**

*Econometrica*, Vol 22, 407-421.

The file contains as carbon copy the original typewritten MS dated February 1947. This was written as a non-technical introduction to students of economics. The background was the comprehensive household survey that RF had supervised in 1945-46. The original MS was used for an address to students and faculty members at Harvard and Princeton. The original version was revised and issued as Memo 1953-06-25, which is identical to the published article. In the folder is also a reprint of J. R. Hicks: The Generalised Theory of Consumer Surplus, RES, Vol. 13 (2), No. 34, 1945-46, and L. R. Klein and H. Rubin: A Constant-Utility Index of the Cost of Living, Cowles Commission Staff Papers, March 15, 1947. In the early 1950s RF also resuscitated the double expenditure method, as in Memo 1953-12-01 (added to the folder).

### **RF1954d La théorie de l'avantage collectif et les régions de Pareto (Missing)**

*Économie Appliquée*, Vol 7, 211-280.

Published in English as RF1959c.

Translated from the original English text in Memo 1953-08-17, by Georges T. Guilbaud.

### **RF1955a Arbeid med metodeproblemer ved økonomisk planlegging i India**

**[Work on problems of method in economic planning in India]**

*Stimulator*, Vol 8 No 4, 4-21.

Contains two reprints.

### **RF1955b From national accounts to macro-economic decision models**

Gilbert, M. and R. Stone (eds): *Income and wealth - Series IV*, London, Bowes & Bowes Publishers Ltd., 1-26

Paper presented at the Third Conference of the International Association for Research in Income and Wealth, Castelgandolfo, near Rome, 1-6 September 1953.

**RF1955c Hard thinking and hard work (Missing)**

*Stimulator*, Vol 9 No 1, 4-6

**RF1955d Litt om å fraråde individuell sparing [A short commentary on advising against individual saving] (Missing)**

*Stimulator*, Oslo, Vol 9 No 6-7, 18-22.

**RF1955e Market price versus factor cost in national income statistics**

Sankhyá: *The Indian Journal of Statistics*, Vol 15, 1-8.

Comment by M. Ezekiel and a rejoinder by Frisch, published as RF1956e.

**RF1955f The mathematical structure of a decision model: The Oslo Sub-Model**

*Metroeconomica*, Vol 7, 111-136.

Contains one reprint.

**RF1955g Speech by Professor Ragnar Frisch**

Sankhyá: *The Indian Journal of Statistics*, Vol 16, 186-187.

Speech delivered at the Twentythird Anniversary of the Indian Statistical Institute, Calcutta, December 12 1954.

**RF1956a Formulazione di un piano di sviluppo nazionale come problema di programmazione convessa (Il caso del piano indiano)**

*L'Industria*, 1956, 1-12. 138 1956b Macroeconomics and linear programming, in 25 economic essays in honour of Erik Lindahl 21 November 1956, *Ekonomisk Tidskrift*, 1956, 38-67

Contains two reprints.

**RF1956b Macroeconomics and linear programming.**

25 economic essays in honor of Erik Lindahl 21 November 1956, *Ekonomisk Tidskrift*, 1956, 38-67.

Contains the book and editorial correspondence with E. Lundberg and B. Hansen.

### **RF1956d Programme convexe et planification pour le développement national**

*Colloques internationaux du Centre National de la recherche scientifique LXII*, Les modèles dynamiques. Conférence à Paris mai 1955, Publiée 1956, 47-80.

On the logarithmic potential method in linear programming and the general problem of macroeconomic planning.

### **RF1956e A rejoinder**

*Sankhyá: The Indian Journal of Statistics*, Vol 17, 246-246. Placed with RF1955e.

### **RF1956f La résolution des problèmes de programme linéaire par la méthode du potentiel logarithmique**

*Cahiers du Séminaire D'Économétrie: No 4 - Programme linéaire - Agrégation et nombres indices*, 13 Quai Anatole-France Paris-7e, Centre National de la Recherche Scientifique, 1956, 7-23 (including discussion).

