

Gender Discrimination, Entrepreneurial Talent and Self-Employment

Luisa Rosti
Francesco Chelli

ABSTRACT. The trend of female self-employment in Italy is stable, with a low level of participation which confirms the prediction of economic theory on discrimination. We contend that gender discrimination alters the distribution of entrepreneurial talent between employees and self-employed workers. This gives rise to the prediction that the self-employed women are less likely to survive when self-employed than men because the lesser entrepreneurial talent of women will increase their risk of failure. Applying Markovian analysis to ISTAT's labor market transition matrices we verify this prediction: Many women try to set up on their own, but they fail to remain self-employed both because their lesser entrepreneurial talent and because they try to become entrepreneurs without any previous experience of work.

'If you think you're so discriminated against, why don't you set up on your own?'

1. Introduction

Currently a large body of theoretical and empirical literature exists on gender discrimination by employers, and numerous studies furnish direct evidence of gender differences in self-employment selection. However, still little is known about how prejudice affects decisions by women to set up their own businesses.¹ Usually, discriminatory behavior by employers has caused female partic-

ipation in the labor market and the social division of roles by which wives undertake domestic production and husbands produce for the market (Becker, 1993).² But if this is not the best arrangement, either individually or socially, why do women not opt for the alternative solution of setting up on their own and engage not in domestic work but market activity?

We believe that some of the women who are rejected by subordinate employment possess valuable talents, unknown to even themselves, and that they should consequently leave the home for talent-revealing roles like market activity. The issue is all the more important in view of its magnitude in both Europe, where the Luxembourg Jobs Summit (1997) identified a gender gap of 25 million jobs – 25 million fewer women than men employed – as one of the main problems, and Italy, where the presence of 8,000,000 housewives pushes the country's female activity rate to bottom position among the EU member states.

In Italy, female self-employment has been stable at a low participation level over the past 20 years, which contrasts sharply with the marked growth in the numbers of women in dependent employment (Figure 1). This trend challenges the economic theory on discrimination that one possible consequence of discrimination by employers may be that more women are induced to set up on their own because discriminatory behavior reduces the wages of women in dependent employment and thus lowers the opportunity cost to women of self-employment. Our flow data show short survival periods of females that differs from what is known about male self employment: Men and women follow two different routes into self-employment, and the probability of remaining in self-employment is lower for women than it is for men. These results fully confirm the predictions of discrimination theory: Numerous women

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Luisa Rosti
University of Pavia
Department of Political Economy and Quantitative Methods
Via San Felice 5
27100, Pavia
Italy
E-mail: lrostri@eco.unipv.it

Francesco Chelli
Dipartimento di Economia
Università di Ancona
Italy

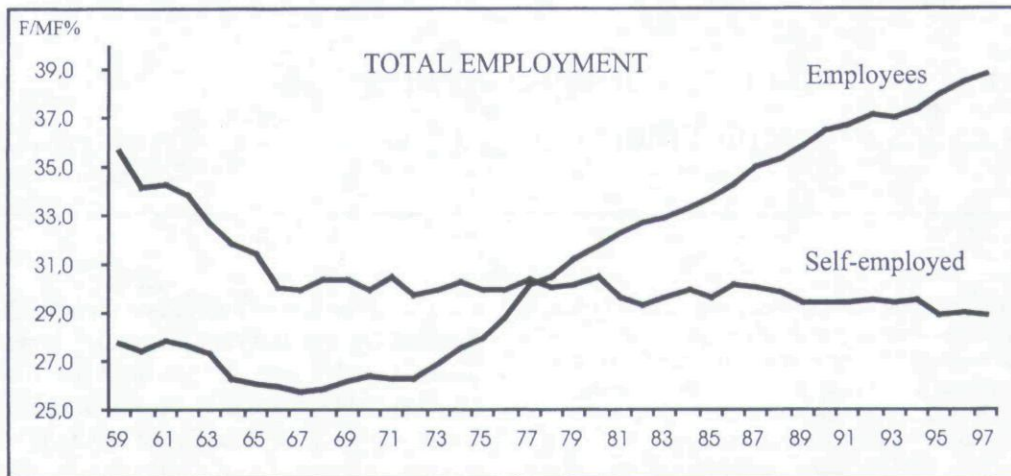


Figure 1. Share of women in self-employed workers and in employees. Total employment.

enter self-employment but they exit from it so rapidly that traditional annual stock data (time series) fail to capture the phenomenon.

