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Entrepreneurship: Can the Jack-of-All-Trades Attitude be Acquired?

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Abstract
Entrepreneurs are believed to be the ultimate engine of modern economic systems. Yet, the study of entrepreneurship suffers from the lack of consensus on the most crucial question: what makes an entrepreneur? A recent theory developed by Edward Lazear suggests that individuals mastering a balanced set of talents across different fields, i.e. the Jacks-of-All-Trades (JATs), have a high probability of becoming entrepreneurs. In this paper, I investigate whether the JAT Attitude is just an innate ability or a skill that can be trained to enhance individuals' chances of becoming entrepreneurs. Using panel techniques, I show that changes in the spread of knowledge across different fields do not increase the probability of becoming an entrepreneur. This suggests that, if the JAT Attitude matters for entrepreneurship, it is an innate and time-invariant individual attribute, rather than a skill that can be acquired.

JEL Codes: M13, J23, J24
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1 Introduction

The role of the entrepreneur (EN) in modern economic societies has long been studied. Its relevance is grounded on the belief that ENs are the ultimate engine of modern economic systems; indeed, ENs are believed to be a significant determinant of one country's performance, particularly with respect to innovation processes and job creation. Following Schumpeter (1911), a vast literature has studied the link between one country's endowment of entrepreneurship and its ability to achieve prosperity. Recently, Baumol (2004) has shown that most breakthrough inventions come from independent inventors and ENs; large firms, instead, focus more on incremental (and often invaluable) improvements.

Despite a vast interest in the field, different authors have conveyed divergent messages about both the entrepreneurial function and its characteristics. In fact, the study of entrepreneurship lacks of consensus on the most crucial question: what makes an EN?

A recent theory developed by Lazear (2003) suggests that individuals mastering a balanced set of talents across different fields, i.e. the *Jacks-of-All-Trades* (JATs), have a high probability of becoming ENs. The crucial intuition rests on the idea that ENs differ from wages and salary workers (WS) in that ENs do not need to be particularly good *in one single* skill; given that the entrepreneurial function requires managing of different people and tasks, ENs must be sufficiently well versed in a variety of fields. From this stems the comparative advantage for the JATs to choose the entrepreneurial occupation.

In fact, cross-sectional evidence provided in Lazear (2003) and (2004) shows that measures capturing an individual's breadth of experience across different fields positively affect her probability of becoming EN; this suggests that the JAT Attitude may be an important determinant of the entrepreneurial choice. Similar evidence is provided in Wagner (2002) using German national representative data. Finally, Baumol (2004) shows that a specialized education for mastery of scientific knowledge can impede heterodox thinking, innovation and entrepreneurial spirit; this provides general support for a JAT view of entrepreneurship. Yet, one question remains unanswered:

is the *Jack-of-All-Trades* Attitude an innate ability or a skill that can be acquired?

In this paper, I investigate whether the JAT Attitude is an inborn and time-invariant individual characteristic, driving educational and occupational choices, or an expertise that can be developed, by training individuals' knowledge across different fields, to increase their chances of becoming EN.

To shed light on this issue, I first reconsider the theoretical JAT framework and discuss individuals' human capital investment plans. Following Lazear (2004), I show that individuals who are *innately* endowed with a high JAT Attitude and can easily master various tasks, have incentives to train their knowledge across different fields, achieve a balanced skill-mix and become ENs.

This is important as it implies that inborn, and ultimately unobservable, attributes may drive individuals' educational and occupational choices. Cross-sectional estimates of the impact of knowledge in a variety of fields on the chances of becoming EN cannot control for unobservable characteristics: they are therefore uninformative when trying to identify the (causal) impact of acquiring a wide set of skills on the probability of becoming an entrepreneur.

To deal empirically with this problem, I exploit the longitudinal dimension of two Italian datasets. First, the Bocconi University Graduates Dataset is explored; although information contained in this database is well designed to test for the JAT hypothesis, the relevance of the results may be reduced by the peculiar kind of sampled individuals. To overcome this problem, the JAT hypothesis is confronted to information contained in ILFI Survey (Longitudinal Survey of Italian Families) providing a meaningful picture of the whole Italian working population.

When cross-sectional techniques are used, I find that the proposed JAT proxies, measuring an individual's breadth of experience across different fields, are positively correlated with the entrepreneurial choice; this confirms previous findings. Yet, cross-sectional estimates are confounded by unobservables driving self-selection into educational and occupational tracks.

In fact, when panel data techniques are used to control for unobservables, I find that changes in the spread of knowledge across different fields do not increase the probability of becoming an entrepreneur. I interpret this as the true effect of acquiring a more balanced skill distribution on

individuals' occupational choices and conclude that most of the positive cross-sectional result is driven by unobservables. This suggests that, if the JAT Attitude matters for entrepreneurship, it is an innate and time-invariant individual ability, rather than a skill that can be acquired. Individuals lacking of a JAT Attitude cannot be trained to become JATs.