Published under the direction of René Roy, Membre de L'Institut, Inspecteur Général des Ponts et Chaussées.

### ***Box 19L. (1957 - 59)***

### **RF1957b The multiplex method for linear programming**

*Sankhyá: The Indian Journal of Statistics*, Vol 18, 329-362.

Contains one reprint.

### **RF1957c Om målsettingsformuleringen ved nasjonal planlegging [On the formulation of objectives in national planning]**

*Nationaløkonomisk Tidsskrift*, Vol 95, 125-130.

Contains two reprints.

**RF1957d Sur un problème d'économie pure**

*Metroeconomica*, Vol 9, 79-111

Re-issue of RF1926h, Contains two reprints.

**RF1958a Aggregeringsproblemet fra produksjonsteoretisk synspunkt.**

Contains editorial correspondence.

**RF1958b Økonomikkens landevinninger i nyere tid [The progress of economics in recent time]**

Published in *Statsøkonomisk Tidsskrift*, Vol 72, 263-286. From a speech delivered at a gala meeting at the University of Oslo October 25 1958 at the fiftieth anniversary of the first degree in economics.

**RF1959a A complete scheme for computing all direct and cross demand elasticities in a model with many sectors**

*Econometrica*, Vol 27, No 2, 177-196.

Contains two reprints.

**RF1959b On the need for forecasting a multilateral balance of payments**

**(Missing)**

Kvant Allen, William R. and Clark Lee Allen (eds): *Foreign trade and finance*, New York, The Macmillan Company, 410-425.

An abbreviated reissue of RF1947e.

**RF1959c On welfare theory and Pareto regions**

This paper originated in 1953 as an annex to a paper at a IARIW conference, later published as RF1955b. The annex appeared as memorandum 17 August 1953. It was published in French as RF1954d. In the French translation there were substantial changes in section 6. This version was used for RF1959c with some additional minor corrections.

Contains the typewritten original of the abovementioned memorandum with some handwritten marginal notes, letter to Zeuthen 1953, A note by Tinbergen 'More realism in welfare economics' (18 pp., Feb. 1953), exchange of letters with Tinbergen 1956, and handwritten notes.

### **RF1959d The Principle of Recurrent Planning**

In Bergvall, John et al (eds): *Ekonomi Politik Samhälle*, Stockholm, Bokförlaget Folk och Samhälle, 67-74. A volume in honour of Bertil Ohlin. RF's contribution was an excerpt (adapted) from *General Theory of the Kernel Model*, Memo 07.02.58. Contains correspondence in connection with publication, changes made in the original version, etc.

### **RF1959e Recept på investeringspolitik för stabil framstegstakt [Recipe for an investment policy for a steady rate of progress]**

*Ekonomien*, Vol 35, 6-13.

Contains one issue.

### ***Box 19M. (1960 - 61)***

### **RF1960a Generalities on planning**

*L'Industria*, 1960, 1-23.

Contains one photo copy.

### **RF1960b The infra effect of investments, in Bombach, G. (ed): *Stabile Preise in wachsender Wirtschaft***

*Das Inflationsproblem*, Tübingen, Verlag von J. C. B. Mohr (Paul Siebeck), 105-114.

Contains two reprints.

### **RF1960c Market Prices vs. factor costs and the constancy of production coefficients**

Published in *Essays in economics and econometrics. A volume in honor of Harold Hotelling* by Chapel Hill, the University of North Carolina ( Pfouts, R.W., ed). Contained within are original ms along with correspondence sustained with R.W. Pfouts.

### **RF1960d Maxima et minima. Théorie et applications économiques**

Published by Dunod, *Finance et économie appliquée volume 8*, Paris (178 pp.) In collaboration with A. Nataf; translated from Norwegian by M. Gilliard. Contains correspondence with A.Reidel from D Reidel Publishing Company. Also, a letter from US lieutenant Roger Nils Folsom with questions regarding the article to which we find a mimeograph of Frisch's response. Also letter from Sagitario a publishing house in Barcelona asking for a copy of the document to consider it for publication. The manuscript is not included. Contains the book.