Our analysis addresses two different questions. First, it identifies the main determinant of the decision to become an entrepreneur (which reflects a desire to reap the rewards of one's endowment of entrepreneurial talent). Second, it explores the reasons why this motive does not operate to an equal extent for men and women, on the assumption that the two sexes (as a group) have the same endowment of entrepreneurial talent. Such talent remaining equal, analysis shows that the presence of gender discrimination alters the distribution of entrepreneurial talent between employees and self-employed workers because less talented women, too, set up on their own in reaction to employers' discrimination. This finding gives rise to an empirically verifiable hypothesis: Once women have entered self-employment, they are less likely to survive than men because their lower level of entrepreneurial ability heightens their risk of failure.³ Our empirical analysis confirms this prediction, and flow data shed light on the apparent contradiction in the time series: Women do not refrain from setting up on their own, but they are unable to remain in that condition, and their exit rates are as high as their entry rates. Breaking the data down by gender shows that there are two different routes into self-employment (Cowling and Taylor, 2001). The first is followed

mainly by men: In this case, self-employment is either a fall-back solution following job loss or a movement into hierarchically higher positions in a *career* begun in wage and salary sector (Carroll and Mosakowski, 1987). This, however, is not the route followed by women, who enter self-employment from inactivity or unemployment "when nothing else is available" (Dennis, 1996), and they return to inactivity after disappointing experiences of working on their own account and frustrating spells of unemployment.

Many states are currently promoting self-employment as a way to leave the welfare and unemployment insurance rolls. Also, many academicians and policy makers view self-employment as a route out of poverty and as an alternative to unemployment or potential discrimination in the labor market (Tacker, 1995). In Italy, the importance of gender-oriented policies to incentivize female self-employment is borne out by the magnitude of the phenomenon: every year more than 1.2 million individuals set up on their own, out of a stock of 5.7 million self-employed and a total labor force of 20 million (Chelli and Rosti, 1998).

II. The definition and the evolution of self-employment

The definition of self-employment most suitable for our purposes is that those in this category are

employers of themselves or of others. The feature shared by self-employers and other-employers is their economic status as non-dependent workers. Also ISTAT (the Italian National Statistics Institute) defines a self-employed worker by the legal status of his/her work – that is, by the rules that regulate the employment relationship – so that s/he is characterized as self-employed when “no employment relationship is established and the work is performed as part of an activity whose proprietor is the worker him/herself or a member of his/her family.” By contrast, an employee is someone who “performs his/her work on the basis of a relationship established with the proprietor of the enterprise and regulated by a contract or law” (ISTAT, 1984, p. 117). Istat’s classification includes the following among self-employed workers: employers, free professionals, self-employed workers, members of production cooperatives, and family workers.

In Italy the share of self-employed workers in total employment is high (28%) and has grown spontaneously in the last 20 years, especially in non-agricultural sectors.⁴ A comparative study of the European countries shows that the share of self-employment in Italy is three times higher than in Denmark and Luxembourg, and more than double the share in Germany, Netherlands, France,

Austria, and Sweden. Disaggregation of the data by sector shows that only Greece has a higher share of self-employment than Italy in both the industry and service sectors (Table I).⁵

Yet, in Italy women are markedly under-represented in self-employment (Table II), and the proportion of women among self-employed workers fell slightly in the 1980s and 1990s, rather than growing substantially like employees (Figure 1). This applies especially to the industrial sector (Figure 2), where the ratio of composition by gender (i.e. the F/MF % ratio) of self-employment has almost constantly diminished since 1959; and it also applies to the services sector, where, although the share of women is much larger than in industry, there has been almost no growth in female self-employment (Figure 3).

We contend that there is a relation between female self-employment and the economic theory on discrimination: Employer discrimination should induce more women to set up on their own, other conditions equal, because the lower wages paid to women in subordinate employment reduce the opportunity cost of self-employment. Yet, the data indicate that this is not the case, and so we seek to identify the factors that hamper the growth of female self-employment in Italy.

TABLE I
Share of self-employed in total employment by sector and sex, in European countries, 1997.

	Agriculture	Industry	Services	Males	Females	Males and females
EU 15	68.7	11.9	15.2	19.9	12.7	16.9
Belgium	83.4	10.2	17.5	18.7	15.1	17.2
Denmark	51.3	6.8	8.2	12.4	6.0	9.4
Germany	47.0	6.6	11.6	13.0	8.2	10.9
Greece	96.0	31.2	33.2	46.8	42.4	45.2
Spain	64.1	16.7	22.1	25.5	21.1	24.0
France	71.5	9.9	10.1	15.5	9.7	12.9
Ireland	80.8	11.8	14.1	27.9	9.5	20.8
Italy	64.5	18.2	30.1	31.6	23.1	28.5
Luxembourg	71.0	5.0	8.3	9.8	8.1	9.2
Netherlands	62.2	7.3	10.6	13.7	10.4	12.4
Austria	86.9	4.8	10.2	14.3	13.3	13.9
Portugal	85.6	17.0	21.0	29.4	27.1	28.4
Finland	75.3	9.7	10.7	20.8	9.5	15.5
Sweden	68.5	10.2	9.6	16.5	6.6	11.7
United Kingdom	55.5	14.4	11.4	17.2	7.9	13.0

Source: EUROSTAT 1998.

