

**Hidden Figures:  
The (In)Visibility of Women Economists in Italian Economic Journals from 1930 to 1970**

Giulia Zacchia

*Sapienza University of Rome –E-mail: [giulia.zacchia@uniroma1.it](mailto:giulia.zacchia@uniroma1.it)*

December 30, 2017

**Short Abstract:**

*The paper aims at shedding light on the contributions by women economists to the evolution of the Italian economic thought in a recent past. It is a first attempt to fill the substantial ignorance about who were women pioneers of economics in Italy and how they contributed to the discipline, identifying the evolution of their visibility and trends in their research fields' specialization in the articles published by Italian economic journals from the 1930s to the 1970s.*

**Keywords:** *Diversity in Economics; Women Economists; Italian Economic Journals; Italy; History of Economic Thought; Sociology of the Profession; Gender Studies.*

**JEL:** *A14, A11, B31, B54*

**Introduction**

An increasing number of studies, mainly focused on the Anglo-Saxon countries and particularly on North America, found that women, despite the discrimination they faced, significantly contributed to economics. Some historians (Forget, 1995) developed statistical analyses of the frequencies and topics of women's contributions, especially in journal articles and in PhD theses. "The Biographical Dictionary of Women Economists" and "A Bibliography of Female Economic Thought to 1940", instead, are the main comprehensive collections of bibliographies and selections of writings by women economists who were important, either because they made a substantive contribution to the field or because they were historically the first woman in a particular country to contribute to the discipline. Among women economists internationally identified as determinant in the evolution of the economic thought (Dimand et al. 2000) only two are Italian: Vera Cao Pinna and Costanza Costantino. Beyond these works, there are numerous articles and chapters concerning women's participation in the discipline, and biographical notes about life experiences and economic ideas of individual women. For example, Libby's work (1984, 1987, and 1990) presents descriptive statistical trends in the construction of economics knowledge by women economists in the US before 1940. Madden (2002) provides bibliometric analysis of published contributions to economics by women from 1900 to 1940. Dimand et al. (2011) assesses changes in women's participation in the Allied Social Sciences Association since its inception in the late 19th century while Forget (1995) reviews PhDs' theses' topics prior to 1940 at American universities. Always concerning US, Forget (2011) analyzed the history of American women in the economics profession during the 20th century and she identified four different phases characterized by different visibility, research interests and publications' habits: "Prehistory", "Interwar Years", "1950s–1960s" and the "1970s and Beyond".

In line with Forget (2011), even if with a narrower perspective due to the unavailability of PhD theses' archivals in Italian universities, the paper emphasizes the "woman question" in the economics profession in Italy with an exploration of articles published by Italian economic journals from the 1930s to the 1970s in order to find the evolution of women's contribution. The paper is a first attempt to identify the contribution of women to the development of Italian economic thought, trying to remove the ignorance about who were

the women pioneers of economics in Italy. The paper aims also at denying Baumol's (1985) idea that a few women were contributing to the economic literature, and that there were just two women economists in recent past in Italy.

The paper is organized as follows: section 1 describes data and data collection, mainly by archival investigation for the identification of Italian women pioneers in the economics profession as well as trends in gender segregation among different research fields. Section 2 presents a reconstruction of the biographies of four women pioneers identified by the analysis of articles published in the Italian economic journals from the 1930s to 1950s and their relevance for the evolution of the Italian economic thought :

-Jenny Kretschmann Griziotti - forefront in interdisciplinary approach and in the diffusion of economic thought;

-Maria Castellani, pioneer in mathematical and technical studies about social insurances and calculators for statistical use;

-Vera Cao Pinna, that gave an impulse to applied economic research as support to political economics during the post-war economic reconstruction in Italy, introducing the use of the Input-Output tables;

-Francesca Duchini, the first women appointed as full professor in history of economic thought in Italian universities, she was one of the first and main expert of Karl Marx and his influence among the Italian economists.

In section 3, I present the results of the elaboration of the data collected about articles by women in order to identify the evolution of their visibility in Italian economic context and their specialization by subject areas over decades.

Finally, I draw some conclusions providing some directions for future research.

## **1. Data sources and research design**

In order to define the contribution of women economists to the Italian economic thought I analysed the visibility of women in Italian economic journals from the 1930s to the 19670s.

I considered 11 main Italian economic journals (see table 1 for details) different in terms of editorial boards and research fields. Some of the journals analysed were published by banks' research centers, such as *Banca Nazionale del Lavoro (BNL) Quarterly Review*. It is an English-language journal founded in 1947 by the impulses of Imbriani Longo and Luigi Ceriani, with the aim of supporting the economic debate in Italy and gaining a place in the international intellectual and scientific arena, with contributions from eminent Italian and foreign economists, such as, Federico Caffè, Corrado Gini, Vera Lutz, Fritz Machlup and Robert Triffin. *BNL Quarterly Review* published articles about different economic fields, but mainly about monetary economics and finance as well as Italian economic development. *Moneta e Credito*, defined as *BNL Quarterly Review's* "Italian language cousin", has the same editorial board (composed by bank's top management, high civil servants and eminent academics) and vocation, even if its target is narrower and direct to an Italian public. *Rassegna Economica*, was published, since its first issue in 1931, by the Bank of Naples' (Banco di Napoli) research center. It was the first economic journal published by an Italian bank with the aim of developing a highly specialized economic and financial research activity, at national and international level, about dualism and Southern Italian economic development. Moreover, also linked to the Italian banking and financial sector was *Bancaria*, founded in March 1920 with the name of *Bollettino economico-finanziario* by the Italian Banking Association.

I also analysed journals close to the academic world such as *Giornale degli Economisti e Annali di Economia*, *Rivista Internazionale di Scienze Sociali* and *Ricerche Economiche*. *Giornale degli Economisti e Annali di Economia* born in 1875, is the Italian academic journal in the economic field with greater tradition and international diffusion; after World War II, linked to the Bocconi University of Milan, it increased its activity and began to attract a vast number of contributions from eminent national and international scholars, such as Franco Modigliani and Jan Tinbergen.