### **RF1960e Oskar Jæger - Kåseri for sosialøkonomiske studenter 28. april 1960**

**[Oskar Jæger - Causerie to students in economics 28 April 1960] (Missing)**

*Sosialøkonomen*, Vol 14 No 5, 17-19.

### **RF1960f Planning for India: Selected explorations in methodology**

*Indian Statistical Series* No. 8, Calcutta, Statistical Publishing Society, 86 pp.

Contains one photo copy.

### **RF1960g Speed with safety through national planning**

Published in *L'Egypte Contemporaine*, Cairo, National Planning Committee, 5-43. Frisch in 21.04.60 made manuscript for the present article. Also as reprint No 118 from UO.

### **RF1961a Economic planning and the growth problem in developing countries**

*Statsøkonomisk Tidsskrift*, Vol 75, 115-135.

Based on presentation at a seminar in October 1960 at the Norwegian Institute of International Affairs in Oslo. Subsequent discussion in same issue pp135-138.

Folder contains Øst-Økonomi, published by the Office of Eastern Economics Norwegian Institute of International Affairs.

**RF1961f Litt om desisjonsmodeller i regional planlegging [Some reflections on decision models in regional planning] (Missing)**

*Sosialøkonomen*, Vol 15 No 8, 5-6.

**RF1961g Mixed linear and quadratic programming by the multiplex method (Missing)**

Hegeland, H. (ed): *Money, growth and methodology and other essays in economics*, Lund, CWK Gleerup, 373-392.

Festschrift to Johan Åkerman.

**RF1961i Numerical determination of a quadratic preference function for use in macroeconomic programming (Missing)**

*Giornale Degli Economisti e Annali di Economica*, Vol 20, 3-43.

**RF1961j The Oslo Refi interflow table**

*Bulletin de L'institut International de Statistique*, Paris, 33e Session, 1961, 1-12. In co-operation with Hans Heli, Tore Johansen, H. J. A. Kreyberg, Per Schreiner, Jan Serck-Hanssen and Tore Thonstad.

Contains two reprints.

**RF1961k Quadratic programming by the multiplex method in the general case where the quadratic form may be singular**

*Bulletin of the International Statistical Institute*, Vol 38, 283-332.

Contains two reprints.

**RF1961l A reconsideration of Domar's theory of economic growth (Missing)**

*Econometrica*, Vol 29, No 3, 406-413.

**RF1961n Verdifaste låneformer [Indexed loan forms]**

*Statsøkonomisk Tidsskrift*, Vol 75, 198-212.

***Box 19N. (1962 - 63)***

**RF1962a Address delivered at the Britain-Commonwealth-EFTA Conference  
July 17, 1962 (Missing)**

Report of the conference: *Britain should stay out*, The Britain-Commonwealth-EFTA Conference, July 16-19, 1962, House of Commons, Westminster, London, S. W. I., The Forward Britain Movement, 102-107.

**RF1962c *Innledning til produksjonsteorien, 9. utgave [Introduction to the theory of production, ninth edition]***

Oslo, UF, 252 pp.

The first printed version of Frisch's theory of production, followed by enhanced French, English and Italian translations issued as 1963c ,1965k and 1966e respectively.

**RF1962e Note generali sulla pianificazione (Missing)**

Caffe, F. (ed): *Economisti moderni*, Milan, Geranzi Editore, 202-235.

Translation of 1960a.



**RF1962f La pianificazione economica ed il problema della crescita nei paesi in sviluppo (Missing)**

*L'Industria*, 1962, 5-?.

Italian translation of Frisch 1961a. An added note: M.Talamona: Note in margine al saggio di Ragnar Frisch, su alcuni problemi dellapianificazione, p 25.

**RF1962g Preface to the Oslo Channel Model - A survey of types of economic forecasting and programming**

Geary, R. C. (ed): *Europe's Future in Figures*, Amsterdam, North-Holland Publishing Company, 248-286.

