

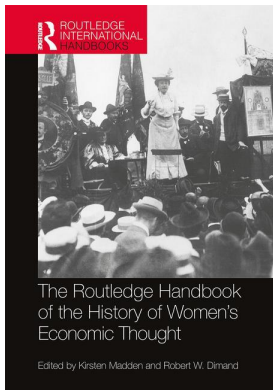
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The two faces of economic forecasting in Italy

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THE TWO FACES OF ECONOMIC FORECASTING IN ITALY

Vera Cao Pinna and Almerina Ipsevich

Marcella Corsi and Giulia Zacchia

Introduction

This chapter aims to analyse the contributions made by two Italian women economists, now almost completely forgotten, but who were at the forefront of political and economic debate in the 1960s and 1970s, Vera Cao Pinna and Almerina Ipsevich. Both women gave an impulse to applied economic research as support to political economics during the post-war economic reconstruction in Italy, although their ideologies and theories were very different.

Vera Cao Pinna is described as a “kind and powerful woman, courageous and unconventional, who made a firm contribution to the economic debate in Italy and Europe during the last fifty years”.¹ It is thanks to her that inter-industry relationships between different industrial sectors were introduced in Italy, using the so-called input-output tables designed by Wassily Leontief in the US during the 1940s. And Almerina Ipsevich is remembered as the “real mother of business cycle analysis in this country (Italy)”.²

Both of them, however dialectically, have been cornerstones in the development of applied economics in Italy when applied economics research was concentrated in public- and private-sector research centres, and less so at university level because of its interdisciplinary nature (at the crossroads of political economics, economic politics, economic statistics, etc.). Indeed, these two women were at the top of the two main research centres of applied economics, ISCO and the Economic Planning Study Centre, where they carried their innovative ideas forward.

Their divergent methodological approaches contributed to the birth and evolution of two main Italian schools of economic forecasting:

- one more based in structure and planning, represented by the Economic Planning Study Centre (Centro di Studi e Piani Economici) directed by Vera Cao Pinna;
- one more de-structural, linked to the business cycle analysis carried out at ISCO (Italian Institute for Business Cycle Analysis) under the supervision of Almerina Ipsevich.

Thanks to the memories of their respective families, colleagues and students and some archival research, we are able to shed some light on their private and professional lives. It was important to collect all available recollections, anecdotes and archival materials in order to portray these two women's contributions to economics, which otherwise, would have been forgotten.

The social context: Italy in the late 1950s to the 1970s

Women economists' (in)visibility

Vera Cao Pinna and Almerina Ipsevich were undoubtedly pioneers. They were women economists in influential positions in the 1960s and 1970s in Italy. To provide historical context on the (in)visibility of women economists in the years of the activity of the two women, we analysed the articles published by women authors in economic journals in Italy (see Figure 19.1).

From 1956 to 1969, on average only 1.4% of the authors published in twelve main Italian economics journals³ were women. During this period, the highest share is recorded in 1956 when women wrote 3.8% of the articles. During the 1960s the share of articles written by women fell, not because fewer women were writing but because the overall number of articles rose. Though women's visibility increased in the second half of the 1970s, women still contributed less than 10% of the journal articles published in Italy by the end of the 1970s.

In the journals analysed women contributed to various fields, such as applied economics,⁴ political economy,⁵ taxation,⁶ demography,⁷ and history of economic thought.⁸ During the 1970s, interest shifted toward finance and its impact upon day-to-day life⁹ and toward wages and the redistribution of earnings.¹⁰ Italian economic dualism and the "Southern Question" remained a constant interest over the decades for women economists in Italian economic journals. The British economist Vera Lutz addressed this topic in 1953, 1954, and 1958, as did Wilma Rotondo decades later (1978a, 1978b).

Women editors-in-chief existed during this time period, such as Enrichetta Spina and Valeria Luzzato. Both served as editors of the journal *Ricerche Economiche*, and also wrote many articles on different economic issues, especially during the 1950s. At that time, the role of editors-in-chief was administrative; these two women carried out mainly secretarial and editing activities. This editing process was no small feat, usually culminating in the re-writing of whole articles for publication. The women did not receive any publication credit for their contributions.