This paper is structured as follows: Section 2 reconsiders some aspects of Lazear's theory. Section 3 describes the two datasets. Section 4 assesses the empirical relevance of the JAT hypothesis using multivariate regressions. Section 5 concludes.

2 The Jack-of-All-Trades Theory of Entrepreneurship

2.1 Model Set-up

The model presented in this Section was first formalized in Lazear (2003). The pivotal idea is that ENs differ from wages and salary workers (WS) in that ENs do not have a comparative advantage *in one single* skill, but master a more balanced set of talents *across* different fields. Since the entrepreneurial function requires managing of different people and tasks, ENs must be sufficiently well versed in a variety of subjects. From this assumption stems the comparative advantage for individuals endowed with a balanced set of talents, i.e. the *Jacks-of-All-Trades* (JATs), to choose the entrepreneurial occupation.

Let us start assuming that individuals are endowed with two inborn *talents* , x_1^0 and x_2^0, and ignore skill accumulation; the overall level of ability is $X^0 = x_1^0 + x_2^0$. Next, define an indicator E_i taking value one if individual i is EN and value zero if she is WS. Finally, consider two individuals, i and j, characterized by the same X^0; I define the innate JAT Attitude (and characterize the relation between the individuals) as follows:

Definition 1 *For any X^0, the innate JAT Attitude is defined by $J^0 = -\left|x_1^0 - x_2^0\right|$; $\left|x_1^0 - x_2^0\right|^i < \left|x_1^0 - x_2^0\right|^j$ and $X_i^0 = X_j^0 \Longrightarrow J_i^0 > J_j^0$.*

Stated in words, the JAT Attitude is an *entrepreneurial ability* defined as an evenly spread talent across different fields; the higher the JAT Attitude, the wider the set of tasks individuals

can easily master. For equal levels of overall ability, if the talent distribution of individual i is more balanced than that of individual j, then i is more *Jack-of-All-Trades* than j.

Following Lazear (2003), WS earn:

$$Y^{ws} = \max(x_1^0, x_2^0) \tag{1}$$

Since ENs must be good at doing many things, the JAT hypothesis can be captured writing entrepreneurial revenues as:

$$Y^{EN} = \theta \min(x_1^0, x_2^0) \tag{2}$$

where θ can be interpreted as the market value of the entrepreneurial function.[1]

Who becomes EN? Individuals choose to be EN if and only if $\theta \min(x_1^0, x_2^0) > \max(x_1^0, x_2^0)$, which can be restated as:

$$\begin{cases} x_2^0 > x_1^0/\theta & \text{if } x_1^0 > x_2^0 \\ x_2^0 < \theta x_1^0 & \text{if } x_1^0 < x_2^0 \end{cases} \tag{3}$$

Assuming that $g(x_1^0, x_2^0)$ is the joint talent distribution on R_+^2, the probability of becoming an EN, for a given θ, is :

$$\int_0^\infty \int_{x_1^0/\theta}^{\theta x_1^0} g(x_1^0, x_2^0) dx_2^0 dx_1^0 \tag{4}$$

which is increasing in the market value of entrepreneurship, θ. If $\theta = 1$, nobody is willing to become an EN, while for $\theta \to \infty$, all individuals choose to be EN; θ is uniquely determined at the equilibrium such that a sufficient number of workers choose to be EN.

The following implication can be derived:

[1] Following Lazear (2003), risk is ignored. Similarly, credit constraints, discussed in Blanchflower and Oswald (1991), Evans and Jovanovic (1989), Holtz-Eakin, Joulfaian and Rosen (1994), are neglected here. Notice, however, that Dunn and Holtz-Eakin (2000) provide evidence suggesting that individuals' credit constraints exert a modest impact on the transition to entrepreneurial occupations.

Proposition 1 *For any* X^0, $J_i^0 > J_j^0 \Longrightarrow \Pr(E_i = 1|X^0) > \Pr(E_j = 1|X^0)$.

That is, ENs are *Jacks-of-All-Trades*: controlling for the overall level of ability, a more balanced set of talents increases the probability of becoming EN.

2.2 Skill Investment

So far the distribution of talents has been taken as given. This is however an untenable assumption as most individuals invest in skill acquisition before entering the labor market.

Following Lazear (2004), the basic JAT set-up is next extended to study the simultaneous process of human capital accumulation and working decisions; this allows me to highlight the effects that different levels of J^0 exert on individuals' educational and occupational choices. Indeed, the crucial question is: given the overall level of ability and the innate JAT Attitude, who has incentives to acquire a balanced set of skills and become EN?