TABLE II
Employment by professional status and sex, Italy, 1997

	Absolute values M	Absolute values F	Absolute values MF	% Males	% Females	% MF	F/MF%
Self-employed	4,074	1,658	5,733	31.7	22.9	28.5	28.9
Entrepreneurs	318	78	396	2.5	1.1	2.0	19.7
Independent professionals	613	178	791	4.8	2.5	3.9	22.5
Self-employed workers	2,605	839	3,444	20.3	11.6	17.1	24.4
Members of cooperatives	191	108	299	1.5	1.5	1.5	36.1
family workers	346	457	803	2.7	6.3	4.0	56.9
Employees	8,784	5,570	14,354	68.3	77.1	71.5	38.8
Total Employment	12,858	7,229	20,086	100.0	100.0	100.0	36.0

Source: ISTAT 1998.

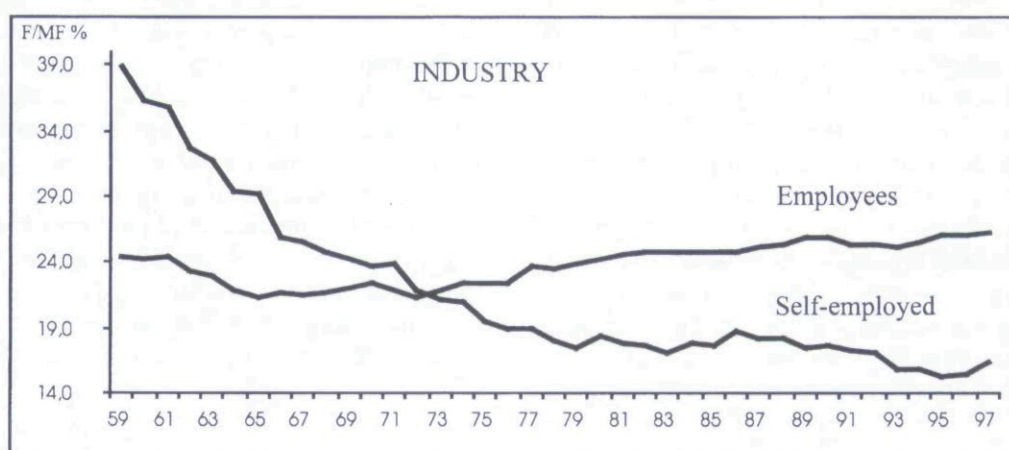


Figure 2. Share of women in self-employed workers and in employees. Industry.

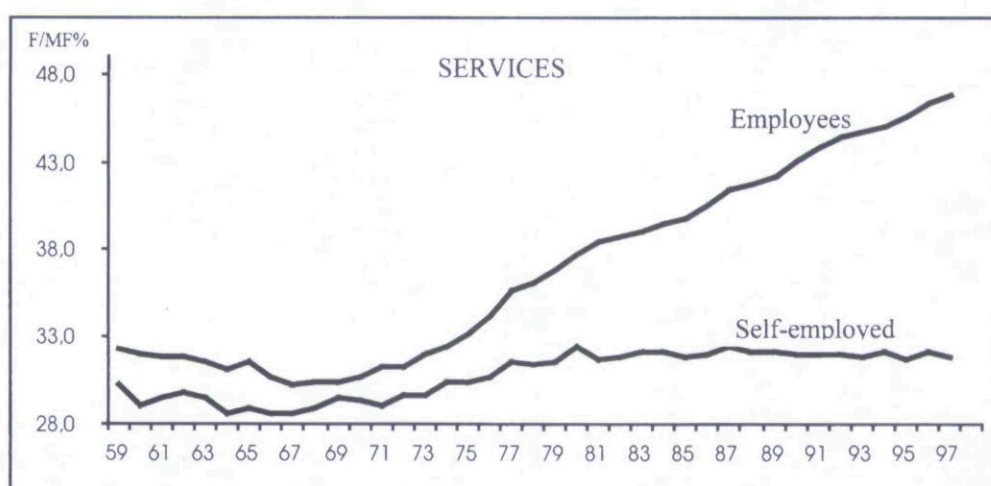


Figure 3. Share of women in self-employed workers and in employees. Services.

III. The implications of the theory of statistical discrimination

Gender discrimination in the labor market – a gender-correlated wage differential between individuals who are otherwise perfect substitutes in production – is a word that strikes at the core of mainstream economic theory. It does so because this behavior arises from a rational decision by agents, it persists even in a competitive market, and it produces an inefficient allocation of resources.