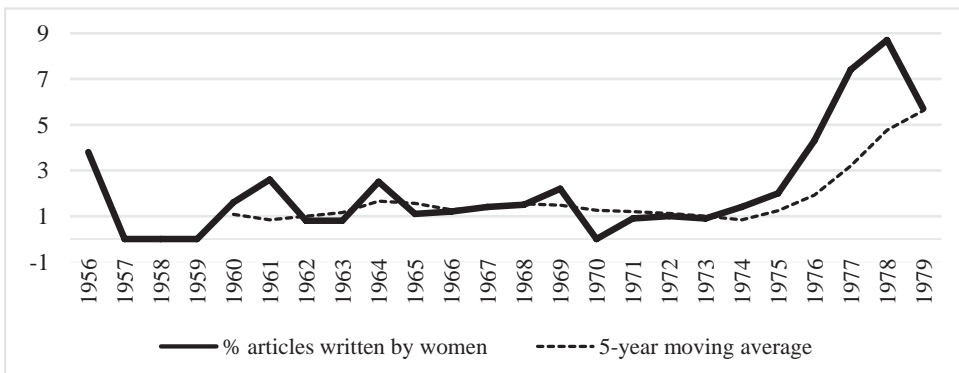


Figure 19.1 Visibility of women in Italian economic journals 1956–79

Just a few of the female authors of journal articles worked in academia, but none held an economics chair. None of the academic women was younger than 50 years old, since women usually were appointed only after their mentor's retirement. Examples include:

- Nora Federici who in 1962, at the age of 51, was the first woman to be appointed Professor of Statistics at Sapienza University of Rome;
- Costanza Costantino who in 1967, at the age of 54, was the first woman Professor of Finance at the University of Turin;
- Francesca Duchini who in 1973, at the age of 54, became Professor in the History of Economics at the Catholic University of Milan.

We found an almost complete absence of women professors in Italy, except those in faculties of Humanities and the Arts. This was a male-dominated academic network that implies the very few successful women had to rely on support from their male mentors. Two examples are Nora Federici, with the support of Corrado Gini¹¹ and Costanza Costantino with the support of Attilio Garino Canina and Alfredo Scotto.¹²

As a consequence of this male-dominated academic context, even in the largest Italian University (Sapienza University of Rome), where both Cao Pinna and Ipsevich studied, no chairs were awarded to women at the Faculty of Economics before 1972. When Cao Pinna was a student of economics (1931–34), the entire faculty had only male professors. The only woman working there was the librarian. Even among students the number of women was very low. For example, during her first year of university training in 1931, Vera Cao Pinna had twenty-three female colleagues, a mere 5% of the total number of students. Moreover, in the same year there had only been one female graduate in economics. Twenty-four years later in 1955 when Cao Pinna began to work as adjunct professor there, the situation had changed very little: there was just one female professor, Maria Castellani, who taught Financial Mathematics, and for the next ten years Professors Castellani and Cao Pinna were the only women in the Department of Economics at Sapienza University of Rome. As reported in Figure 19.2, the number of undergraduate students tripled from 1956 (2,539 students) to 1969 (8,549) and the share of female students increased from 7% in 1956 to 25% in 1969. But in economics departments, the share

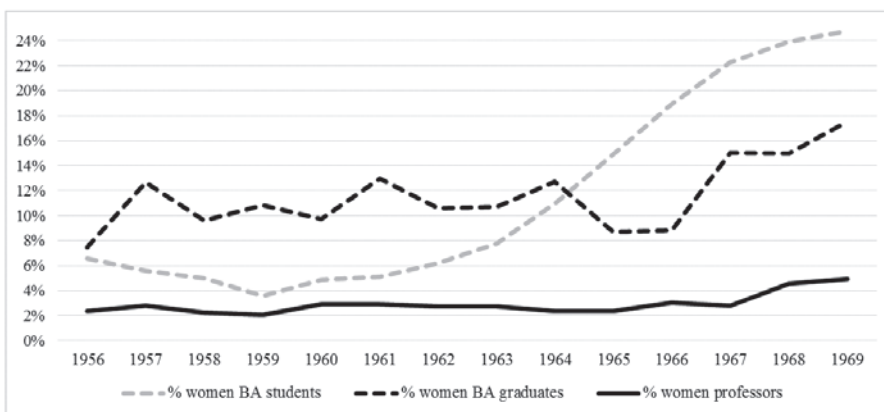


Figure 19.2 Women among registered BA students, BA graduates and professors in Economics at Sapienza University of Rome from 1956 to 1969

of women professors always remained below 5% of the total: considering together tenured and non-tenured professors in 1959, there were only two women among eighty-six professors; in 1969, there were only eight women out of a total of 162 professors.

The economic debate: economic planning in Italy and its historical context

After the Second World War, the Italian economy had to be reconstructed from scratch. Cao Pinna and Ipsevich both contributed to the post-war economic debates in Italy and Europe. Along with Ferdinando di Finizio, Libero Lenti and Gastone Miconi, the two women economists were an integral part of that group of economists and statisticians who described the analytical instruments needed to begin the first experiments in economic policy.

Following international trends that included the Marshall Plan and the OECD, in Italy in the late 1940s the debate focused mainly on three areas:

- economic planning versus *laissez-faire*;
- long-term versus short-term forecasting;
- formal input-output modelling versus informal short-term forecasting.