Another historical Italian journal born as well during the XIX century (exactly in 1893 thanks to Giuseppe Toniolo, professor of Political Economics at the University of Pisa) is *Rivista Internazionale di Scienze Sociali* that had a more sociological and catholic perspective linked to a Italian private university (Cattolica University of Milan). *Ricerche Economiche*, based in Ca' Foscari University of Venice, had a more local-

regional vocation and during the XX century mainly published surveys on the concrete problems of the national and local economy in particular concerning the area near Venice.

Finally, I considered four journals closer to the business world: *Economia Internazionale*, *Mondo Aperto*, *Rivista di Politica Economica* and *L'Industria*. With a broader perspective, focused on international relations and commerce are *Economia Internazionale* and *Mondo Aperto*. *Economia Internazionale* was founded in 1948 mainly to publish the results of research conducted by Chamber of Commerce of Genoa, although professors of the Faculty of Economics of the University of Genoa mainly decided its editorial line. Written mainly in English and French, it became a vehicle for the circulation of international trade theories in Italy with a particular focus on the free trade paradigm. *Mondo Aperto*, born in Rome in 1956 by the Italian research center on foreign economic relations and markets (Ceme), was more devoted to the analysis of international economic policies. *Rivista di Politica Economica* (1911) and *L'Industria* (Milan 1886) were vehicles for the dissemination of major themes of fiscal and industrial policies, with regard to industries, markets and industrial policies.

**Table 1. Italian Economic Journals analysed**

Journals	Language	ISSN	Coverage	Periodicity	Type	Main field of analysis
Banca Nazionale del Lavoro Quarterly Review	English	0005-4607	1947-1970	Quarterly	Banking	General Economics - Methodology
Moneta e Credito	Italian	0026-9611	1948-1970	Quarterly	Banking	General Economics - Methodology
Rassegna Economica	Italian	0390-010X	1955-1970	Six-monthly	Banking	Regional Economics
Bancaria	Italian	0005-4623	1949-1970	Monthly	Banking	Financial and Monetary Economics
Giornale degli Economisti e Annali di Economia	Italian	0017-0097	1930-1970	Four-monthly	Academia	General Economics - Methodology
Rivista Internazionale di Scienze Sociali	Multi-language	0035-676X	1934-1970	Quarterly	Academia	General Economics - Methodology
Ricerche Economiche	Multi-language	0035-5054	1955-1970	Quarterly	Academia	Regional Economics
Economia Internazionale	Multi-language	0012-981X	1948-1970	Quarterly	Business	International Economics
Mondo Aperto	Italian	0026-9492	1945-1970	Quarterly	Business	International Economics
Rivista di Politica Economica	English	0035-6468	1950-1970	Quarterly	Business	Industrial Organization
L'industria	Italian	0019-7416	1964-1970	Quarterly	Business	Industrial Organization

For the creation of the dataset of the journals' articles written by women I had first to consult the print copies of Italian economic journals described above in order to identify the sex of contributors, since most online databases only report initials for authors' first names. Overall, 9,327 articles have been consulted, of which just 2.6% was written by women (243 articles). Finally, I collected all metadata (title, coauthors, years of publication, abstracts, etc.) about the 243 articles by women authors. In order to identify the evolution of the contribution of women economists in the development of economic thought in Italy and to highlight their research fields' specialization across different decades I also acquired, when available, the JEL codes, recorded in Econlit, of each article in the dataset created. JEL codes are alphanumeric codes made up of three levels used by authors or editors to classify scholarly literature in the field of economics. For those articles not recorded in Econlit, this is the case for almost all the articles published before the 1950s, I assigned JEL codes by looking at the title and the abstract or introduction of the article trying to use the same criteria adopted by the Journal of Economic Literature to assign JEL codes<sup>1</sup>.

From the analysis of the data collected, I was able to identify four women economists pioneers in the economic profession in Italy, now almost completely forgotten, that gave an important contribution to the

---

<sup>1</sup> I assigned the JEL codes according to the JEL Code application guidelines, keywords, and examples of items within each classification reported in the JEL Classification Codes Guide (available at: <https://www.aeaweb.org/jel/guide/jel.php>).

development of the Italian economic thought and who were forefront of applied economics, history of economic thought and multidisciplinary approach. I collected all available recollections, anecdotes by their respective families, colleagues and students and archival materials in order to portray, in session 2, some biographic notes and contributions to economics of Jenny Kretschmann Griziotti, Maria Castellani, Vera Cao Pinna and Francesca Duchini, which, otherwise, would have been forgotten.

In section 3, following the ongoing trend on quantitative investigation into the history of economic thought (Cherrier, 2015; Duarte and Giraud, 2016; Marcuzzo and Zacchia 2016), with the use of JEL codes I explore the evolution of the contribution of women in Italian economic journals in order to identify the changing role of women in the production of economic literature and to highlight their specialization and contribution. In the analysis I concentrated on JEL codes rather than on publications. This means that, for example, I doublecounted an article with two JEL codes, because it belongs to two different fields. I could not weight the JEL codes of a single article because Econlit mainly records them in an alphabetical order rather than in order of priority as reported by authors.

The quantitative investigation proposed is than concerned with the definition of diversity and gender segregation (in terms of concentration in the so-called “women’s studies”) in the economics profession in Italy.

## **2. Women pioneers in the economics profession in Italy: 1930s-1950s**

In the journals analysed, women contributed to various fields, such as applied economics, political economy, taxation, insurances and history of economic thought.

The period from the 1930s to the 1950s is characterized by a small but active participation of women: they represented a distinct minority within the profession although there was an almost complete absence of women professors in economics departments in Italian universities. Therefore, instead of conducting a quantitative investigation of publications, for these years, I decided to focus on the pioneers or better those women economists that were innovators, who decided to choose and dedicate their research activities to fields that were completely new at the time.