The theory of statistical discrimination (Arrow, 1972) demonstrates that it is possible for there to be equilibrium *with discrimination* in a competitive market in which heterogeneous agents make rational choices in a context of incomplete and asymmetric information. In this context, although there is no preference for discrimination (i.e., there is no aversion to women among employers), discrimination may characterize an equilibrium position of the model, proving resistant to the equalizing effects of market competition. The discriminatory behavior arises because the imperfect verifiability of work performance generates “prejudice, in the literal sense of that term; that is, a judgment about abilities made in advance of the evidence and not altered by it” (Arrow, 1972, p. 106). It persists in equilibrium due to feedback effects. Although the discriminatory behavior of employers is due to prejudices that have nothing to do with the intrinsic qualities of the group discriminated against, it may give rise to results that automatically confirm those prejudices. Also Becker reaches this conclusion, pointing out that “the *beliefs* of employers . . . that minority members are less productive can be self-fulfilling, for these beliefs may cause minorities to underinvest in education, training, and work skills” (Becker, 1993, p. 388).

In the empirical literature, labor market discrimination is evident in the finding of an unexplained gender gap in work force participation, together with the overrepresentation of women in the self-employment sector, as compared to the wage and salary sector. The implications can be summarized as follows. The first effect of discrimination (even minor) in the labor market is lower female wages relative to male ones; this wage differential generates a comparative advantage

which makes it more convenient for women to do domestic work and men to do market work. Given this comparative advantage, each spouse specializes in the activity that s/he performs, and the increasing returns deriving from investment in human capital reinforce the productivity differences between men and women in domestic and market activity. Hence the small initial difference eventually becomes a wide and permanent wage differential. From this Lazear and Rosen (1992) conclude that the smaller number of women in the labor market results from a rational allocation of resources – identically distributed between the two sexes – of time and effort. The distribution of these resources between domestic production and production for the market differs between men and women because of discrimination. But this difference simply reflects a “market-based judgment about the social value of each person’s labor. (This may not be the best way to determine social value, but it is the only way that the market provides.) The competitive market’s judgment of each person is confirmed by the other available opportunities for employment. Everyone could, in theory, go elsewhere and still earn their current salary” (Ackerman, 2000, p. 76).

In our view, even if the present division of labor between men and women results from a rational allocation of resources of time and effort, it does not correspond to the social optimum because discrimination prevents the market from establishing the true value of women’s human resources. We therefore argue for the efficiency of policies which provide incentives increasing female participation in the labor market, and more specifically for the efficiency of policies that promote non dependent female employment. But in order to argue persuasively for such gender-sensitive labor market policies we must rebut Ackerman’s assertion – the market’s judgment is confirmed by the other opportunities – by finding a satisfactory answer to the following question: Why do women who suffer discrimination not look for other opportunities for employment? Why do they not make the most efficient use of the human resources that they possess and which employers spurn? Why do they not decide to set up on their own?

The problem can be broken down into two distinct questions: (a) How does one become an

entrepreneur? (b) What prevents women from becoming entrepreneurs?

From a theoretical point of view, Lucas (1978) has provided an authoritative answer to the former question: Individuals endowed with a specific *entrepreneurial talent* become entrepreneurs. But if one assumes, as is reasonable, that this particular innate ability is identically distributed between the sexes,⁶ why is it that the entrepreneurial talent of women is less frequently realized than the entrepreneurial talent of men?

IV. Entrepreneurial talent

Nature endows different individuals with different talents. Some people possess an innate ability for particular activities, like singing opera or playing football: Murphy, Shleifer, and Vishny call this innate ability "*natural talent*" (1991, p. 504). This natural talent is specific, because those who possess it have a comparative advantage, and this comparative advantage makes the correct matching of individuals with jobs important for allocative efficiency.

Lucas (1978) poses the problem of the efficient allocation of resources in an economic system in which agents differ by entrepreneurial ability, although they are equally productive when they work in subordinate employment. For our purposes herein it is not particularly important to investigate the economic role of the entrepreneur; what matters is solely the heterogeneity of agents with respect to entrepreneurial talent: whatever entrepreneurs have to do, some of the agents do it better than the others.

In Lucas' model, those who possess this kind of innate ability (exogenously given) are able to start up as entrepreneurs without any prior training or learning; but the situation does not greatly change if one assumes that agents differ in their ability to acquire new expertise as long as they have equal access to common and general knowledge (Calvo and Wellisz, 1981). Whatever the case may be, the conclusion of the Lucas' model is that in equilibrium, those choosing to become entrepreneurs are all individuals for whom the use of their talent in entrepreneurial functions guarantees higher earnings than they would receive otherwise.⁷

What changes in Lucas' model if we introduce gender discrimination in the labor market?