The term economic planning indicates the adoption, by the state, of coordinated programs in various fields of the economy. These coordinated programs extend across fiscal and monetary policies to housing and public investment in public companies, in order to meet specific economic objectives, such as GDP growth, reduction of inequality or economic dualism. Economic planning involves the pursuit of set goals, taking into account practical, real world constraints.

Economic planning is different from the central planning that is characteristic of socialist countries. In centralised planning, a central authority within the government makes the main investment decisions on production levels and prices of various products. In contrast, economic planning is based on predictions of the behaviour of economic subjects who are separate from the public operators, such as economic trends in major overseas countries and the investment decisions of private companies.

Beginning in the early 1960s in Italy, some attempts were made to adopt economic planning policies, but they failed mainly because of the inefficiency of the public administration. The history of the first implementation in Italy of economic planning and its evolution is useful to understand the social and political context in which Cao Pinna and Ipsevich worked.

The first years after the end of the Second World War (1945–47) were the years of reconstruction. The United States, through the Marshall Plan, provided the aid necessary to rebuild production capacity (machinery and equipment) destroyed during the war, and to buy raw materials and energy to allow the resumption of production. In 1947 Luigi Einaudi, Governor of the Bank of Italy, implemented a severely restrictive monetary policy, which blocked the inflation that had been high during the war and in the immediately following years. However, the restrictive policies of Einaudi also caused a fall in investment and a slowdown in growth in a period when unemployment was still high. It was not until 1949 that Italy's production returned to pre-war levels. In 1950, an agricultural reform was carried out allowing many landless farmers to become owners of small pieces of arable land. In the same year, the *Cassa del Mezzogiorno* (Fund for the South) was established. This was a public effort by the government to build infrastructure (such as roads, bridges, hydroelectric power stations, irrigation, etc.) in the southern regions (also called *Mezzogiorno*). The *Cassa del Mezzogiorno* had the aim of stimulating economic growth and development

in less-developed southern Italy in order to fight economic dualism,¹³ that is, to narrow the economic gap between the richer northern and much poorer southern regions of Italy.

The decade 1953–63 is usually labelled as the “economic miracle” phase in Italy. There was a rapid growth in investment and then a rapid growth in exports, both favourable to development. Throughout this period, real wages grew less than productivity, favouring firms’ profits – and thus their investments – and favouring Italian industries’ competitiveness in international markets. In 1954 the Vanoni Plan¹⁴ became the first exercise of economic planning in Italy for the decade 1955–64; this plan focused on employment and income. The Vanoni Plan aimed to reach four main targets under the condition of an annual 5% increase in GNP, better international cooperation and a greater propensity toward savings:

- greater stability in labour employment,
- a better balance of payments,
- a reduction of the gap between northern and southern Italy,
- a reduction of employment in agriculture.

The fragility of the Vanoni Plan led Prime Minister Amintore Fanfani to set up a committee of economists in 1961 (chaired by Giuseppe Ugo Papi) to improve the plan; their improvements were never implemented. Meanwhile in 1963, for the first time in over fifty years, real wages rose more than productivity; this meant a redistribution of income in favour of workers. The reduction in unemployment, especially in the northern regions in the years of the “economic miracle” provided greater bargaining power for trade unions. But the wage increase caused an upward pressure on prices, and the increased consumption of imports worsened the trade balance. Therefore, the Bank of Italy adopted a restrictive monetary policy, which resulted in a sharp slowdown in growth in 1964, marking the end of the growth process of the “economic miracle”. The inflationary pressures of 1963 and the slowdown of growth in 1964 revived concern about the underlying Italian economic problem: the economic dualism between the southern and the northern regions.

The decade 1963–73 can be considered the real programming phase, because the state tried to address the underlying problems of the Italian economy with programming tools. The first attempt (the Vanoni Plan of 1954) was never implemented, but after a long period of fierce debate that began in 1963, the first “Five Year Plan” – proposed by La Malfa – was approved by parliament in July 1967. In a period of slower growth (after the “monetary tightening” of 1963, investment was especially slow to recover), economic planning aimed to promote a more rational use of available resources. In 1969, after the “hot autumn” (*autunno caldo* in Italian) characterised by mass strikes and student protest, there was a new wage explosion. Moreover, in 1969, the approval of the Workers’ Statute by the parliament marked a clear improvement in the bargaining position of workers and trade unions in Italy. In 1970–71 economic growth slowed further. The expansion of public spending caused, in the second half of 1972, a recovery which, however, was accompanied by inflation and deterioration in the balance of payments.