Contains two reprints and one version issued by the reprint series.

**RF1962h Den Sosialøkonomiske vitenskaps utvikling[The development of the Economic Science]**

Published in *Sosialøkonomen* Vol16, pages 2-6. Folder contains a typewritten copy with several notes written on it in pen. It contains two other copies, one in perfect state and another one that seems to be a draft with glued-together parts.

**RF1963b An implementation system for optimal national economic planning without detailed quantity fixation from a central authority (Missing)**

*Extrait des Actes de la 3e conference internationale de recherche operationelle*, Oslo 1963, Paris, London, Dunod and English Universities Press Ltd, 20-59.

**RF1963c Lois techniques et économiques de la production**

Published by Dunod, *Finance et économie appliquée* volume 14, Paris (362 pp.) (two copies of the document) Translated from Norwegian by Marc Gilliard. The book comprises the content of both first

volume (1946c) and second volume (20.11.53) of *Innledning til produksjonsteorien [Introduction to the theory of production]*. An English translation RF1965k, and an Italian translation RF1966e.

**RF1963d A multilateral trade clearing agency**

*Statsøkonomisk Tidsskrift*, Vol 77, 1-10.

Contains one reprint.

**RF1963e The nonplex method in its subconditional form. Main points of the theory**

*Economics of Planning*, Vol 3, 221-238.

Assisted by Håvard Alstadheim.

***Box 190. (1964)***

**RF1964a Dynamic Utility**

*Econometrica*, Vol. 32, 418-424. Contains editorial correspondence, a proof copy and reprint. Also letter from Alan Powell 11.09.64, commenting upon the article, and letter from Edmond Malinvaud 22.04.63 with an attached chapter from lecture notes.

**RF1964b Economic planning and the role of econometrics**

*Statsøkonomisk Tidsskrift*, Vol 78, 1-7. Introductory remarks to a paper presented 10 October 1963 to a Study Week organized in the Vatican by the Pontifical Academy of Sciences

Contains two reprints.

**RF1964c Die grundlegenden Züge des zwischenzweiglichen Modells "Oslo"**

Förster, E., K. König, and G. Wintgen (eds): *Mathematische Methoden in der Wirtschaft*, Berlin, Verlag die Wirtschaft, 383-472

Translated from Russian by Birgitte Berthold, Erhard Förster, Heinz Geiáler, Karl König, Herbert Kluge, Wolfgang Salecker and Joachim Ulbricht. Original title of the book of readings (in Russian): *Primeniye matematiki v ékonomicheskikh issledovaniyakh*.

### **RF1964d A multilateral trade clearing agency**

*On political economy and econometrics* - Essays in honour of Oskar Lange, Warszawa, PWN-Polish Scientific Publishers, 165-172.

Contains one reprint.

### **RF1964e Optimal skewness in international economic cooperation**

*Economics of Planning*, Vol 4, 65-75.

Contains two reprints.

### **RF1964f Parametric solution and programming of the Hicksian model**

Co-author Ashok Parikh. Contains ms based on memorandum version (1962), proof copy/reprint and much correspondence with Parikh and some letters related to the publication of the article. Also a note on advice to colleagues about students from developing countries.

### **RF1964g Planning for The United Arab Republic**

*L'Egypte Contemporaine*, LVème annee, 5-17.

Public lecture delivered on 8 February 1964 in the Egyptian Society for Political Economy, Legislation and Statistics, at the invitation of Cairo University.

### **RF1964h Utdrag av forelesninger i teoretisk statistikk. Fra kompendier av Ragnar Frisch og Trygve Haavelmo [Extract of lectures in theoretical statistics. From memoranda by Ragnar Frisch and Trygve Haavelmo] (Missing)**

Oslo, *Universitetsforlaget*, 81 pp.

**Box 19P. (1965)**

**RF1965b Monopol - Polypol - der Begriff der Kraft in der Wirtschaft**

Ott, Alfred Eugen (ed): *Preistheorie*, Köln, Berlin, Kiepenheuer & Witsch, 17-32.