The direct consequence of discriminatory behavior by employers is that women's wages are less than those of men; and this reduces the opportunity cost for women of setting up on their own. Discrimination therefore induces women to enter self-employment, but when this happens, a fundamental change occurs in the distribution of entrepreneurial talent between self-employed men and self-employed women. Also less talented women, in fact, find it economically convenient to set up as entrepreneurs, and when they do so they reduce the average endowment of talent among self-employed women as a group.

The last consideration prompts an empirically verifiable prediction: other conditions remaining equal, self-employed women will have less chances of survival than their male counterparts because their lower level of entrepreneurial ability will increase their risk of failure: that is, of exiting from self-employment.

Our empirical analysis confirms the theoretical prediction, and the use of flow data explains the apparently contradictory trend of the stock data: women try to set up on their own, but they are unable to survive and soon they return to the condition from which they started.

V. The flow data

Entries to or exits from a condition or state can be best studied by using a method based on longitudinal data: that is, data collected from subjects who have been interviewed repeatedly over time. In Italy, it is possible to obtain information of this type from the data published by ISTAT in the "*matrix of the population structural changes between corresponding data referring to two successive periods*".⁸

Publication of the matrixes began in 1971. It was interrupted in 1977 because major changes had been made to the methodology used for the labor force survey, and it was resumed in 1979/80 on the basis of the new survey criteria and then was interrupted again in 1988/89. Available for this interval of time, therefore, are ten consecutive annual matrixes from which we constructed an average matrix in order to neutralize the random elements inevitably present in annual flows. The information yielded was therefore more stable and consequently better suited to long-period analysis.

The annual matrix for 1997/98 has recently been added to this information.

In order to depict entries to and exits from self-employment, we examine the horizontal coefficients of the ten-year matrix 1978/79–1988/89 and the annual matrix 1997/98. The horizontal coefficients can be read as the probabilities of transition among the states of a finite Markov chain. The probability of transition to any state i at time t is considered to be conditioned only at the state reached at the instant $t - 1$ immediately prior to the present one, thereby omitting the individual's less recent history.⁹

The most significant horizontal coefficients of the ten-year matrix (Table III) show that the likelihood of entering self-employment is greater for individuals coming from dependent employment (4.4%), and especially for employees in the same sector: the likelihood of passing from dependent to self-employment in agriculture is 7.8%,

in industry 2.3%, and in services 3.2%. The probability of unemployed persons entering self-employment is only slightly less than that of their entering dependent employment (4.2%), while the probability of their passing directly from inactivity to self-employment is much lower (1.4%).

However, disaggregation of the data by gender shows, in this case too, differences between males and females: Women are half as likely as men to enter self-employment, and their probability of moving from dependent employment to self-employment is just over half that of men. Males who change state are more likely to move from unemployed persons to self-employed workers (6.4%), followed by the transition from dependent workers to self-employed workers (5.1%) and then from non active persons to self-employed workers (1.7%). As regards women, most likely to enter self-employment are those in dependent employ-

TABLE III

Horizontal coefficients (exit rates) of the ten-year transition matrix. The values in brackets refer to the 1997/98 matrix

	M	F	MF
<i>From . . . – To . . .</i>			
Dependent workers – Self-employed workers	5.1 (2.9)	2.9 (1.9)	4.4 (2.5)
Unemployed persons – Self-employed workers	6.4 (5.6)	2.5 (2.6)	4.2 (4.0)
Non active persons – Self-employed workers	1.7 (1.3)	1.3 (0.9)	1.4 (1.0)
Self-employed workers – Unemployed persons	1.0 (1.1)	1.3 (1.4)	1.1 (1.2)
Self-employed workers – Non active persons	5.2 (4.7)	15.2 (10.4)	8.2 (6.4)
Employed persons – Non active persons	4.2 (3.8)	7.8 (5.9)	6.0 (4.6)
Employed persons – Unemployed persons	1.5 (1.5)	2.5 (1.8)	1.8 (1.6)
Dependent workers in agriculture – Self-employed workers in agriculture	8.5 (4.6)	6.5 (3.3)	7.8 (4.2)
Dependent workers in industry – Self-employed workers in industry	2.6 (1.5)	1.4 (0.7)	2.3 (1.3)
Dependent workers in services – Self-employed workers in services	3.9 (2.4)	2.1 (1.6)	3.2 (2.0)
Self-employed workers – Dependent workers	9.7 (5.2)	6.7 (5.6)	8.8 (5.3)
Unemployed persons – Dependent workers	27.7 (20.9)	18.6 (13.7)	22.5 (17.1)
Non active persons – Dependent workers	2.9 (2.3)	1.9 (1.5)	2.3 (1.8)
Dependent workers – Unemployed persons	1.8 (1.7)	2.9 (1.9)	2.1 (1.8)
Dependent workers – Non active persons	3.7 (3.4)	7.8 (4.5)	5.1 (3.8)
Unemployed persons – Employed persons	34.1 (26.5)	21.1 (16.2)	26.7 (21.0)
Unemployed persons – Non active persons	16.4 (19.6)	25.0 (31.0)	21.3 (25.7)
Self-employed workers in agriculture – Dependent workers in agriculture	4.5 (2.7)	3.7 (1.4)	4.2 (2.2)
Self-employed workers in industry – Dependent workers in industry	8.9 (4.2)	8.1 (6.2)	8.8 (4.5)
Self-employed workers in services – Dependent workers in services	6.8 (3.8)	5.3 (5.1)	6.3 (4.2)
<i>Permanent in . . .</i>			
Self-employed workers	84.0 (88.9)	76.7 (82.7)	81.8 (87.1)
Dependent workers	89.4 (91.9)	86.4 (91.7)	88.4 (91.8)
Unemployed persons	49.5 (53.9)	53.9 (52.7)	52.0 (53.3)
Non active persons	92.7 (93.7)	94.3 (95.1)	93.7 (94.6)