Let us start assuming that the cost function of skill production is:

$$\begin{gathered} C(x_1, x_2; x_1^0, x_2^0), \\ C_1, C_2 > 0 \quad \text{and} \quad C_{ii} > 0 \end{gathered} \tag{5}$$

where C_1 and C_2 indicate partial derivatives w.r.t. x_1 and x_2, while C_{ii} refers to second order derivatives. It is assumed that x_1^0 and x_2^0 do not exert any effect on the shape of the curve: higher endowments only reduce the overall cost of skill production. Moreover, it is assumed that $C_1|_{x_1=x_1^0} < 1$ and $C_2|_{x_2=x_2^0} < 1$, so that individuals have incentives to invest in skill acquisition.[2] Finally, let us denote by x_1 and x_2 the levels of skills emerging from individuals' human capital investment plans and assume that individuals under discussion are initially endowed with more x_1^0 than x_2^0.[3]

An individual who is going to work as a dependent worker will only invest in the talent she is more endowed with. In fact, this is the skill upon which earnings in WS occupation depend;

[2] Lazear (2003) and (2004) deal with other possible cases; the intutions discussed in this Section are fully confirmed.
[3] All the argument follows with an inverted logic if $x_2^0 > x_1^0$.

there is instead no value to augmenting a skill that will not be used (x_2). Essentially, would-be employees have incentives to achieve a specialized skill distribution and consistently accumulate human capital in one field only.

ENs, instead, face a more involved problem. The constraint to their profits is the talent in which they are weak, x_2: there exist no incentives to invest in x_1 unless x_2 is brought up at least to the level of x_1. Human capital investment therefore initially concentrates on x_2 and leads to a more balanced skill distribution. As soon as x_2 is taken up to the level of x_1, the latter becomes the new constraint to entrepreneurial profits; potential ENs would then benefit from investing in x_1 as well, but the optimum must have $x_1 = x_2$. As long as the returns to the accumulation of expertise in both fields are higher than the costs, would-be ENs invest in human capital by simultaneously increasing their knowledge in both fields. In a nutshell, while would-be employees have incentives to specialize, ENs pursue a balanced human capital investment strategy. The following Proposition summarizes this intuition:

Proposition 2 *Individuals who become entrepreneurs have balanced human capital investment strategies and achieve evenly spread skill distributions.*

But who has incentives to do so? Notice that individuals can choose whether to be ENs or WS and how to invest in human capital when entering each sector; they base their decisions on the expected revenues in the occupations. The optimal investment plan that maximizes revenues in the entrepreneurial sector would lead all individuals to achieve the same skill distribution; in fact, for all individuals, any additional unit of skill-balancing (or specialization) has the same marginal revenue. Nevertheless, the cost of achieving an evenly spread distribution of skills is inversely related to the innate JAT Attitude: the higher J^0, the wider the set of tasks individuals can easily master, the lower the effort they have to exert to train their knowledge across different fields. Therefore, only individuals with sufficiently high J^0 find it profitable to invest in a balanced set of skills and become ENs. This second intuition is summarized in the following Proposition:

Proposition 3 *Individuals characterized by a highly balanced set of innate talents have incentives to acquire an evenly spread skill distribution.*

In fact, the extended JAT set-up is not different from a standard schooling decision problem; here, however, individuals' investments concentrate on skill spread, rather than levels. Similarly, individuals' unobservable ability is replaced by the innate JAT Attitude (J^0). The two Propositions together have therefore an appealing intuition: more *able* individuals (high J^0) have incentives to train their knowledge across various fields, acquire a balanced set of skills and become ENs.

Notice finally that (especially from an empirical point of view) both the innate JAT Attitude and the acquired breadth of expertise across different fields can exert distinct and positive effects on the probability of being EN. Once more, this is not different from what usually assumed when studying the effects of educational achievements on occupational choices: unobserved ability can affect the outcome both directly and indirectly, *via* educational achievements.

The next Sections exploit Italian workers' information to test for the relevance of a JAT Attitude on occupational choices.

3 Data

The empirical investigation in this paper is based on two datasets containing information about Italian workers.

First, a dataset of Bocconi University students who graduated in 1985, 1989, 1993 and 1997 is used. Graduates were interviewed in 2001 and asked to report information about their working experiences and familial characteristics. As for labor experiences, they were asked to answer questions relating to the period just after graduation, first job characteristics and current job situation. As for familial background, individuals were asked to describe their current and past family situation and answer questions about parental background. Individual data were then merged to Bocconi Administrative Data to collect detailed information about university and high school curricula. A job history panel was then obtained, where each individual has one row of data for each job she

held.[4]

Although information contained in this database is well designed to test for the JAT hypothesis, the relevance of the results may be reduced by the peculiar kind of sampled individuals. To overcome this problem, the JAT hypothesis is also confronted to information contained in ILFI Survey (Longitudinal Survey of Italian Families). While former Bocconi student may not be representative of a broad labor force, ILFI Survey provides a meaningful picture of the whole Italian working population. In fact, this dataset was collected by a consortium of Italian Universities (ILFI (1997)) to provide an exhaustive description of labour market transitions and educational attainments of Italian households through the analysis of individual and family life-histories. Indeed, a representative sample of Italian households was interviewed about social and demographic features of their members; in addition, the whole life-history of each member of each family was reconstructed in relation to education, training, work career and family characteristics. The dataset is organized as a job history panel so that sampled people have one row of data for each experienced occupational spell.[5]