With different personal backgrounds, careers, ambitions and interests Jenny Kretschmann Griziotti, Maria Castellani, Vera Cao Pinna and Francesca Duchini identified and introduced in Italy innovative fields of research and methods (see table 2 for a comparison of their biographies).

There some common elements in the bibliographies of the four women: first, they attended graduate courses at University and specialized in economics. Moreover, they moved from their hometowns to study, something really rare for women in those years. In particular, Jenny Kretschmann Griziotti moved from Moscow first to Lausanne at the Faculty of Social Sciences of the *Escole des Sciences Sociales et Politique* (UNILS), where she attended Vilfredo Pareto’s courses in economics. Then, once in Rome she enrolled in the Faculty of Law of Sapienza University of Rome where she attended courses of economics by Rodolfo Benini and Maffeo Pantaleoni. Under the supervision of the latter (Pantaleoni at the time was carrying out innovative studies about system dynamics factors) she graduated (B.A. level) with a thesis about the colonization of Siberia that was recommended by Luigi Einaudi for publication, in 1915, in *Giornale degli Economisti e Annali di Economia*.

Maria Castellani, once graduated, with full marks (110 out of 110), in mathematics at the Mathematical Institute of Rome, moved in US at the Bryn Mawr College, Philadelphia, thanks to a scholarship, in order to study and specialize in the functioning and use of calculators for statistical and actuarial use. Francesca Duchini also spent a period of study abroad; after her graduation at Cattolica University of Milan with an innovative thesis about Marx and his influence on Italian economists, Francesca Duchini followed her mentor’s advice (Prof. Francesco Vito) to follow the economics courses of Prof. Edgar Salin at the University of Basel, Switzerland. Salin's lessons deeply influenced her and directed her research interests toward history of economic thought during all her academic career. Finally, Vera Cao Pinna moved from the small village in Sardinia where she was born (Siliqua) to Rome for studying economics at the Royal Higher Institute for Economics and Business Studies (later to become the Faculty of Economics at Sapienza University of Rome). There, she graduated in 1934 with a thesis, supervised by prof. Alfredo Niceforo, about

the economic problems of Sardinia, with particular reference to the living conditions of the most disadvantaged social groups.

Despite their commitment and dedication to study and research, and their vocation to teaching, Italian academia, really male-dominated, never fully recognized the scientific value of the four women pioneers. With the exception of Francesca Duchini who in 1973, at the age of 54, was appointed as full professor in history of economic thought (it was the first woman to have a structured position at Italian universities in this economic field), all the other women never were appointed professors and always worked in Italian universities with temporary contracts. Jenny Kretschmann Griziotti from 1930 until her retirement, in 1954, taught as adjunct professor in economics at the University of Pavia and never held any academic chair: probably her political creed and her status as an academic's wife did not favor her career's chances. Instead, for Vera Cao Pinna and Maria Castellani the main reason for their academic failures can be identified with their "innovative" field of research: both econometrics and actuarial sciences were in contrast with the contextual Italian academics' main research activity, mostly concentrated on developing theoretical models, seemingly without concern for how those models fit into reality. Things were different out of Italy where Cao Pinna and Castellani were really appreciated. The latter, forced during the 1940s to leave Italy for the fascist racial laws (also her academic qualifications were invalidated in Italy during the Fascism), moved to America, where she had a brilliant academic career, becoming first member of a pool of professors of the USAFI (US Army Forces Institute), then professor at the University of New Jersey and finally, dean of the Faculty of Mathematics at the University of Kansas City in Missouri. Also Vera Cao Pinna's applied economics research was adequately recognised abroad the national borders. Before her lectureship in Economic Statistics at Sapienza University of Rome was renewed in 1961, Cao Pinna had been a member of the scientific committee of the Department of Applied Economics at the Université libre de Bruxelles (1959), where she actively followed the research programme. She was the founder and Deputy President of the Association Scientifique Européenne pour la Prévision Economique à Long Terme (ASEPELT), founded in 1961 to bring together the best econometricians from all over Europe. She contributed actively to the scientific dissemination of works by the ASEPELT, making detailed critical analyses of the main sources of statistics and the methods conventionally used to measure consumption. Wassily Leontief, Nobel prize-winner, mentor and friend of Vera Cao Pinna remembered her, in an Italian local newspaper article, as the woman who "understood the importance of statistics and mathematics to understand economics in depth," and stressed that she was the first Italian economist to "deal with measuring production, with creating a link – a real liaison – between theory and the empirical observation of economic facts".<sup>2</sup>

Another aspect that identifies the four women is their obstinate and courageous characters and the continuous commitment not only in the academic field but also in the political and social context.

Jenny Kretschmann Griziotti was active in the socialist party since 1912. Together with her husband, Benvenuto Griziotti, they were an intellectual and artistic reference point (she was also an excellent pianist) for economists and finance scientists who were gradually forming in the circle of the Pavia economic school, such as Ezio Vanoni, Antonio Pesanti, Sergio Steve, Arturo Colombo etc. Francesca Duchini was, instead, active in volunteer activities and economics training courses for social workers mainly organized by the trade unions. Maria Castellano was the first president of the Italian branch of the IFBPW (International Federation of Business and Professional Women), she was a pioneer in the advocacy for claiming women's rights and gender equality in Europe and in Italy. In her stay in US, she got in touch with Lena Madelin Phillips who founded the Federation of Business and Professional Women<sup>3</sup> in 1919. She became interested in women's right and emancipation, a passion that she cultivated throughout all her life. In 1925 when she came back to Italy, she promoted and was part of the committee of the "Women's interests" (*Interessi femminili* in Italian), a trade union initiative of the journal *Vita Femminile* to enhance any form of women's work, recognizing its fair economic value. In 1929, back in United States, she participated in a series of conferences reporting the status of women in Italy. On her return to Rome, she gathered a group of upper middle class women, working in different fields and she founded the first association of women in arts and business, later became F.I.D.A.P.A. (Italian Federation of Business and Professional Women). F.I.D.A.P.A. aimed at identifying women's available skills and experiences and supporting labour policies and programs that recognized the needs of women in the labour force and the elimination of gender discrimination at workplace.