Source: Our calculations on ISTAT data.

ment (2.9%), followed by unemployed persons (2.5%) and non-active persons (1.3%).

Moreover, the probability of remaining in self-employment is lower for women than it is for men (76.7% for females, 84% for males). Conversely, women are more likely than men to leave employment, i.e. move from self-employed workers to unemployed persons (1.3% for females, 1.0% for males) and from dependent workers to unemployed persons (2.9% for females, 1.8% for males). Most strikingly, women are almost three times more likely to pass from self-employed workers to non active persons (15.2% for females, 5.2% for males) and more than twice as likely to pass from dependent workers to non active persons (7.8% for females, 3.7% for males).

The composition ratios by sex in the gross

flows (Table IV) highlight that women do not follow the more traditional route for entry into self-employed workers (i.e. starting from dependent workers). Yet, they are not reluctant to set up on their own: they constitute, in fact, 56.6% of the gross flow from non active persons to self-employed workers, and 34.2% of the gross flow from unemployed persons to self-employed workers.

But the crucial point here is that they are unable to continue in self-employment, and so they constitute a flow in reverse of the same magnitude. The exit flows from self-employment, in fact, show that the sex ratio in the gross outflow to non-active persons is very high (55.6%), while that to dependent employment is very low (22.9%).

TABLE IV
Ratios of composition by sex of the ten-year transition matrix and of the 1997/98 matrix

	$F(i, j) F / F(i, j) M + F\%$	
	Ten-year matrix	1997/98 matrix
<i>From . . . - To . . .</i>		
Dependent workers – Self-employed workers	21.99	29.23
Unemployed persons – Self-employed workers	34.15	34.52
Non active persons – Self-employed workers	56.58	55.11
Self-employed workers – Unemployed persons	36.32	33.78
Self-employed workers – Non active persons	55.60	47.47
Employed persons – Non active persons	52.82	46.43
Employed persons – Unemployed persons	43.96	39.50
Dependent workers in agriculture – Self-employed workers in agriculture	31.22	28.57
Dependent workers in industry – Self-employed workers in industry	14.95	13.95
Dependent workers in services – Self-employed workers in services	25.74	36.30
Self-employed workers – Dependent workers	22.90	30.62
Unemployed persons – Dependent workers	47.21	42.66
Non active persons – Dependent workers	52.73	49.97
Dependent workers – Unemployed persons	45.56	41.09
Dependent workers – Non active persons	51.01	45.71
Unemployed persons – Employed persons	45.16	41.11
Unemployed persons – Non active persons	67.01	64.35
Self-employed workers in agriculture – Dependent workers in agriculture	30.52	22.41
Self-employed workers in industry – Dependent workers in industry	16.55	21.18
Self-employed workers in services – Dependent workers in services	26.97	38.59
<i>Permanent in . . .</i>		
Self-employed workers	28.18	27.69
Dependent workers	32.60	38.89
Unemployed persons	59.18	52.70
Non active persons	63.12	61.16

Source: Our calculations on ISTAT data.

VI. Markovian analysis of the transition matrixes

The most interesting results yielded by application of Markov chains to the transition matrixes concern the *limiting vector*, the *mean first passage matrix*, the *limiting correlations matrix*, and the *fundamental matrix Z* (Kemeny and Snell, 1960).¹⁰

The *limiting vector* represents the equilibrium point of a transition matrix of a finite Markov chain. It is made up of the fixed probabilities of belonging to the states of the system in the long period. The limiting vector was calculated for both the average ten-year matrix and for the series of annual matrixes. The reliability of the forecast is highlighted by the data of the annual matrixes, which show a strong convergence by the values on the ten-year one for both males and females.