Finally, the oil crisis of 1973–74 and the consequent dramatic increase in the price of oil drastically worsened the problem of inflation and the balance of payments; mainly because Italy was dependent on foreign countries for its energy supply.

Following the major industrialised countries, Italy was forced to adopt restrictive policies.

In 1975, for the first time in the post-war period, national income decreased, unemployment grew and inflation rose. A second wave of oil price increases occurred in 1979–80, followed by a new recession in Italy and much of the rest of the world. This marked the end of this particular economic planning project in Italy.

Vera Cao Pinna and Almerina Ipsevich had an active role, even though antithetical, during these years of debate and preparation of the first Italian attempts at economic planning.

Vera Cao Pinna and Almerina Ipsevich: two parallel lives

Reconstructing the biographies of these two economists is particularly difficult because only limited documentation remains (for Cao Pinna see Fornengo 1997 and 2000). Thus, personal interviews with their relatives, former colleagues and friends have been essential to writing this chapter.¹⁵

In both families a father figure is almost completely absent, whereas bonds with the mother are very strong. Both women moved to Rome and studied at the same university, albeit in different fields (Cao Pinna graduated in Economics and Ipsevich in Political Science). Neither Almerina Ipsevich nor Vera Cao Pinna settled down to raise a family. They never married, never had children, and lived with their mothers for most of their lives. Their mothers grew old and became increasingly ill, and this conditioned the work they were able to do: they made fewer and fewer visits overseas, and worked increasingly from home.

The strong bonds between Cao Pinna and her mother and sister (Maria) were stressed in private correspondence dating back to 1986 between Renato Guarini (her fellow) and her friend Estelle Leontief¹⁶ found from archival research among the few documents now available.¹⁷ These three women (Maria, Vera and their mother) lived for one another, shut off in their own personal world right through to the last days of their lives. They all died within twenty days of each other.

Another common element is that both Cao Pinna and Ipsevich were very reserved people. Both preferred to have no one, even their closest colleagues or friends, know their personal lives. They also rarely spoke about their professional achievements with family or close friends.



Although they were heavily burdened with family duties, Vera Cao Pinna and Almerina Ipsevich were invested with great responsibilities in economics and for many years represented Italy on international economics committees, where they interacted with some of the world's most important scholars and politicians. We cannot provide a detailed list of the conferences and meetings that they attended, but from the collected documents it emerges clearly that Vera Cao Pinna was frequently called to give lectures overseas. In 1956 she spoke at the Faculty of Statistics and Economics at the University of Madrid; in 1960, she went to Cairo for the Institute for National Planning of the United Arab Republic; and in 1964 she delivered lectures in Paris at CESD-Paris (Centre européen de formation des statisticiens économistes des pays en voie de développement) on planning methods as part of balanced regional economic development. For her part, Almerina Ipsevich was a member of international committees in the European Community and participated as an expert in the OECD group on short-term forecasting. It seems apparent that both women loved their jobs. All those who dealt with them for whatever reason say that their whole lives revolved around research work and mentoring/teaching.

Cao Pinna dedicated her whole life to studying comparative economics, to applying Leontief's input-output model (activities that started in ISCO and then developed in the Economic Planning Study Centre or *Centro di Studi e Piani Economici*), and to teaching econometrics at university. The importance of her work was never formally recognised by the university system in Italy but has been recognised by her students. Students embraced her teachings and the salient characteristics of her scientific method: "methodological insights, critical rigour, and attention to empirical testing".¹⁸ However, Italian academia never recognised her scientific value – Vera Cao Pinna was never appointed professor, always teaching with temporary contracts. In her curriculum vitae, Pinna identifies her "innovative" field of research as the main reason for her

academic failures. While she was interested and deeply involved in describing and analysing the new structure of the Italian post-war economy using applied economics and statistical models, the contextual Italian academics were mostly concentrated on developing theoretical models, seemingly without concern for how those models fit into reality.

Things were different in other countries where Vera Cao Pinna and her applied economics research were really appreciated. 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 Économique à Long Terme* (ASEPELT), founded in 1961 to bring together the best econometricians from

Table 19.1 Two biographies compared

Vera Cao Pinna	Almerina Ipsevich
	
<p>Photograph: Unione Sarda</p> <p>Date of birth: 23 December 1909</p> <p>Studies: graduated in Economics (BA 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>Work:</p> <ul style="list-style-type: none"> [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) [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>Date of death: 11 June 1986</p>	<p>Photograph: Cristina and Giovanna Ipsevich</p> <p>Date of birth: 18 November 1920</p> <p>Studies: graduated in Political Science (BA level) at University of Rome (later to become the Faculty of Political Science at Sapienza University of Rome) in 1944.</p> <p>Work:</p> <ul style="list-style-type: none"> [1948–1954] National Committee for Business Cycle Analysis [1955–1995] ISCO (Italian Institute for Business Cycle Analysis): Research officer, then Director (1973) and Vice President (1993). <p>Date of death: 18 March 2003</p>

all over Europe. She contributed actively to the scientific dissemination of works by the ASEPELT by making detailed critical analyses of the main sources of statistics and the methods conventionally used to measure consumption.¹⁹ Wassily Leontief, Nobel prize-winner, mentor and friend of Vera Cao Pinna remembers 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”.²⁰