Being an EN is at the heart of this empirical investigation. Both in the case of Bocconi and ILFI data, I rely on self reported occupational information to determine entrepreneurial activities. For Bocconi data, ENs are defined as non-dependent workers in one of the following categories: advisor, entrepreneur, craftsman or managing partner of a society. Similarly, in ILFI Survey, ENs are defined as individuals working either as self-employed, with or without employees, or as managing partners of cooperative firms.

Given the scope of the analysis, it is crucial to distinguish *true* entrepreneurs from self-employed who choose low-quality entrepreneurial occupations pushed by poor labor market alternatives. This problem is certainly not binding for Bocconi Graduates, which suffer from negligible unemployment and out-of-labor force experiences. Yet, it may be relevant for individuals sampled by ILFI. To

[4] I retain only employment spells. In the case of Bocconi Graduates, however, the incidence of unemployment and out-of-labor force spells is negligible.

[5] Only employment spells are retained. Although this may introduce a selection bias, it seems to be a marginal issue as only heads of households are sampled.

overcome this problem, the analysis based on ILFI includes an extensive set of labor market controls; moreover, alternative, more stringent, definitions of EN have been used to check the robustness of the findings. The problem of *false* entrepreneurs is thus empirically controlled for.

The main focus of this analysis is on the influence that knowledge in a variety of fields, proxying for the JAT Attitude, exerts on the probability of becoming an EN. Following Lazear (2003), the next three variables are meant to capture the breadth of experience of sampled individuals:

- *Specdiff*: Dispersion of academic curriculum measured by the difference between the maximum number of exams taken in one field and the average number of exams across fields (available for Bocconi Graduates).

- *Grdiff*: Dispersion of academic curriculum measured by the difference between number of exams taken in the highest average grade point field and the lowest one (available for Bocconi Graduates).

- *Tot.N.Roles*: Total number of roles held by the individual before the considered job spell; notice that this is different from the total number of jobs (available for ILFI Survey).

To obtain the first two indicators, Bocconi Administrative information about academic department, research centres and research strands (within research centres) have been used to assign exams taken by former Bocconi students to clearly defined fields; this allows me to create sufficient variation among subjects taught in different areas. Importantly, although the structure of academic programs offered to students is quite uniform during the first two years, students have wide possibilities to create their personal academic curricula in the remaining two years.

The total number of roles, instead, is derived from information about specific roles held by individuals in each occupation, collected in IFLI Survey; roles covered by individuals can change within the same occupation or remain the same across occupation. As long as there is sufficient variation in the skill requirements across different roles, the total number of roles provides a good

proxy for the breadth of expertise an individual has cumulated before the considered job spell.[6]

Additional controls will be included in the regressions discussed later on. Among the others, information has been collected about individuals' familial status and their family background.[7]

Descriptive statistics for the variables obtained using Bocconi data are reported in Table 1. About 4600 employment spells have been sampled; entrepreneurial occupations represent around 8.5% of all observations. Notice that the interviewed individuals represent a young cohort of workers; moreover, EN's fathers are more often involved in entrepreneurial occupations than for WS. As for the JAT indicators, moving from large to small figures increases the balancing of skills across different fields. *Specdiff* reveals that ENs have on average more balanced curricula than WS; the opposite however is true for *Grdiff*.

Descriptive statistics for the variables obtained using ILFI Survey are presented in Tables 4. The sampled workers are all heads of household aged between 18 and 60; additionally, the following restrictions need to be satisfied for individuals to be sampled: *i*- they must have finished full time education; *ii*- they must have been born later than 1936.[8] The dataset counts about 5200 job spells with entrepreneurial occupations representing 20% of the total. Only individuals' information from the second job spell onwards is presented. Indeed, the average job tenure cannot be properly defined at the first job spell; as I want to control for the average job tenure in the regression framework, this is the relevant sample under analysis.[9] As found by previous research in the field, ENs tend to be older and more frequently married. Descriptive statistics for the JAT proxy are also reported. For both WS and ENs the total number of roles vary between 1 and 8; yet, ENs displays higher mean values than WS, conveying the idea that they tend to be experienced in a wider variety of fields.

[6] Notice that the validity of the three proposed proxies partly rests on a high degree of transferability of skills across different jobs; in fact, this seems to be empirically plausible for both the considered datasets.

[7] No information about individuals' financial assets is available in the two datasets. Yet, Dunn and Holtz-Eakin (2000) suggest that individuals' financial assets exert a modest effect on the transition to entrepreneurial occupations. Moreover, they show that the capital of parents exerts a large influence, not through financial means, but rather through human capital. To control for this possibility we include in our analysis a wide set of controls for familial background.