---

<sup>2</sup> Leontief's interview, *L'Unione Sarda*, 19 November 1988., p. 6.

<sup>3</sup> For details see: <https://www.bpw-international.org/>

Vera Cao Pinna was a key person in the post-war economic reconstruction in Italy; she tried, using econometric models and “her” Input-Output tables, to contribute to economic policy changes. Working mainly for the Ministry for Economic Planning and for the Italian delegation of the US Mutual Security Agency, she took an active part in the economic planning, during the preparatory stages of the first attempt of economic planning in Italy (the so-called Vanoni Plan of 1954) by forecasting private consumption levels and by ensuring compatibility and consistency in statistics. Her objective was to turn the Italian economy back towards collective consumption with planners selecting specific sectors to emphasise in the economy, using input-output estimates of final demand.

Although the similarities in education, in the neglected recognition of their true value by Italian academic peers, despite they were well known by many colleagues in other countries, Jenny Kretschmann Griziotti, Maria Castellani, Vera Cao Pinna and Francesca Duchini gave different contribution to the economic thought in Italy in the recent past.

In particular, Maria Castellani in 1932 had a National Award for her publications, both mathematical and technical on Social Insurance. She was part of the editorial board of the Italian journal *Previdenza sociale*, and with her more than 100 journals’ articles published in the 1930s she gave a great impulse to the actuarial field in Italy introducing the study of social insurances and the use of computers for the statistical and actuarial calculation. Cao Pinna refined and adapted to the Italian and European context the double-entry input-output tables, devised by her friend and master Wassily Leontief in the 1940s. In 1952 Cao Pinna had already become a pioneer in drawing up with Hollis B. Chenery and Paul G. Clark,<sup>4</sup> and a small number of young researchers, the first ever table of structural interdependences for Italy related to the year 1950. The importance of this applied work on Italy was identified by established economists such as David Henderson, chief economist at the Economics and Statistics Department at the OECD,

*“this is a most impressive piece of applied economic research, which deserves a wider circulation than it seems likely to get in its present form. It should be of interest to all economists who are concerned with the quantitative aspects of national economic problems”*  
(Henderson, 1955, p. 151).





Both Jenny Kretschmann Griziotti and Francesca Duchini gave their contribution to the evolution of the history of economic thought in Italy. Jenny Kretschmann Griziotti introduced an interdisciplinary approach, as economics and systems, she said, can be fully understood only if analyzed in the context of the social environment and of ideas in which they arise and develop over time. Her studies about Italian economic thought from the 18th century up to “modern” trends and those of Russia and United States were unconventional for the scientific landscape of her time. In particular, she pursued an innovative “institutional approach” defined as the analysis of social values of human behavior which can be expressed and shaped by different institutions, customs and habits. She also contributed to the evolution of the Italian economic thought translating into Italian language works by Ernst Wagemann, Ludwig von Mises, Knut Wicksell, Friedrich Hayek and Paul Samuelson’s book *Economics. An Introductory Analysis*.

Francesca Duchini, instead, was a pioneer in Italy for her studies about Marx and his influence on Italian economists. Moreover, she did pioneering analysis of the evolution of economic theories about income distribution and value and she studied Italian economic thought between the two World Wars and the Catholic social thought.

---

<sup>4</sup> Hollis B. Chenery and Paul G. Clark worked with Wassily Leontief at the Harvard Economic Research Project. Chenery, director of the Italian Division of the Mutual Security Agency (the MSA was responsible for the development and administration of US military and economic post-war assistance programs in Europe), called Vera Cao Pinna to Rome - she was in Paris - from 1951 to 1953 to work on the construction of the first input-output table, drawn up for Italy for the year 1950.

**Table 2. Four Biographies Compared**

<i>Jenny Kretschmann Griziotti</i>	<i>Maria Castellani</i>
	
<p><i>Photograph: ASE - SIE</i></p>	<p><i>Photograph: FIDAPA BPW Italy</i></p>
<p><b>Date of birth:</b> 22 June 1884  <b>Studies:</b> she studied economics with V. Pareto and A. Bergson in Lausanne Ecole des Sciences Sociales et Politique (UNILS). She graduated (B.A. level) at Sapienza University of Rome, Faculty of Law in 1912.</p>	<p><b>Date of birth:</b> 26 July 1896  <b>Studies:</b> graduated in Mathematics (B.A. level) at the Mathematical Institute of Rome (later to become the Faculty of Mathematics at Sapienza University of Rome) in 1920. She also specialised in Statistics and Actuarial science in the same institution.</p>
<p><b>Work:</b>            [1929 – 1954] University of Pavia: Adjunct professor in Political Economy/History of Economic Thought.</p>	<p><b>Work:</b>            [1920 – 1929] Italian Ministry of Labour: social security officer.            1922 Bryn Mawr College, Philadelphia – US: fellowship            1924 Metropolitan Insurance Co. NY – US: fellowship.            [1929 – 1930] Italian International Labour Office, Geneva: actuary.            [1932 – 1940] Sapienza University of Rome: Adjunct professor in Financial Mathematics.            [1940 – 1946] USAFI –US Army Forces Institute: professor in Financial Mathematics            [1945 – 1946] University of Kansas City: Dean of the Faculty of Mathematics            [1946 – 1966] Sapienza University of Rome: Adjunct professor in Financial Mathematics; Italian Ministry of Labour: actuary.</p>
<p><b>Date of death:</b> 4 December 1980</p>	<p><b>Date of death:</b> 1985</p>
<i>Vera Cao Pinna</i>	<i>Francesca Duchini</i>
	