Almerina Ipsevich, on the other hand, dedicated her professional life²¹ to ISCO (Italian Institute for Business Cycle Analysis).²² She started working there in 1955 as assistant of the first President, Gustavo Miconi, and then became director in 1973, and vice president in 1992. She concentrated her efforts, as reported in one of her notes,

to define constantly new fields of research to maintain a frontier role between statistical and economic analyses, that, starting from the intuition of a phenomenon, allows to construct and to provide new data, intelligently prepared and checked to formulate the first hypothesis of individual behaviours.

A whole group of economists, statisticians, economics journalists, civil servants and industrialists grew up with her, and they respected her curiosity and her approach to the day-to-day observation of events, which would then be summarised using an economic and social approach, never taking anything for granted.

Vera Cao Pinna and Almerina Ipsevich: a methodological contrast

Although the lives of these two women were similar, when we look at the contents of what they said and wrote it is easy to see their ideological distance.

The two women fell on opposing sides of the economic debate surrounding applied economics: short-term economic analysis (business cycle analysis) and the analysis of relationships between sectors. At the time, many people believed there was rivalry between Vera Cao Pinna and Almerina Ipsevich, but those who actually knew them said that these two women were parts of related, though completely separate, networks.

Ipsevich was reticent and rarely moved outside Rome. She was a moderate right-winger, mainly linked in her work to the banker and politician Guido Carli and industrialist Franco Mattei. Cao Pinna on the other hand worked mainly for the Ministry for Economic Planning, for the Italian delegation of the US Mutual Security Agency, and at university.

From the analysis of their curriculum vitae (see Table 19.1) we find that the two women worked from 1954 to 1957 in the same institution (the National Committee for Business Cycle Analysis, later ISCO, Italian Institute for Business Cycle Analysis) on applied economics but on different perspectives:

- Cao Pinna was research director of the Input-Output Unit, working on the update of the first input-output table for Italy;
- Ipsevich was also a research director, working instead on short-term forecasting.

While Cao Pinna was adapting the Italian input-output tables to evaluate the impact of the US-financed Marshall Plan for reconstruction of a country ravaged by war,²³ Ipsevich was

working on a series of data collection techniques and the data processing that would characterise the research activities of the Institute in the next decades.

In 1957, Cao Pinna decided to leave ISCO because, as she explains in her curriculum vitae, “the Institute (ISCO) had begun to concentrate more on short-term economic analysis” (Cao Pinna’s own note).

Although we cannot say that there was rivalry between Vera Cao Pinna and Almerina Ipsevich, we can argue that they had different ideological and methodological approaches to economic forecasting.

Economic forecasting, *stricto sensu*, is the identification and quantification of certain developments related to both real and monetary economic aspects of society (economic growth, inflation, employment, etc.). When preparing an economic forecast, due account must be taken of many different elements. One of the most important of these is the period of time to which the forecast has been applied.

A difference is usually made between short- and medium-/long-term forecasting. There is an economic explanation for this. The idea behind medium-term forecasting is that specification must be made of the time needed for families, companies and central or local government to reach certain targets, and this is the time we need to see if certain variables have settled down. In contrast, short-term forecasts can be made by observing the immediate effects upon a pre-existing situation and by studying what changes arise.

For economic forecasting in Italy during that time, in addition to the various national ministries, there were two main Institutes: the ISCO which, as we described above, concentrated mainly on short-term forecasts; and the Economic Planning Study Centre (*Centro di Studi e Piani Economici*), for long-term forecasts, where Vera Cao Pinna worked from 1965 to 1975 in order to “specialize further in economic forecasting and analysis” (Cao Pinna’s curriculum vitae).

Ipsevich preferred short-term forecasts of 12–18 months, where structures were considered unchangeable; Cao Pinna emphasised the medium and long term, and analysed structural changes to economic systems. This difference between the two, as well as the timescale of their forecasts, can be seen in their different methodological approaches. Ipsevich was willing to use any element, including economic sentiment indicators, which would help in analysing upward or downward trends in possible economic scenarios. In contrast, Cao Pinna relied more upon formalised structure and based all her models on the Leontief matrix.