Originally issued in French as RF1933d; later in English translation as RF1951c. Translated from French to German by Alfred Eugen Ott.

**RF1965c Nyorientering av den økonomiske teori. Økonomikken som eksperimentalvitenskap [New orientation of economic theory. Economics as an experimental science]**

*Sosialøkonomen*, Vol 19 No 2, 2-7.

Contains two reprints.

**RF1965d Planning for the United Arab Republic (Missing)**

*Economics of Planning*, Vol 5, 29-42. Public lecture delivered on 8 February 1964 in the Egyptian Society for Political Economy, Legislation and Statistics, at the invitation of Cairo University.

Public lecture delivered on 8 February 1964 in the Egyptian Society for Political Economy, Legislation and Statistics, at the invitation of Cairo University. A revised version of RF1964g.

**RF1965e Politikk i pakt med fremtiden [Politics in harmony with the future]**

Pamphlet published by A/L Orientering (87 pp.). The pamphlet originally appeared as a series of 12(?) articles in *Orientering*. Contains handwritten and typewritten pieces of the ms and some related papers and notes.

**RF1965g Selection and implementation - The econometrics of the future**

Published in *Semaine d'Étude sur le Role de l'analyse econometrique dans la formulation de plans de*

*developpement*, by *Pontificiae Academiae Scientiarvm Scripta Varia* – 28, Rome, 1197-1204. Inside the folder are the two tomes of the publication (within which we find Frisch's contribution) as well as a reprint containing only Frisch's *Selection and Implementation*. Also included is a version of the paper presented at the Study-Week of the Pontifical Academy of Science, 7.-14.10.1963 as well as typewritten and handwritten notes, mimeographs and photocopies of correspondence with Marcello Boldrini and Giancarlo Mazzocchi, handwritten notes on a typewritten copy of the document, and an original second preliminary printing of the Memorandum from the Institute of Economics at the University of Oslo.

**RF1965k Theory of production (Missing)**

Dordrecht-Holland, D. Reidel Publishing Company, 370 pp.

Translated by R. I. Christophersen.

***Box 19Q. (1966)***

**RF1966a General outlook on a method of advanced and democratic macroeconomic planning (Missing)**

Bruno de Finetti (ed): *Mathematical Optimization in Economics*, Roma, III Ciclo, l'aquila, 29 Agosto - 7 Settembre 1965, Edizioni Cremonese, 223-264.

Issued in Italian translation as 1966c.

**RF1966b A generalized form of the Refi interflow table**

Kowalik, T. (ed): *Problems of economic dynamics and planning*. Essays in honour of Michal Kalecki, Warszawa, PWN-Polish Scientific Publishers (Pergamon Press), 133-156.

**RF1966c Intorno ad un metodo di pianificazione macroeconomica avanzata e democratica (Missing)**

*Rassegna Economica*, Vol 30, 5-42.

Translation of 1966a.

### **RF1966e Leggi tecniche ed economiche della produzione industriale**

Published by Milan, Etas Kompass, 53 pp. Translation of RF1963c by Luigi M. Bianchi. Introduction by Luigi Frey, xiii-xxxvi.

### **RF1966f Maxima and minima. Theory and economic applications**

Dordrecht-Holland, D. Reidel Publishing Company, 176 pp.

Contains two issues.

### **RF1966h Optimal implementation**

Tullio Bagiotti (ed): *Essays in honour of Marco Fanno*, Padova, Cedam - Casa Editrice Dott. Antonio Milani, 270-286.

Folder contains one reprint.

### **RF1966i Propagation problems and impulse problems in dynamic economics**

In Gordon, R. A., and L. R. Klein (eds): *Readings in business cycles*, London, George Allen & Unwin Ltd., 155-185.

Reissue of RF1933i.