<p><i>Photograph: Unione Sarda</i></p>	<p><i>Photograph: Associazione Duchini</i></p>
<p><b>Date of birth:</b> 23 December 1909  <b>Studies:</b> graduated in Economics (B.A. level) at the Royal Higher Institute for Economics and Business Studies in Rome (later to become the Faculty of Economics at Sapienza University of Rome) in 1934.</p>	<p><b>Date of birth:</b> 4 October 1919  <b>Studies:</b> graduated in Political Sciences (B.A. level) at University of Milan Cattolica del Sacro Cuore in 1944. She specialised in economics at the University of Basel (with prof. E. Salin)</p>
<p><b>Work:</b>            [1947 – 1951] US Embassy in Italy: Economic Analyst.            [1952 – 1953] Italian Division of the Mutual Security Agency            [1954 – 1955] National Committee for Business Cycle Analysis.            [1955 – 1957] ISCO (Italian Institute for Business Cycle Analysis)            [1955 – 1979] Sapienza University of Rome: Adjunct professor in Econometrics.            [1958 – 1964] Banco di Sicilia: Economic Analyst.            [1965 – 1975] Economic Planning Study Centre –<i>Centro di studi e piani economici</i>: Chief Research officer.            [1976 – 1986] Information Technology and Systems Study Institute (ISIS): Director of Research</p>	<p><b>Work:</b>            [1945-1961] Cattolica University of Milan: Voluntary assistant professors in History of Economic Thought            [1962-1969] Cattolica University of Milan: Adjunct professor in History of Economic Thought            [1969-1972] Cattolica University of Milan: Associate professor in History of Economic Thought            [1973-1989] Cattolica University of Milan: full professor in History of Economic Thought</p>
<p><b>Date of death:</b> 11 June 1986</p>	<p><b>Date of death:</b> 9 May 2010</p>

### 3. Trends in visibility and contributions of women economists in Italian economic journals from the 1930s to the 1970s

The final session offers a contribution in the direction of quantitative analysis of economic thought on a gender perspective, by looking at the evolution of:

- a) women's visibility in Italian economic journals published from 1930 to 1970;
- b) women's main research fields developed;
- c) women's concentration on "women's studies".

The higher visibility of women in Italian economic journals is in the 1950s, even if the share is still low: articles written by women represented the 4.3% of the total number of article published in that decade (see table 3). During the 1960s, there has been a decrease in the share of women authors due to an increase in the total numbers of articles published and not to a lower number of articles by women. The lower share is therefore recorded in the 1940s (just 0.7%). The picture is somehow similar to that drawn by Forget (2011) for US, where, during the 1930s and 1940s, the visibility of women in the economic profession declined significantly.

With reference to journal type, the share of women authors is, for all the periods considered, higher in Italian economic journals close to the academic world, despite the male-dominated academic context described in the previous session. In particular, from the 1960s, journals published by banks' research centers reduced drastically the shares of articles by women authors. Looking at the journals' main field of analysis, instead, the higher visibility for women is reported in those journals with a local/regional vocation, in fact Italian regional economic issues and, in particular, Italian economic dualism and the "Southern Question" remained constant interests over the decades for women economists in Italian economic journals. The British economist Vera Lutz addressed this topic in 1950s as did Wilma Rotondo decades later.

**Table 3. Women's visibility in Italian Economic Journals**

(% of articles by women)	1930s	1940s	1950s	1960s	1970s
<b>Total</b>	1.2%	0.7%	<b>4.3%</b>	1.6%	3.6%
<b>Journal type</b>					
<i>Academia</i>	1.2%	0.7%	<b>6.3%</b>	3.1%	<b>6.1%</b>
<i>Banking sector</i>	n.a.	n.a.	4.4%	0.9%	2.7%
<i>Business sector</i>	n.a.	n.a.	3.2%	1.0%	3.2%
<b>Journal main field of analysis</b>					
<i>Financial and Monetary Economics</i>	n.a.	n.a.	0.6%	0.6%	0.8%
<i>General Economics - Methodology</i>	1.2%	0.7%	3.9%	1.8%	4.0%
<i>Local/Regional Economics</i>	n.a.	n.a.	<b>7.5%</b>	<b>2.1%</b>	<b>4.4%</b>
<i>Industrial Organization</i>	n.a.	n.a.	3.6%	0.7%	3.7%
<i>International Economics</i>	n.a.	n.a.	3.5%	1.8%	0.9%

For the identification of the evolution of women's concentration in research fields, first I propose an analysis of the main JEL codes used by women authors in the five different periods considered. As evident from table 4, the main subjects of articles written by women changed over decades: during the 1930s women were more interested in history of economic thought, economic history and microeconomics. During the 1940s, there is a higher concentration of articles in few topics, first history of economic thought (37.5% of articles reported that subject descriptor), followed by macroeconomics, public economics and labor and demographic economics. The main contributions during these two decades came from Maria Castellani, Jenny Kretschmann Griziotti and Francesca Duchini, described in session two.

Women wrote back about economic history in the fifties paying attention also to international economics and economic development and growth. Excluding Vera Cao Pinna, whose biography has been analysed in details in the previous session, during the 1950s the main contributions in the Italian economic journals considered are by: Enrichetta Spina (15 articles), Valeria Luzzato (4), Vera Lutz (8), Nora Federici, Costanza Costantino (4), Danila Cremona Della Chiesa (4) and Gina Papa (4).