They can, therefore, be described as two sides of the economic forecasting coin: on the one hand, Cao Pinna used quantitative methods that, considering only the quantities in a series of data, were supposed to show future trends in economic variables. In contrast, Ipsevich advocated the development of qualitative methods, useful for eluding the more determinist quantitative methods. She mainly wanted to understand changes in phenomena as a way of understanding the direction in which such changes were leading.

Cao Pinna used formal statistical methods in forecasting to represent those factors that influence economic variables. She refined and adapted to the Italian and European situation those models, which were based on the dealings between economic sectors that could be obtained using double-entry input-output tables. These were the methods devised by her friend and master Wassily Leontief in the 1940s, although historical precedent can be seen in Quesnay’s *Tableau économique* (1758). Cao Pinna herself speaks of the

statistical and mathematical analysis of interdependence between the various forms of economic activity (manufacturing, consuming, investing) [. . . that] allows one to describe the structure of an economic system in numerical terms and to explain how it develops. . . . Statistical analysis uses a large, double-entry table called the *matrix* of

economic interdependence. . . . In practical application of the model for forecasting purposes, it is (therefore) necessary and sufficient to estimate the probable fluctuations in final demand {Y}, to determine the orders of magnitude of changes which (in conditions of relative price stability in a system) such fluctuations will give rise to at a general level of activity and to the structure of a national production system.

Cao Pinna, 1961a

In 1952 Cao Pinna had already become a pioneer in drawing up, with Hollis B. Chenery and Paul G. Clark,²⁴ and a small number of young researchers, the first ever table of structural interdependences for Italy related to the year 1950. This 1950 table was the first application of input-output analysis to Italian economic problems.

The input-output table was used to illustrate some of the features of the Italian economy described in the book, co-authored by Cao Pinna, *The Structure and Growth of the Italian Economy* prepared by the Mutual Security Agency. As reported in the introduction, the book is innovative in the sense that:

Up to now, most attention has been given to the development of the theoretical scheme and the compilation of the basic tables. The application of input-output analysis to practical problems of economic policy is only just beginning. It is as an illustration of such practical applications that our work in Italy may be of some general significance.

Chenery et al., 1953, p. 5

The general significance 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,

[T]his 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

One main innovation of Cao Pinna was outlining a regional input-output model in which the north and south of Italy are distinguished. A second innovation was her use of the input-output model to estimate the effects of economic policies toward achieving the aim, as agreed upon by the OECD countries,²⁵ of a 5% yearly increase in total output between 1951 and 1956.

When she was working at ISCO, Cao Pinna directed the updating of the national input-output tables to 1953. She also acted as lead consultant for the Italian Statistical Institute (ISTAT) in creating tables for the years 1959 and 1965. After that, ISTAT began drawing up the series of tables. The introduction of intersectoral tables became an integral part of the national accounts in Italy and in European countries from 1970, with the introduction of the European System of Integrated Economic Accounts (ESA). Currently all industrialised countries frequently publish input-output tables, as do many countries in the developing world.

Almerina Ipsevich, who had a great sensitivity for economics and who was amazingly skilled in observing numbers, instead introduced quarterly reports on economic trends in Italy. In particular, she pushed to have quarterly income surveys in Italy (rather than yearly) mainly because of increased reliability of the use of quarterly statistics in estimates and forecasting performance.

As reported in one of her few notes that we found, Ipsevich firmly believed in the importance of data and data collecting, “because any researcher that wants to investigate new phenomena must also build the data in the sense of putting in place methods and research for gathering the needed data” (Ipsevich’s own note).

She worked toward data-based analysis by introducing at ISCO the Short-term Economic Business Tendency Surveys for qualitative data collecting about the economic short-term forecast. The surveys consisted of questionnaires distributed to entrepreneurs and managers about their perceptions of the current situation and their expectations for the near future, regarding both their own business and the general situation of the national economy. Answers obtained from the survey were aggregated in the form of *balances* (differences between positive and negative answers). Balances were then used to build indicators about production expectations.

Ipsevich also worked at ISCO on an *informal*⁶ forecasting process based on the interplay between experts who forecast how certain variables were likely to change. It is a complicated process that requires careful selection of information, a firm understanding of economic theory and statistical and mathematical tools and, especially, great experience in sifting through all the various signals. This can only be achieved by continuously observing the economy, especially its short-term fluctuations, where details from the past are mixed up with predictions of the future. The ISCO forecasting model was short-term (eighteen months), starting from the assumption that most of the relevant trends are predetermined by observable events. Consequently, such trends were extrapolated by using a series of indicators, and then brought into line with national official statistical figures.

Vera Cao Pinna and Almerina Ipsevich are therefore two kindred spirits of applied economics through their use of statistics. On the one hand, both contributed to “technical” statistics concerning the definition of formalised statistical models to be used to understand the current situation and make forecasts. On the other, both contributed to “data” statistics, the use of which involves great care in selecting their source and in defining what information can be used to observe an economy.