[8] This reduces recall bias problems.

[9] Results run over the entire sample, treating the first tenure spell as zero, did not prove to be different.

To sum up, descriptive statistics suggest that the JAT Attitude may be a relevant determinant of the entrepreneurial choice of Italian workers. The next Sections assess the validity of this intuition using a multivariate regression framework.

4 Regression Results

4.1 Econometric Framework

The empirical strategy followed in this Section builds on Lazear (2003): a dummy variable indicating whether an individual is EN is modeled as a function of some underlying utility measures; in turn, the utility is proxied by individual's characteristics and the dependent variable regressed on a set of personal indicators.

Define an indicator E_{it} taking value one if individual i is EN at time t (zero if she is WS). Also, define by B_{it}^A the acquired breadth of expertise across different fields, for individual i at time t, as measured by the proxies discussed above; finally, denote by J_i^0 individual i's innate JAT Attitude. Abstracting from other controls, the intuitions discussed in Section 2 can be represented as:[10]

$$\begin{cases} E_{it} = \beta_1 + \beta_2 B_{it}^A + \beta_3 J_i^0 + \omega_{it} \\ \quad \text{with } B_{it}^A = \alpha_1 + \alpha_2 J_i^0 + \varepsilon_{it} \\ \quad\quad \text{and } \alpha_2, \beta_2 \text{ and } \beta_3 \ > 0 \end{cases} \tag{6}$$

where ε_{it} and ω_{it} are idiosyncratic distrurbances with $E(\varepsilon_{it}|J_i^0) = 0$ and $E(\omega_{it}|B_{it}^A) = 0$; the signs of the coefficients in (6) are those suggested in Section 2 and can be summarized as follows: a higher innate JAT Attitude (J_i^0) favors skill balancing ($\alpha_2 > 0$); both the innate JAT Attitude and the acquired level of skill-balancing exert positive effects on the probability of being EN (β_2, $\beta_3 > 0$).

In empirical applications, only B_{it}^A and E_{it} can be measured; the innate JAT Attitude (J_i^0),

[10] A linear specification is assumed for the discussion of the analytical results. A linear probability specification yeld consistent estimates of the parameters in the model. Moreover, it has the great advantage of providing a neeter intution of the analytical results. Although the algebra is more convoluted, the main conclusions derived in this Section apply to the non linear case as well.

instead, cannot be observed. It is, therefore, part of the regression error term if unobservables are not controlled for.

Ignoring individuals' unmeasured characteristics coincides with fitting the following model:

$$E_{it} = \beta_1 + \beta_2 B_{it}^A + \phi_{it} \tag{7}$$

with $\phi_{it} = \beta_3 J_i^0 + \varepsilon_{it}$. The expected value of (7) conditional on B_{it}^A is:

$$E(E_{it}|B_{it}^A) = \beta_1 + \beta_2 B_{it}^A + \beta_3 E(J_i^0|B_{it}^A) \tag{8}$$

Now, consider that:

$$B_{it}^A = \alpha_1 + \alpha_2 J_i^0 + \varepsilon_{it} \implies J_i^0 = \lambda_1 + \lambda_2 B_{it}^A + \varphi_{it} \tag{9}$$

with $\lambda_1 = -\frac{\alpha_1}{\alpha_2}$ and $\lambda_2 = \frac{1}{\alpha_2}$. Whenever $\lambda_2 \neq 0$, individuals self-select into educational tracks and $E(J_i^0|B_{it}^A) = \lambda_1 + \lambda_2 B_{it}^A \neq 0$; cross-sectional techniques applied to (7) will give:

$$\widehat{E}_{it} = b_1 + b_2 B_{it}^A \tag{10}$$

where $\widehat{E}_{it}$ represents fitted values of E_{it} and b_1 and b_2 are *biased* estimates of $\beta_1$and β_2.

In particular, the bias of b_2 is:

$$E(b_2) - \beta_2 = \lambda_2 \beta_3 \tag{11}$$

Given the focus of this research, the crucial parameter to be identified and estimated is precisely β_2, as it measures the effect of acquiring a balanced skill distribution (higher B_{it}^A) on the chances of becoming an EN. Yet, the JAT theory predicts both β_3 and λ_2 to be positive: even when the true impact of B_{it}^A on the probability of being EN is zero ($\beta_2 = 0$), its cross-sectional estimate can be positive as a result of the bias induced by self-selection ($\lambda_2 \beta_3 > 0$).

As long as J_i^0 is a time-invariant individual attribute, the longitudinal dimension of the two

databases can be used to control for unobservables and identify the (*causal*) impact of mastering a wider set of skills on the probability of being EN (β_2). Only if, after controlling for unmeasured individuals' attributes, the estimated β_2 is found to be positive and significant, B_{it}^A can be said to have a positive impact on the probability of being EN; the JAT Attitude can then be considered a skill that can be acquired to gain access to the entrepreneurial function.