Enrichetta Spina and Valeria Luzzato were editors-in-chief of *Ricerche Economiche*, and all their contributions were published by this journal. Enrichetta Spina's articles were about different topics, from the analysis of Italian and regional (mainly about Veneto, a Northeastern region of Italy) unemployment, to the analysis of the Soviet economy and European mechanical industry. Valeria Luzzato, instead, concentrated on agricultural sector and transportation economics. Instead, as reported before, Vera Lutz, when she moved in Italy to work at the Bank of Italy (1950-1963), contributed to the debate on the dualism of Italian economy. From the pages of *BNL Quarterly Review* and *Moneta e Credito*, criticizing any form of public intervention and economic planning, she proposed a *laissez faire* solution for overcoming the imbalance between North and South Italy: flexibility of wages and free mobility of both labor and capital. Nora Federici, appointed in 1962, at the age of 51, full professor of demography at Sapienza University of Rome, during the 1950s published mainly articles concerning the dissemination of the results of the 1951 Italian census and the forecast of the demographic trends for Italy. Another important name is that of Costanza Costantino, the only Italian woman, along with Vera Cao Pinna, to appear on the list of 120 women economists, who have made an important contribution to the economic thought since 1817, reported in *A Biographical Dictionary of Women Economists* by Dimand et al. (2000). During the 1950s, she concentrated on the relationship between taxation and consumption, and she published the results of an empirical analysis of the Danish tax system, conducted during her stay in Denmark, for a scholarship granted by the Italian Ministry of Foreign Affairs. Danila Cremona Della Chiesa's contribution in the 1950s concerned political economy issues, in particular the effects of inflation on Italian economy. Gina Papa, instead, was an expert of insurances linked to the labor market (in particular, unemployment, health and long-term care insurances). During the sixties, as clearly described in table 3, there is a reduction in the share of women's articles in the journals analyzed, even if the contributions of Vera Lutz, Enrichetta Spina and Danila Cremona Della Chiesa stand out in number. The articles published in the 1960s mainly concerned international economics, economic development and growth and economic systems.

During the seventies, there has been an increase in visibility of women. They concentrated their publications on macroeconomics and monetary economics, economic history and economic development and growth. New authors appeared in those years, such as Gianna Maria Sanacuore (5 articles), professor of Economics and Quantitative Methods at University of Genoa. Sanacuore focused her research activity on the evolution of financial sector and its impact on real economy. Her articles analyzed the impact and limits of fiscal and monetary policies. Furthermore, Wilma Rotondo (5), economist of the Italian Government not linked to the academic world, published mainly on the Italian economic dualism, with a different perspective than that of Vera Lutz, while Renata Targetti Lenti (3), full professor of Political Economy at University of Pavia, focused on wages and income redistribution.

So far I drew a picture, albeit partial and with the limits of the observation of only eleven economic journals, of the contribution of women to the economic debate and thought in Italy. This allows inferring that women economists dealt with different economic issues, introducing both innovative fields of research, such as applied economics, and interdisciplinary approaches. From this preliminary quantitative analysis, as already done for US by Dimand (1995), Forget (1995), Dimand et al. (2000) and Madden (2002) it is possible to refute William Baumol's (1985) claim, and, also for Italy, we can say that it is not true that:

*"before World War I, as today, a (distressingly) few women were contributing to the literature. However, even more today, their topics were predominantly specialized in "women's issue", of considerable interest in themselves, but unrelated to the subjects that were attracting the bulk of the profession."* (Baumol, 1985, p.11)

To better analyse the latter statement, always considering the JEL codes but with the use of proxies, I investigated how the segregation in the so-called "women's issue" evolved over time. I propose here two different definitions of "women's issue". The first one, which I called "women's studies", is a thematic aggregation that, in addition to the specific JEL codes B54 Feminist Economics and J16 Economics of Gender, covers all those publications that include:

- (i) a multidisciplinary approach;
- (ii) the concept of "household", "time allocation", and discrimination in labor market (for a complete description of the JEL codes included see appendix 1).

Instead, under the definition of "women's topics" I classified a wider aggregation that covers all the JEL codes considered for the "women's studies" plus those publications about research fields traditionally

***Preliminary draft, not to be quoted***

developed by women economists such as labor economics, health and welfare, poverty, economic development, demography, and education.

Publications of the first group weighed on average no more than 4% of total number of articles published by women, with a discontinuous trend, with a peak in the thirties (3.8%), followed by a complete absence during the forties and then a slight increase culminating in the seventies (1.9%).

When the broader definition (*women's topics*) is considered, the share of publication is much higher, but not higher than the 25%, reaching the peak during the thirties (23.1%) and seventies (22.3%) and a decline during the forties (12.5%).

Finally, I considered also the evolution of the concentration of women's publications about local and national economic analysis, looking at those articles that focused on Italy or on specific Italian areas and/or regions. In this case, the share of articles is higher than in the other two cases previously considered. During the fifties, 42.1% of articles written by women concerned national and local Italian issues and only during the forties, the share decreased below 20%, confirming, as already said, that Italian and local economic issues are a constant field of research over the decades for women economists in Italian economic journals.

**Table 4. Women's research interests in Italian Economic Journals**

<b>Main research field by decade (% of tot JEL codes)</b>					
<b>JEL codes</b>	<b>1930s</b>	<b>1940s</b>	<b>1950s</b>	<b>1960s</b>	<b>1970s</b>
<i>B History of Economic Thought, Methodology, and Heterodox Approaches</i>	15.4%	37.5%	–	–	–
<i>D Microeconomics</i>	15.4%	–	–	–	–
<i>E Macroeconomics and Monetary Economics</i>	–	12.5%	–	11%	15.2%
<i>F International Economics</i>	–	–	11.1%	23%	–
<i>H Public Economics</i>	–	12.5%	–	–	–
<i>J Labor and Demographic Economics</i>	–	12.5%	12.3%	–	–
<i>N Economic History</i>	15.4%	–	14%	–	10.9%
<i>O Economic Development, Innovation, Technological Change, and Growth</i>	–	–	9.9%	18%	9.5%
<i>P Economic Systems</i>	–	–	–	10%	–
<b>Field segregation (% of tot JEL codes)</b>					
<i>Women's studies</i>	3.8%	0.0%	1.2%	1.0%	1.9%
<i>Women's topics</i>	23.1%	12.5%	20.5%	15.0%	22.3%
<i>Italy</i>	30.8%	12.5%	42.1%	20.0%	35.1%