### **RF1966j Rational Price Fixing in a Socialistic Society (Part 1)**

Contains handwritten and typewritten ms and proof copy with corrections. Part 2 was never published. Many wrote to the journal or to Frisch about the continuation. The file also contains notes and reading material used for writing the article or in preparation of part 2. The reading material comprised articles by Leif Johansen, Jaroslav Haber and Ota Šik and newspaper cuttings. Exchanges with the editor and the printer.

### **RF1966k and RF1966l Øst og Vest - og avanserte planleggingsmetoder**

[East and west - and advanced planning methods. The second article: The price problem] Contains many handwritten notes, a mimeograph of the second manuscript and a typewritten copy of the first.

There are also newspaper cuttings of articles written by Dr. Philos. Professor i økonomi Jevsei Liberman from different newspapers.

***Box 19R. (1967 - 72 )***

**RF1967a Investment starting vs. investment sinking**

*Economics of Planning*, Vol 7, 219-231.

A paper prepared for invited lectures to be given April 1968 in the Department of Economics and Jurisprudence of the Hungarian Academy of Sciences, Budapest.

**RF1967b A multilateral trade clearing agency**

*Economics of Planning*, Vol 7, 97-105.

Contains one reprint.

**RF1967c Möglichkeiten einer vorteilhaften Anwendung der mathematischen Programmierungsmethode in der bundesstaatlichen Wirtschaftsplanung Jugoslawiens**

Mayrzedt, Hans und Heelmut Romé (eds): *Koexistenz zwischen Ost und West - Konflikt, Kooperation, Konvergenz*, Wien, Frankfurt, Zürich, Europa Verlag Wien, 157-164 and 311-312.

**RF1967d The smoothing of an interpreference table**

Henn, Rudolf (ed): *Operations Research-Verfahren - Methods of operations research III*, Meisenheim, Verlag Anton Hain, 181-191.

### **RF1968b Monopol - Polypol - der Begriff der Kraft in der Wirtschaft**

Barnikel, Hans-Heinrich (ed): *Wettbewerb und Monopol*, Darmstadt, Wissenschaftliche Buchgesellschaft, 35-56

Reprint of RF1965b.

### **RF1969a Et numerisk eksempel som viser hvorledes prinsipper fra "The Oslo Channel Model" kan brukes for å avgjøre valg mellom investeringsprosjekter [A numerical example which shows how principles from "The Oslo Channel Model" can be used to decide choices between investment projects] (Missing)**

Oslo,Bergen, Tromsø, *Universitetsforlaget*, 72 pp.

### **RF1969b An Interview with the professor Ragnar Frisch**

Published in a *Separatum* in a review from *The General Assembly of the Hungarian Economic Association*. Interview appears on p. 208. The folder contains the original document.

### **RF1970a Econometrics in the midst of analytical and social turmoils**

The folder contains three pages of photocopies of James D. Watson's the double helix, handwritten notes. There is also a series of correspondence regarding a summoning to produce a festschrift in honor of Professor Herman Wold to which Frisch contributed with the article. The original manuscript or article is included in the folder as well as some typewritten notes and drafts.

### **RF1970b Econometrics in the world of today**

Document is part of a Festschrift for R. Harrod. The folder contains mimeographed correspondence with J.N.Wolfe from the University of Edinburgh as well as Maurice Scott from Nuffield College, Oxford. It contains as a typewritten copy of the document (which was to have the title: "From growth models to realistic decision models"). This copy is severely written over and corrected by Frisch. There is also a second final typewritten copy of the document. Folder contains the note where Frisch first coined the word "Econometrics" and the book. See also Frisch's paper at the ES World Congress Rome 1965 in Box 34M.



## **RF1970c From utopian theory to practical applications: The case of econometrics**

*Réimpression de Les Prix Nobel en 1969*, 213-243.

Ragnar Frisch's Nobel Prize Award Lecture, June 17, 1970.

Folder does also include manuscripts and notes for Frisch's Nobel Prize speech and other documentation regarding the award of the Nobel Prize.