4.2 Bocconi University Graduates

Table 2 reports the first set of results obtained using Bocconi data and fitting *cross-sectional* models that only control for individuals' observables; results obtained using linear, logit and probit models are reported for two different specifications. Columns 1, 2 and 3 replicate Lazear's results by only including individual's age, gender, number of entrepreneurship classes taken at university and dummies for years of graduation. Columns 4, 5 and 6, instead, assess the robustness of the results by adding an extensive set of controls. Regressions are augmented with dummies for number of children and marital status at the time of the considered job spell. Also, some time-invariant regressors are included: the final high school and B.A. graduation marks, the grades at statistics and mathematics and dummies controlling for the field of specialization are appended to proxy for individuals' overall ability and control for the fact that some courses are more specifically designed for given occupations. Finally, a dummy taking value one if individuals' fathers were involved in an entrepreneurial activity at the time of graduation and a counter for the total number of previously held jobs are included in the regressions.

In all the Columns of Table 2 *Specdiff* enters with a negative and significant coefficient: a more balanced curriculum, as implied by lower values of *Specdiff*, significantly increases the probability of becoming an EN. For the average individual in Column 1, moving from the least to the most balanced academic curriculum, would increase the probability of becoming EN by about 7.5 p.p.; given the sample frequency of EN, this would imply an increase in the probability of being an EN of about 90%.[11]

[11] Notice that categories such as such as professionals and self-employed managing familial firms have been excluded

Partly at odds with the JAT theory, *Grdiff* enters the first three Columns of Table 2 with a positive coefficient. This is however a non robust feature of the data as this proxy turns insignificant when more controls are added.

Results from the augmented regressions confirm previous findings. The coefficient on *Specdiff* is still significant and larger than before. Moving from the least to the most balanced academic curriculum would now imply more than doubling the probability of being EN. Importantly, the JAT proxy remains significant despite the variable *Entrep.Father* entering all regressions with a significant coefficients: having an EN father increases the probability of becoming EN by about 5 p.p.. Irrespective of the relevance of the intergenerational transmission of the entrepreneurial function, the JAT Attitude is found to be an important correlate of the entrepreneurial choice.

Results discussed so far suggest that the JAT Attitude is an important correlate of the entrepreneurial choice. Yet, no causal interpretation has been given to the coefficient attached to the proxies for the breath of expertise as cross-sectional estimates may be distorted by individuals' unobservables. The longitudinal dimension of the dataset is here exploited to test for the relevance of unobserved heterogeneity and identify the impact that a balanced set of mastered skills exerts on the probability of being EN.

Panel data regression results are reported in Table 3. The estimated specification is reduced to only include the following variables: individuals' age, gender and familial status; the JAT proxies, the number of entrepreneurship classes taken at university and the final graduation mark; the number of previously held jobs and the dummy for fathers' entrepreneurial activity. The first Column reports cross-sectional estimates for the reduced specification showing that the operated changes do not alter previous findings. Yet, this compact specification is better designed to model the longitudinal dimension of the data.

First, a Breush-Pagan test is performed to assess for the relevance of unobservables in the

from the definition of the dependent variable. The robustness of all the results has been tested by progressively including omitted categories in the definition of EN. The results presented here are the most conservative about the validity of the JAT hypothesis.

estimated equation; the test strongly rejects the null of no unobserved heterogeneity. The parameter β_3 of system (6) is therefore statistically different from zero.

Next, a Hausman test for a random effect estimation of the proposed specification is carried out; random effects estimates reproduce very closely previous findings.[12] Yet, the Hausman statistics strongly rejects the null that random effect estimates are consistent; this rules out the assumption of no correlation between observables and individuals' unmeasured characteristics. The coefficient α_2 in system (6) cannot be assumed to be zero and a fixed effect specification must be adopted.[13]

As both available JAT proxies are time-invariant individuals' attributes, standard fixed effect techniques cannot be used as they would partial out the variables of interest. To overcome this problem, Amemyia and MaCurdy (1986) procedure is adopted; the idea behind their strategy is based on a refinement of the original Hausman and Taylor (1981) approach.[14] Regressors are ideally split: in time-fixed *vs* time varying regressors; and endogenous *vs* exogenous regressors. An endogenous regressors is defined as a variable whose correlation with the unobservable fixed effects cannot be assumed to be zero; on the other hand, exogenous variables are assumed to be uncorrelated with the error term. The intuitive condition for identification in Haumsan and Taylor (1981) states that the number of time-varying exogenous regressors should be greater than the number time-fixed endogenous variables; the mean (and deviations from mean) of the exogenous regressors can then be used to instrument the endogenous ones.