**Concluding remarks**

The paper is a first attempt to analyze with gender lenses the evolution of the recent history of economic thought and to construct new knowledge about women's contribution to the economic profession beyond the US and the UK. The historical perspective contributes in a critical way to the study of diversity in the economics profession. In a recent article published in the Journal of Economic Perspectives, Bayer and Rouse (2016) have redrawn attention to the importance of proposing new approaches meant to investigate, disseminate and discover data, analyses, and prescriptions that could expound why "*the field of economics is behind others in its progress on diversity concerns*" (p. 238). As underlined by Marcuzzo (2008) in her address as the first woman president of the European Society for the History of Economic Thought (ESHET):

*"HET (History of Economic Thought) could be an important tool in the work of exposing an impossible neutrality and pervasive gender blindness. A gender-sensitive reading of past works and theories could open our eyes to the gradual shifts in meaning of the terms, the slow movement of the boundaries of the discipline the progressive exclusion from it of whole areas of economic activity*

***Preliminary draft, not to be quoted***

*(housework for example) and of concepts which, though meaningful, lack a quantitative dimension.”*  
(p. 120).

Therefore, the study of the evolution of scientific production with gender and historical perspectives can help both to widen the perimeter of economic thought and to understand the barriers to a full recognition of women's contribution to the economics profession.

With this paper, I have pursued a somewhat modest aim, setting out to find women pioneers in economics in Italy from the 1930s and some quantitative evidence of the tendencies and evolution of how women economists practiced the discipline.

Our dataset shows in relative terms a discontinuous visibility of women in Italian economic journals, with a peak during the fifties even though the share is really low (just 4.3%). I sought evidence of the tendencies in the style and content of doing economics with the help of proxies and I found that the concentration in the so-called “women's issues” is low and, depending on its definition, it ranged between 3.8% and 23.1%. Instead, women in all the years considered remained mainly focused on Italian and regional/local economic issues.

Many interesting questions remain, such as: it is possible to trace back the roots of the causes of the under-representation of women in economics? Do they are the same in all the countries and in all the historical phases? Finally, how diversity in the economics profession as an enriching factor for the development of economic thought and for a better understanding of reality can be reinforced?

The last question is of particular interest for Italy, because a bibliometric approach in research assessment for both the allocation of public resources and the researchers' careers is increasingly prevailing in economics, in contrast with the tendency that can be seen at international level to redefine ‘responsible’ metrics for research assessments. These institutional developments are increasingly creating a “disguised discrimination” against women since, to reach the top positions in academia, they have to “homologate” or better to converge to the research habits of their male colleagues – with regards to both research fields and publication types (Corsi et al. 2017 and Zacchia, 2017).

The creation of a comprehensive dataset of articles written by women in economic journals in different countries from a recent past could be a first step to introduce a historical approach to analyse in detail the evolution of gender gaps in academic production and differences in the definition and analyses of the same economic issues. This would also help to understand the main determinants of gender discrimination in economics. I hope that it may be a starting point for further analysis in a near future, in order to preserve diversity and pluralism in economics.

## References

- Bayer A., Rouse C. E. (2016), "Diversity in the economics profession: A new attack on an old problem", *Journal of Economic Perspectives*, vol. 30 n. 4, pp. 221–242.
- Baumol W. (1985), "On Method in U.S. Economics a Century Earlier", *American Economic Review*, vol. 75 n. 6, pp. 1-12.
- Chener, H.B., Clark P., Cao Pinna V. (1953), *The Structure and Growth of the Italian Economy*, U.S. Mutual Security Agency, Rome.
- Cherrier B. (2015), "Classifying Economics: a History of the jel Codes", ssrn Working Paper n. 2537382, available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2537382](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2537382)
- Corsi M., D'Ippoliti, C., Zacchia, G. (2017), *Gendered careers: women economists in Italy*. Working Papers CEB Université Libre de Bruxelles 3.
- Dimand R.W., Black, G., E. L. Forget (2011), "Women's participation in the ASSA meetings", *Æconomia. History, Methodology, Philosophy*, vol. 1 n. 1, pp. 33-49.
- Dimand R.W., Dimand M.A. and Forget E.L. (eds.) (2000), *Biographical Dictionary of Women Economists*. Cheltenham: Edward Elgar.
- Duarte P.G., Giraud Y. (2016), "The Place of the History of Economic Thought in Mainstream Economics, 1991–2011, Viewed through a Bibliographic Survey", *Journal of the History of Economic Thought*, vol. 38 n. 4, pp. 431-462.
- Forget E. (1995), *American women economists, 1900-1940: doctoral dissertation and research specialization*. In M. A. Dimand, R. Dimand, E. Forget (Eds.), *Women of value* (pp. 25–38). Edward Elgar.
- Forget L.E. (2011), "American Women and the Economics Profession in the Twentieth Century", *Æconomia*, vol. 1 n. 1, pp. 19-30.
- Fornengo, G. (1997), "Vera Cao Pinna (1909-1986): un'antesignana dell'econometria in Italia", *Storia del pensiero economico*, vol. 33-34, pp. 159-182.
- Henderson P.D. (1955), "Review: The Structure and Growth of the Italian Economy", *The Economic Journal*, vol. 65 n. 257, pp. 149-151.
- Libby B. (1984), "Women in Economics Before 1940," *Essays in Economic and Business History*, vol. 3, pp. 173-90.
- Libby B. (1987), "Statistical Analysis of Women in the Economics Profession," *Essays in Economic and Business History*, vol. 5, pp. 179-189.
- Libby B. (1990), "Women in the Economics Profession 1900–1940: Factors in Declining Visibility", *Essays in Economic and Business History*, vol. 8, pp. 121–130.
- Madden K.K. (2002), "Female Contributions to Economic Thought, 1900-1940", *History of Political Economy*, vol. 34 n. 1, pp. 1-30.
- Madden K.K., Seiz J.A., Pujol M. (2004), *A Bibliography of Female Economic Thought to 1940*, London and New York: Routledge.
- Marcuzzo M.C. (2008), "Is history of economic thought a "serious" subject?", *Erasmus Journal for Philosophy and Economics*, vol. 1 n. 1, pp. 107-123.
- Marcuzzo M.C., Zacchia G. (2016), "Is History of Economics What Historians of Economic Thought Do? A Quantitative Investigation", *History of Economic Ideas*, vol. XXIV n. 3, pp. 29-46.
- Parisi, D. (2007), "Una lunga vita da economista. L'itinerario biografico e scientifico di Jenny Kretschmann Griziotti (1884-1980)", *Il Politico*, vol. 72 n. 2, pp. 145-165.
- Zacchia G. (2017), "Diversity in Economics: A Gender Analysis of Italian Academic Production", *Institute for New Economic Thinking, Working Paper Series No. 61*, available at SSRN: <https://ssrn.com/abstract=3081220>