The mean first passage time is a measure of the distance between the states of a system. More specifically, its elements indicate the average time taken to reach a given destination for the first time starting from a certain origin. These distances take account not only of the direct flows between any pair of states, but also of all possible indirect flows. We begin by considering the male component.

The results of the ten-year matrix show that the closest destination for self-employed workers in industry consists of employees in the same sector. This is followed by non active persons and then self-employment in industry, i.e. a return to the same state. In the new matrix, instead, the destination closest to self-employed workers in industry is self-employed workers in industry, and then to a considerably lesser extent, dependent workers in industry and dependent workers in services. The closest destination for self-employed workers in services is self-employment in services in both matrices, followed by employees in the same sector and non active persons in the ten-year matrix, although the positions are reversed in the new matrix (first non active persons, then dependent workers in services).

We now consider the female component. The mean first passage matrix shows that the closest destination for self-employed workers in industry is non active persons, followed by dependent workers in services and then by unemployed persons, in both the ten-year matrix and the new

one. Nor has the closest destination for self-employed workers in services changed over time. In both matrices the order is non active persons, self-employed workers in services, dependent workers in services. As regards the female component, the most surprising aspect is that none of the features displayed by the matrix has changed in the past decade.

We now examine the limiting correlations matrix. The generic element c_{ij} in the matrix measures the relation between the time spent by the process in the i -th and j -th states. Since a long period spent in a state i implies a short one spent in a state j , it is logical to expect negative values outside the diagonal; the presence of positive values may instead indicate a process that passes rapidly from state i to state j and vice versa. (For example, the ten-year matrix shows that for women, but not for men, there is a positive correlation between self-employed workers in industry and dependent workers in services.)

The fundamental matrix Z enables, for broad values of n , calculation of the amounts of time spent in the destination states (arranged in the columns) for different states of departure (arranged in the rows).

The data show that for both males and females, and in both matrices, the factor that induces longer persistence in the state of self-employed workers is provenance from dependent workers, and more specifically from employees in the same sector. The periods of time spent in self-employment by workers originating from non active persons are instead much shorter, and this confirms the finding that exclusion from the labor market is always the "*worst school*" for employment of any type, for both males and females.

VII. Policy implications and policies to promote self-employment

Calculations on the data contained in the Istat flow matrixes show that the probability of remaining in self-employment is higher, and that its duration is longer, among persons who have previously worked as subordinate employees in the same sector. By contrast, the probability of remaining in self-employment is much lower, and the duration much shorter, among persons who

enter self-employment from the non-active population.

Breaking the data down by gender shows that men and women follow two different routes into self-employment. Men set up on their own in order to continue, but more profitably, an activity already performed in wage and salary sector; or they do so as a fall-back solution in the case of job loss. Women, who are instead more numerous among the inactive population and among job-seekers, try to set up on their own in order to move out of their current situation "when nothing else is available". But they fail to remain in self-employment and exit from it at the same rate as they enter (they are three times more likely than men to return to inactivity).

Calculation of the mean first passage matrix highlights these routes. For men, the closest destination for self-employed workers in industry is dependent employment in the same sector; and the closest destination for self-employed workers in services is dependent employment in the same sector. This route into self-employment has two substantial advantages. Firstly, it selects specific ability by making individuals aware of their potential and facilitating its self-evaluation. Secondly, it furnishes the worker with the requisite skills through learning on the job.

But this route is not the one suited to women. Women become self-employed workers precisely because discrimination excludes them from subordinate employment. They arrive in self-employment not from the wage and salary sector but from non-activity, and, as a consequence, they have access neither to self-assessment of their potential nor to on-the-job training. Women are consequently much less likely to remain in self-employment than men, and when they leave it the closest destination for self-employed women in both industry and services sector is non-activity, again. Comparison between the data from the ten-year matrix and those from the 1997/98 annual matrix shows that this situation has not changed over time.

These results point up the need for gender oriented policies which promote female self-employment. Because we believe that some women rejected by subordinate employment possess valuable talents, unknown to even themselves, they should be pushed out of the home into

talent-revealing roles such as market activity. Such policies have the institutional task of revealing specific entrepreneurial ability (innate or acquired) before the market passes its verdict, and at a lower cost. Its social utility is twofold in that it prevents the start-up of activities bound to fail, and it fosters the growth of those that will succeed.

Economic policy measures to incentivize self-employment have been introduced by all the industrialized countries. They are given particular importance by the European Community and constitute one of the four *pillars for action* set out in the Employment Guidelines that each member-state is required to translate into National Action Plans. The aim of the guidelines is to promote entrepreneurial initiatives and to help in assessment of their capacity to survive and develop (Stille, 1998). By setting up as entrepreneurs, in fact, self-employed workers always create a job for themselves, and often for others as well (employees or family workers), thereby sustaining the employment level of the economic system in which these policies are applied (de Wit, 1993). In Italy, there are currently six national laws to support self-employment, plus a hundred-odd regional laws. Such policies have been cited as an example of good practice by the report setting out the EU guidelines: Which means that, should the Community evaluate the first results of these policies positively, they will be taken as the model for the other member-states.