## **RF1970e Ragnar Anton Kittil Frisch**

*Réimpression de Les Prix Nobel en 1969*, 211-212.

Biographical note written for the Nobel Prize Award.

Placed with RF1970c.

## ***Box 19S. (1971 - )***

### **RF1971a Co-operation between politicians and econometricians on the formalization of political preferences**

Esselte Tryck, Stockholm, *the Federation of Swedish Industries*, 66 pp. Prepared for a seminar held by the Federation of Swedish Industries.

Includes a very extensive folder with a plethora of handwritten notes, correspondence relating to the logistics of the travels and the lectures in Stockholm, Uppsala, Helsingfors and Göttingen. The original document is typewritten with several notes written upon it in pen and a considerable amount of added material. A final typewritten version of the lecture is found at the end of the folder with notes written upon it in pen as well.

### **RF1971b Communication and developing countries**

Folder contains a typewritten copy of the manuscript.

### **RF1971c Note generali sulla pianificazione (Missing)**

Caffe, F. (ed): *Economisti moderni*, Bari, Casa editrice Gius. Laterza & Figli, 195-226.

The same as 1962e.

### **RF1971d On a problem in pure economics**

Published in *Preferences, utility, and demand - A Minnesota symposium* ( Chipman, John S., Leonid Hurwicz, Marcel K. Richter and Hugo F. Sonnenschein, eds), New York, Chicago, San Francisco, Atlanta, Harcourt Brace Jovanovich, Inc., 386-423. Folder contains a typewritten copy of the original manuscript. This is an English translation by John Chipman of RF1926h.

### **RF1971e Rundspørring om Fellesmarkedet [Poll about the Common Market]**

**(Missing)**

*Sosialøkonomen*, Vol 25 No 3, 47-49.

### **RF1971f Samarbeid mellom politikere og økonometrikere om formuleringen av politiske preferanser [Cooperation between politicians and econometricians on the formulation of political preferences]**

*Sosialøkonomen*, Vol 25 No 6, 5-13.

Lecture given in *Sosialøkonomisk Samfunn*, Oslo, March 1971. Based on RF1971a. 3 different mimeographs of the document found within, one last one with notes written upon it in pen.

### **RF1971h Økonomisk Teori og Økonomisk Politikk [Economic theory and Economic Policy]**

Published in *Økonomi og politikk*, Oslo, H Aschehoug & co., pp. 5-13.

Folder contains the typewritten manuscript, correspondence with Petter Jakob Bjerve, handwritten notes.

### **RF1971i Preface**

Preface in *Knaurs Buch der modernen Statistik*. Preface to the book in Swoboda, H.. Droemer Knaur, München [Czech translation: *Moderní statistika*. Svoboda, Praha 1977]

**RF1974a Kvantitatív és dinamikus közgazdaságtan, Budapest, Közgazdasági és Jogi Könyvkiadó**

Book (382 pp.) published in Hungarian containing 11 papers from Frisch. Folder contains the original publication.

Altogether 11 papers from Frisch translated into Hungarian: 1926h, 1932h, 1933d, 1933i, 1936a, 1936d, 1950c, 1955b, 1959a, 1962g, 1971a.

**RF1976c Economic planning studies (Missing)**

Selected and introduced by Frank Long. Preface by Jan Tinbergen, *International studies in economics and econometrics*, Vol 8, Dordrecht-Holland, Boston-USA, D. Reidel Publishing Company, 195 pp.

A reprint of 1961a, 1962g, 1963b, 1971a, and 1970c.

**RF1976f Objektivitet i sosialøkonomien - den prinsipielle sontring mellom sak og vurdering [Objectivity in economics - the fundamental distinction between scientific statements and value judgements] (Missing)**

Slagstad, Rune (ed): *Positivism, dialektikk, materialisme. Den norske debatten om samfunnsvitenskapens teori*, Oslo, Universitetsforlaget, 108-111.

A reproduction of Frisch 1962c.