To obtain an estimate of the impact of *Specdiff* on the probability of being EN, I consider the following regressors as uncorrelated with individuals' unobserved effects: age, gender, marital status, number of children and number of entrepreneurship classes taken at university. A Hausman test for the validity of the instruments was performed: the test strongly speaks in favor of the

[12] Notice also a reduction in the sample size; this is due to the fact that some individuals do not change job over their life. Previous results are fully confirmed if we confine our attention to individuals changing job over the considered time spell.

[13] Unfortnatuely, neither the sign of λ_2 nor that of β_3 can be determined without making additional assumptions on the structure of the econometric model.

[14] Only linear model estimation results are presented. In fact, Amemyia and McCurdy (1986) procedure cannot be easily extended to non linear models.

instrument choice (p-value .99).[15]

Estimation results (Column 4) reveal that, although the coefficient attached to *Specdiff* is larger than before, it is now completely statistically insignificant. This suggests that, when the effects of unobservables are purged out of the estimates, the acquired spread of knowledge across different fields does not have any significant impact on the probability of being EN.

Notice also the negative and insignificant coefficient attached to the dummy for fathers' entrepreneurial activities: compared to cross-sectional results, this suggests that all the variable is capturing is some unmeasured transfer of capital occurring across generations. This may take the form of physical capital (plants or credit availability) as well as human capital (firm specific skills or entrepreneurial networks).[16]

To conclude, the analysis conducted using Bocconi data suggests that, despite positive cross-sectional findings, acquiring a balanced set of skills does not have a positive and significant impact on individuals' chances of becoming EN. Using Bocconi student data, yet, it may be difficult to draw inferences for more heterogeneous populations. To overcome this problem, the JAT hypothesis is next confronted to information contained in ILFI Survey.

4.3 ILFI Survey

Table 5 presents *cross-sectional* regression results obtained using information contained in ILFI Survey. Columns 1, 2 and 3 replicates Lazear's results by modelling the entrepreneurial choice as a function of educational dummies, age, gender, average job tenure, Italian nationality and the number of previously held roles (proxy for the JAT Attitude). Respectively, they report OLS, logit and probit estimates.

The positive and significant coefficients on the variable counting the number of previously held roles confirm the results obtained using Bocconi data: the JAT Attitude has a remarkable

[15] The test is based on a comparison between fixed effect and Amemyia-MaCurdy coefficients; given the reduced number of commonly estimated parameters, the power of the test is limited. Other specifications were tried; neither testing nor estimation results proved to be different.

[16] This evidence is well in line with what discussed in Dunn and Holtz-Eakin (2000).

explanatory power for the probability of being EN. In all regressions, the proposed JAT proxy enters with a sizable coefficient. Its marginal effect on the probability of being an EN is around 2.5 p.p.; similarly, OLS regressions imply that one additional role held in the past increases the probability of becoming an EN by 2.7 p.p.. This compares with an average probability of being an EN of about 20% implying that an additional held role increases the probability of being EN by 15%.

Following Lazear (2003), the average job tenure is included as a control. Holding the number of roles constant, moving from firm to firm decreases the probability of being EN. This is at odds with a risk preference interpretation of the entrepreneurial choice; yet, as suggested by Lazear (2003), it may also be that the average tenure is capturing some ability to focus on projects, which increases the probability of becoming EN.

Columns 4, 5 and 6 scrutinize the robustness of these findings by including a series of additional controls. First, a battery of dummies is included to clean out regional and sectoral differences, as well as the effects of fathers' educational attainments. Some family background information is also included; first, a dummy taking value one for married individuals is included along with the number of children still living in the house. Next, I control for the number of siblings living with the individual when she was fourteen and for whether she is still living with her original family at the time of the reported employment spell. Both these variables should capture the possibility that transfers within the family occur altering the probability of being EN. Finally, a variable for previous unemployment spells and a dummy taking value one if individual's father was an EN when she was fourteen are included.

Results from this set of regressions confirms previous findings. The effect of the JAT proxy is positive and significant with a marginal effect of about 2 p.p.; similarly, OLS coefficient is as large as 2.5 p.p.. Importantly, the coefficient on the dummy for fathers' entrepreneurial activity is large, positive and significant: its marginal effect is as sizable as 5-6 p.p.. Despite the relevance of the intergenerational persistence in occupations, the JAT Attitude is found to be an important

correlate of the entrepreneurial choice.[17]

Finally, notice that, in all regressions, previous unemployment experiences exert a negative, non-significant effect on the probability of becoming EN; this helps excluding the possibility that the observed entrepreneurial spells are last resort occupational choices, motivated by individuals' poor labor market opportunities.

As discussed above, cross-sectional results can only suggest that the JAT Attitude is an important correlate of entrepreneurship; yet, these estimates cannot help discriminating whether the JAT Attitude is an innate ability or a skill that can be acquired by training knowledge across different fields. As long as the innate JAT Attitude can be treated as a fixed unobservable characteristic, the longitudinal dimension of the dataset can be exploited to control for unobservables and obtain a consistent estimate of the parameter of interest (β_2).