VIII. Conclusions

This paper attempt to analyze the self-employment of women and the role that discrimination plays.

We contend that there is a relation between female self-employment and gender discrimination in the labor market. Gender discrimination reduces the wages of women in dependent employment and thus lowers the opportunity cost to women of self-employment. We assume that there is an equal distribution of entrepreneurial talent between men and women as a group. Such talent remaining equal, the presence of gender discrimination alters its distribution between employees and self-employed workers, because less talented women, too, set up on their own in reaction to employers' discrimination.

We test the hypothesis that self-employed

women have lower rates of survival than men because their lower level of entrepreneurial ability heightens their risk of failure.

We support the female underperformance hypothesis by using a method based on longitudinal data, i.e. by applying Markovian analysis to Istat's transition matrices.

The flow analysis shows that the low female presence in self-employment is due to a significant extent to the difficulty of remaining in that situation. Women have high probability of failure, that is of rapidly leaving self-employment, both because less talented women try to become entrepreneurs and because they try to do so without any previous experience of work.

The empirical evidence suggests that there are two different routes into self-employment. The first is followed by men in order to continue an activity already performed in wage and salary sector (either more profitably or in the case of job loss). This route into self-employment furnishes the worker with the requisite skills through learning on the job. But women follow a different route into self-employment. They become entrepreneurs precisely because discrimination excludes them from subordinate employment. Women arrive in self-employment from non-activity, and they have access neither to self-assessment of their potential nor to on the job training, and, as a consequence, they exit from self-employment at the same rate as they enter it.

These results should provide useful information for formulating effective policies to promote successful entrepreneurial activities. On the basis of the data provided, different policies are needed to develop entrepreneurship among men and women.

A good policy to promote (female) self-employment must ensure that entrepreneurial training is provided after a stringent selection process has been conducted on a long-term and quantitatively large scale, and it must be methodologically gender oriented. The aim of these measures should be to increase both the probability of passing from non-activity or unemployment to self-employment, and the probability of remaining in that state.

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Notes

¹ See e.g. Moore (1983), Coate and Tennyson (1992), Tacker (1995), Verheul and Thurik (2001).

² "In almost all societies, married women have specialized in bearing and rearing children . . . It should not be controversial to recognize that the explanation is a combination of biological differences between men and women – especially differences in their innate capacities to bear and rear children – and legal and other discrimination against women in market activities, partly through cultural conditioning" (Becker, 1993, p. 397).

³ "Longitudinal studies show that the individual's probability of remaining self-employed depend not only on the number of years spent in the business, but on his/her ability as well" (Le, 1999, p. 410).

⁴ The source of these data is the ISTAT Labour Force Survey – annual average – from 1959 to 1997.

⁵ The data of the Statistical Office of the European Union (EUROSTAT) envisage employers, self-employed workers and family workers as being in self-employment.

⁶ We also assume for simplicity's sake that it is not necessary to obtain credit to set up in business. Several authors have emphasized the role of credit as a mechanism which selects and identifies entrepreneurial talent. Coate and Tennyson (1992) set the problem of credit in relation to the two main topics addressed by this paper: discrimination and entrepreneurship. Their model assumes that entrepreneurial ability is imperfectly observable, and that setting up on one's own requires access to credit. In these circumstances, gender membership is a signal of entrepreneurial talent. The banks, knowing that the opportunity cost of self-employment is lower for women because of discrimination, assess female entrepreneurial ability as being inferior to that of males and therefore impose higher interest rates on women. For this reason, the expected returns on the work of self-employed women are lower than those for men, so that, not surprisingly, the former have less incentive to set up as entrepreneurs.

⁷ Baumol (1990), Holmes and Schmitz (1990), and Gifford (1993) discuss differential entrepreneurial abilities, and argue that people with greater such abilities will tend to self-select as entrepreneurs. The term "entrepreneurial ability" is used here to encompass all the skills possessed by an individual which contribute to his/her productivity on the job.

⁸ The survey method used is to interview the same subjects on several occasions over time following the rotation of the households in the sample constructed for the labour force survey. The surveys discussed here are relative to the average annual flows obtained by combining the individuals records relative to the same cohort of persons subjected in two corresponding surveys (i.e. conducted in the same month of two successive years).

⁹ See on this Blumen, Kogan and McCarthy, 1955; and, for Italy, Giacomini Arangio-Ruiz, 1974.

¹⁰ Tables V–XIV are not included in the paper but can be obtained from the authors upon request.

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