**RF1977a Indeksproblemet [The index problem]**

Gørtz, Erik and Drud Hansen, Jørgen (eds): *Indeks teori*, Odense, Odense Universitetsforlag, 21-36.

**RF1978a New methods of measuring marginal utility (Missing)**

Philadelphia, Penn., Porcupine Press, 142 pp.

A facsimile edition of 1932h.

**RF1981a From utopian theory to practical applications: The case of econometrics (Missing)**

*The American Economic Review*, Vol 71, No 6. 1-16.

A reprint of RF1970c.

**RF1984a Partial time regressions as compared with individual trends (Missing)**

Houck, James P. and Abel, Martin E. (eds): Waugh, Frederick V.: *Selected writings in agricultural policy and economic analysis*, Minneapolis, University of Minnesota Press, 409-423.

With Frederick V. Waugh. A reprint of 1933f.

**RF1992a Statics and dynamics in economic theory (Missing)**

*Structural Change and Economic Dynamics*, Vol 3, 391-401.

An English translation by Peter Thomas of the sections 1-3 of 1929d. An introduction by Andvig 1992 in the same journal issue, pp 385-389.

**RF1994a Editorial (Missing)**

Poirier, Dale J. (ed): *The methodology of econometrics*, Aldershot, Edward Elgar Publishing Limited, 3-6.

Reprint of 1933c.

**RF1994b More pitfalls in demand and supply curve analysis (Missing)**

Darnell, Adrian C. (ed): *The history of econometrics - Volume II*, Aldershot England (Brookfield Vermont USA), Edward Elgar Publishing Limited (E. E. Publishing Company), 54-60.

Reprint of 1934c.

### **RF1995a Foundations of modern econometrics (Missing)**

The selected essays of Ragnar Frisch. Volume I, and II, Edited and with an introduction by Olav Bjerkholt, Aldershot UK, Brookfiels US, Edward Elgar, 532 pp.

A compilation of 40 essays or articles: 1929b, 1930c, 1931c, 1931f, 1932i, 1933e, 1933f, 1933i, 1934a, 1935b, 1935g, 1936a, 1936d, 1938a, 1938e, 1939a, 1946j, 1947e, 1948c, 1948d, 1949d, 1951c, 1954a, 1955f, 1956b, 1957b, 1959a, 1959c, 1961g, 1961i, 1961l, 1962g, 1963b, 1963e, 1964a, 1964f, 1966j, 1967d, 1970c, 1971d, 1992a.

### **RF1995b The foundations of econometric analysis (Missing)**

Cambridge England, Hendry, David F. and Morgan, Mary S. (eds) New York, Melbourne, Cambridge University Press.

Comprises complete or excerpts of various works: 1934c, 1934f, 1938e, 1949b, 1933i.

### **RF1995c Troen på nøkken (Missing)**

Oslo, Det Blå Bibliotek, Selections and introduction by Jens Chr. Andvig, Olav Bjerkholt and Tore Thonstad. 1995, UF, 267 pp.

Comprises excerpts from several works by Frisch (in Norwegian).

### **RF2007a Saving and Circulation Regulation (Missing)**

Published in *Rivista di Storia Economica*, Nuova Serie, anno XXII, Agosto 2007, fascicolo 2.

English translation of RF1933l.

See also Bjerkholt & Qvigstad (2007).

### **RF2009a Problems and Methods of Econometrics (Missing)**

Edited with an introduction by Olav Bjerkholt and Ariane Dupont-Kieffer. Routledge.

### **RF2009b Refleksjoner om tidsregning [Reflections on time-calculations]**

*Samfunnsøkonomen*, Nr. 9. 2009. 62 årgang. Oslo.

With introduction by Olav Bjerkholt.

Also includes the original typewritten document (11pp.) written during RF's last visit to Tokyo for ISI meeting 1960.

**RF2010a A Dynamic Approach to Economic Theory The Yale Lectures of  
Ragnar Frisch (Missing)**

1930. Routledge.

Edited with an introduction by Olav Bjerkholt and Duo Qin. Routledge.