*Preliminary draft, not to be quoted*

**Annex 1. Women's studies proxies - JEL codes used**

Women's topics	Women's studies	JEL codes	Women's topics	Women's studies	JEL codes
X	X	B54 - Feminist Economics	X		J170 - Value of Life; Forgone Income
X	X	J16 - Economics of Gender; Non-labor Discrimination	X		J180 - Demographic Economics: Public Policy
X	X	A12 - Relation of Economics to Other Disciplines	X		J190 - Demographic Economics: Other
X	X	A13 - Relation of Economics to Social Values	X		J200 - Demand and Supply of Labor
X	X	D19 - Household Behavior and Family Economics: Other	X		J210 - Labor Force and Employment, Size, and Structure
X	X	J12 - Marriage; Marital Dissolution; Family Structure; Domestic Abuse	X		J230 - Labor Demand
X	X	J13 - Fertility; Family Planning; Child Care; Children; Youth	X		J240 - Human Capital; Skills; Occupational Choice; Labor Productivity
X	X	J14 - Economics of the Elderly; Economics of the Handicapped; Non-labor Market Discrimination	X		J260 - Retirement; Retirement Policies
X	X	J15 - Economics of Minorities, Races, and Immigrants; Non-labor Discrimination	X		J280 - Safety; Job Satisfaction; Related Public Policy
X	X	J22 - Time Allocation and Labor Supply	X		J300 - Wages, Compensation, and Labor Costs
X	X	J29 - Time Allocation, Work Behavior, and Employment Determination: Other	X		J320 - Nonwage Labor Costs and Benefits; Private Pensions
X	X	J31 - Wage Level and Structure; Wage Differentials	X		J380 - Wages, Compensation, and Labor Costs: Public Policy
X	X	J7 - Labor Discrimination	X		J390 - Wages, Compensation, and Labor Costs: Other
X	X	R20 - Urban, Rural, Regional, Real Estate, and Transportation Economics: Household Analysis	X		J400 - Particular Labor Markets
X	X	R29 - Urban, Rural, Regional, Real Estate, and Transportation Economics: Household Analysis: Other	X		J5 - Labor-Management Relations, Trade Unions, and Collective Bargaining:
X		A11 - Role of Economics; Role of Economists	X		J6 - Mobility, Unemployment, and Vacancies
X		A14 - Sociology of Economics	X		J8 - Labor Standards
X		D10 - Household Behavior: General	X		L30 - Nonprofit Organizations and Public Enterprise
X		D13 - Household Production and Intrahousehold Allocation	X		L31 - Nonprofit Institutions; NGOs
X		H31 - Fiscal Policies and Behavior of Economic Agents: Household	X		L39 - Nonprofit Organizations and Public Enterprise: Other
X		H51 - National Government Expenditures and Health	X		O0 - Economic Development, Technological Change, and Growth
X		H52 - National Government Expenditures and Education	X		O1 - Economic Development
X		H53 - National Government Expenditures and Welfare Programs	X		O2 - Development Planning and Policy
X		H54 - National Government Expenditures and Related Policies	X		O22 - Project Analysis
X		H55 - Social Security and Public Pensions	X		O29 - Development Planning and Policy: Other
X		H75 - State and Local Government: Health; Education; Welfare; Public Pensions	X		O30 - Technological Change; Research and Development; Intellectual Property Rights
X		I00 - Health, Education, and Welfare: General	X		O31 - Innovation and Invention: Processes and Incentives
X		I11 - Analysis of Health Care Markets	X		O38 - Technological Change: Government Policy
X		I14 - Health and Inequality	X		O39 - Technological Change: Other
X		I15 - Health and Economic Development	X		O40 - Economic Growth and Aggregate Productivity
X		I18 - Health: Government Policy; Regulation; Public Health	X		O43 - Institutions and Growth
X		I19 - Health: Other	X		O44 - Environment and Growth
X		I2 - Education and Research Institutions	X		O47 - Measurement of Economic Growth; Aggregate

*Preliminary draft, not to be quoted*

				Productivity; Cross-Country
X		I3 - Welfare and Poverty	X	O49 - Economic Growth and Aggregate Productivity; Other
X		J0 - Labor and Demographic Economics	X	P46 - Other Economic Systems: Consumer Economics; Health; Education and Training; Welfare, Income, Wealth, and Poverty
X		J01 - Labor Economics	X	Q01 - Sustainable Development
X		J08 - Labor Economics Policies	X	R23 - Urban, Rural, Regional, Real Estate, and Transportation Economics: Regional Migration; Regional Labor Markets; Population
X		J10 - Demographic Economics	X	Z10 - Cultural Economics; Economic Sociology; Economic Anthropology
X		J11 - Demographic Trends, Macroeconomic Effects, and Forecasts	X	Z13 - Economic Sociology; Economic Anthropology; Social and Economic Stratification