In light of the first attempts at economic planning in Italy, the distance between Vera Cao Pinna and Almerina Ipsevich widens enormously.

On one side, Vera Cao Pinna was a key person advocating models for economic planning based on input-output tables. The objective was to turn the Italian economy back toward collective consumption with planners selecting specific sectors to emphasise in the economy, using input-output estimates of final demand. Cao Pinna believed “that even a country like Italy could promptly build its own future by means of economic planning or, at least, by a more coordinated positioning of politics, general and sectorial, based on serious in-depth studies” (Cao Pinna, 1971, p. 20). On the other side, Almerina Ipsevich, along with Guido Carli (Bank of Italy) and Emilio Colombo (Treasury Minister), were magnets for those who felt that the economy should follow market trends, without being forced in any direction but to avoid inflation which would inevitably result from wage increases and limits placed upon supply.

Ipsevich was firmly against medium-term planning because she saw this as running an economy by law. She critically saw this as the first step toward centralised planning and socialism.

Cao Pinna tried, using econometric models and “her” tables, to contribute to economic policy changes.²⁷ Indeed, she took an active part in the economic planning, during the preparatory stages of the Vanoni Plan of 1954 by forecasting private consumption levels for 1964. In 1961 she also designed an econometric model (based on the input-output analysis) for the Economic Planning Minister to ensure compatibility and consistency in statistics for the first part of the 1965–69 planning measures. She then presented a critical analysis of the structure and limits of this model to the World Conference of Econometricians.

Ipsevich, instead, was an active member of a committee of experts created in 1968 by the Italian Statistical Institute (ISTAT) for designing new statistical analyses and methods for estimating national accounts.

As we explained previously in this chapter, the “hot autumn” of 1969 saw a series of long strikes; new collective bargaining agreements and wage increases exacerbated contrasts between the supporters and non-supporters of public intervention in economics. The oil crises, the lowering of supply and then the onset of stagflation all contributed to the death of economic planning. Cao Pinna regretted having to see “a trend towards documenting and overlooking the rhythm of development . . . rather than looking towards a brighter future” (Cao Pinna, 1971, p. 25).

Final thoughts

We have shown the contribution made by two women economists in Italy during the 1960s and 1970s who had been more or less forgotten. A final consideration concerns the “silent” contribution made by so many women in the past, whose contributions are in danger of being lost forever because women did not sign their works with their full names.

It is so in the case of Almerina Ipsevich whose full name never appeared in publications although she directed and supervised the research publications edited by ISCO. She signed just one publication with her initials (A.I.) and it is only thanks to her colleague Giovanni De Cindio that we were able to find it and to piece together her contribution to the economic profession in Italy.

Vera Cao Pinna, instead, was an innovator, choosing a field of research completely new at the time: input-output analysis. This innovation unfortunately turned out to be a failure for her recognition in Italy. Although she was well known by many of her colleagues in other countries, Cao Pinna was pushed aside by Italian universities, which refused to award her a professorship in economic statistics. Furthermore, Cao Pinna was not credited as the mother of input-output analysis in Italy by the Italian Statistical Institute (ISTAT). ISTAT does not even mention her name on their webpage dedicated to intersectional analyses.

Let us wind up by reprinting a brief summary of the lives of these women given by Innocenzo Cipolletta, who knew and worked with both of them:

Vera Cao Pinna challenged a men’s world, that of post-war Italy, and stood out as a leading scholar in her analysis of the relationships between sectors. In doing so, she advanced our understanding of the structure of the Italian economy and its economic policy after reconstruction. . . . Almerina Ipsevich pragmatically introduced interdisciplinary analysis because she really understood statistics without allowing herself to be overwhelmed by formulas like many of her contemporaries. Her greatest contribution has been how to understand reality by looking at the exceptions rather than at the rules.

Interview conducted with the present authors on 27/01/2014

Notes

- 1 Claudio Mazziotta (1986).
- 2 *Il Sole 24 Ore*, 21/03/2003, p. 11.
- 3 We analysed a wide range of journals in terms of editorial boards and research fields: journals published by banks’ research centres such as *BNL Quarterly Review*, *Moneta e Credito*, *Rassegna Economica*, *Bancaria* and *Review of Economic Conditions in Italy*; journals close to the Confederation of Italian Industry

- including *Rivista di Politica Economica*, *L'industria* and *Mondo Aperto*; and finally journals more linked to academia such as *Il Giornale degli Economisti* and *Annali di Economia*, *Rivista Internazionale di Scienze Sociali*, *Ricerche Economiche* and *Economia Internazionale*.
- 4 The studies on applied economics include Vera Cao Pinna 1952, 1954, 1955, 1956a, 1956b, 1958 and Enrichetta Spina, 1955, 1959, 1960, 1961, 1963, 1965.
 - 5 The political economy studies include Danila Cremona Della Casa, 1953, 1961.
 - 6 The taxation studies include Costanza Costantino, 1951, 1955, 1956, 1958.
 - 7 The demography studies include Nora Federici, 1953a, 1953b, 1954a, 1954b.
 - 8 The history of economic thought studies include Francesca Duchini, 1957a, 1957b.
 - 9 Gianna Maria Sanacuore has two pieces on finance in 1972 and 1973.
 - 10 Renata Targetti Lenti has three pieces on wages and earnings redistribution in 1974, 1975, 1977.
 - 11 Nora Federici's academic mentor was Corrado Gini, Professor of Statistics at Sapienza University of Rome, a prominent statistician, demographer and sociologist who developed the Gini coefficient, a measure of the income inequality in a society still commonly used in the literature.
 - 12 Costanza Costantino's academic mentors were both Attilio Garino Canina (whose biography she would later write), Director of the Institute of Finance at the Department of Economics at Trieste University, and Alfredo Scotto from the Department of Economics at Genoa University.
 - 13 Dualism between northern and southern Italy has deep historical roots, consolidated (and even extended) after the country's political unification in 1861. See Galasso (2014) for an excellent analysis of Italian dualism.
 - 14 The Vanoni Plan was the ten-year plan for developing employment and wages for 1955–64. It took the name of the economist and Minister for Economic Planning who drew it up.
 - 15 We wish to thank the following for sharing their memories with us: Innocenzo Cipolletta and Giovanni De Cindio who worked with Almerina Ipsevich at ISCO; Cristina and Giovanna Ipsevich, nieces of Almerina Ipsevich who gave us biographical details, photos and a curriculum vitae written by their aunt; Dolly Tommasi, a close friend of Almerina Ipsevich when she was in Agesci; Francesca Pizzetti from the Centro Documentale Agesci, who showed us the Officer Reports and other materials by Almerina Ipsevich. Thanks are also due to Alessandro Roncaglia, who worked both with Almerina Ipsevich and Vera Cao Pinna and to Renato Guarini, who worked with Vera Cao Pinna from 1959 to 1960 on the input-output tables for Italy. Cao Pinna left him all her work and books.
 - 16 Wife of Wassily Leontief. They usually met during their respective visits to America and Italy.
 - 17 Unfortunately, most of the books, notes and letters belonging to Vera Cao Pinna inherited by Renato Guarini have been lost in the intervening years.
 - 18 From the memorial lecture given by Renato Guarini in Cagliari, organised in memory of Vera Cao Pinna on 18/11/1988.
 - 19 See Cao Pinna 1962 and 1963.
 - 20 Leontief's interview, *L'Unione Sarda*, 19 November 1988, p. 6.
 - 21 In parallel with her work at ISCO, in her spare time she was part of AGI (Association of Female Italian Catholic Guides and Scouts). At AGI she was a real leader and landmark figure for many generations of Catholic girls.
 - 22 ISCO (*Istituto Nazionale per lo Studio della Congiuntura*), incorporating the former National Committee for Business Cycle Analysis, was formally founded in 1955 with the support of Ezio Vanoni, Finance Minister and later Minister for Economic Planning. The aim of the institute was to monitor and examine economic trends in Italy, with an eye also on the world economy. Gastone Miconi, a lawyer at the National Court of Audit who believed in the relevance of statistics, and the economist Ferdinando Di Fenizio, were its founding members. For a complete analysis, see De Cindio (1993).
 - 23 There was a specific target set for all OECD countries.
 - 24 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.
 - 25 The Organisation for European Economic Cooperation (OEEC) was established in 1948 to run the US-financed Marshall Plan. By making individual governments recognise the interdependence of their economies, it paved the way for a new era of cooperation that was to change the face of Europe. Encouraged by its success and the prospect of carrying its work forward on a global stage, Canada and the US joined OEEC members in signing the new Organisation for Economic Co-operation and

- Development (OECD) Convention on 14 December 1960. The OECD was then officially born on 30 September 1961, when the Convention entered into force.
- 26 The *informal* method or *ingenuous* forecast can be extremely subjective, but it allows a greater amount of information to be considered. As Löwenthal (1988) stresses, forecasting thus becomes the product of the “accumulated wisdom” of the analyst, or the result of his/her experience and ability in detecting new trends. See Cipolletta (1992) for details of the method used.
- 27 Several works in this context are highly revelatory: Cao Pinna 1956a, 1961b and 1969.

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