Panel regressions results are presented in Table 6. Columns 1 and 3 present results for linear panel fixed effect estimation while Column 2 and 4 report results from Chamberlain's (1984) conditional logit model.[18] Before commenting on the findings, two remarks are worth been made.[19]

First, a Breush-Pagan test was performed on the linear specifications to test for the significance of unobservables. In both cases, the null of no unobserved heterogeneity was strongly rejected. The parameter β_3 cannot therefore be assumed to zero.

Next, a Hausman test was performed on the linear regressions. For both specifications, the test strongly rejects the consistency of random effect estimators: the correlation between unobservables and regressors is thus far from being null and α_2 in (6) cannot be considered statistically zero.[20]

[17] In all the analysis conducted so far, self-employed workers of family firms were excluded from the definition of EN. The robustness of the presented results was assessed by including in the definition of the dependent variable the omitted category; no changes in either the magnitude or the significance of the coefficients of interest could be detected.

[18] Linear fixed effect and conditional logit models are natural panel counterparts of linear and logit cross-sectional models, when a random effect specification cannot be assumed. No such a counterpart exists for probit specification, as probit fixed effect models are plagued by the incidental parameter problem.

[19] The reduction in the sample size is due to the fact that some individuals do not change job over their life. The sample is further reduced when performing a conditional logit, as this requires individuals to change their occupational status. Previous results are fully confirmed if we confine our attention to individuals changing job over the considered time spell.

[20] In principle, the sign of α_2 cannot be determined without additional assumptions on the econometric model. Nevertheless, a regression of the total number of roles on the estimated individual fixed effects displayed a strong,

If the sign predictions developed in Section 2 are correct, cross-sectional estimates obtained before can be expected to be positively biased.

The four Columns of Table 6 confirm this intuition. Once unobservables are purged out of the regressions, it is found that mastering a wider set of skills does not increase the probability of being an EN. Indeed, in Columns 1 and 3, the coefficient attached to the JAT proxy is negative, although insignificant. More surprisingly, the effect of having covered a larger number of roles becomes significant and negative when Chamberlain's methodology is used.

The negative result strikingly clashes with previous findings, where the impact of the JAT Attitude was as high as 2.5 p.p.. This suggests that self-selection may be completely driving cross-sectional results with no real effects of B_{it}^{A} on the probability of being an EN.

To conclude, the JAT Attitude, as proxied by the total number of previously held roles, is an important correlate of the entrepreneurial choice. However, the JAT should only be considered as an innate and time-invariant entrepreneurial ability, driving educational and occupational choices. The causal impact of acquiring a wide set of skills on the probability of being EN is found to be either non significant or negative. There is thus little scope in trying to develop a JAT Attitude to increase the chances of accessing the entrepreneurial function: individuals lacking of a JAT Attitude cannot be trained to become JATs.

5 Conclusions

Despite the crucial role played by ENs in modern economic societies, the study of entrepreneurship suffers from the lack of consensus on the most crucial question: what makes an EN? A recent theory developed by Lazear (2003) suggests that individuals mastering a balanced set of talents across different fields, the *Jacks-of-All-Trades* (JATs), have a high probability of becoming ENs.

In this paper, Lazear's original set-up has been revised to investigate whether the JAT Attitude is just an innate and time-invariant entrepreneurial ability or a skill that can be acquired to gain

positive and significant coefficient. This is suggestive of α_2 being positive: a high innate JAT Attitude calls for further skill balancing.

access to the entrepreneurial function.

First, the theoretical framework has been reconsidered to account for individuals' unobservables and investment in human capital. Following Lazear (2004), it has been shown that the higher the *innate* JAT Attitude, the stronger the rationale to further balance the ability-mix and become EN.

This is important as it implies that cross-sectional estimates of the impact of knowledge in a variety of fields on the chances of becoming EN may be confounded by unobservable characteristics; they are therefore potentially uninformative when trying to identify the causal effect of acquiring a wide set of skills on the entrepreneurial choice.

Information contained in two Italian longitudinal datasets has then been exploited to explore whether the JAT Attitude is an expertise that can be developed.

Cross-sectional results show that the proposed JAT proxies, measuring individuals' breadth of experience across different fields, are positively correlated with the entrepreneurial choice.

Yet, a different picture emerges when panel data techniques are used to control for individuals' unobserved attributes. The estimated impact of knowledge in a variety of fields on the probability of being EN is found to be either non significant or negative. This suggests that the JAT Attitude is an innate and time-invariant individual ability, rather than a skill that can be acquired. Individuals lacking of a JAT Attitude cannot be trained to become JATs.

6 Description of the Variables

6.1 Bocconi University Graduates

The following variables have been constructed for the Bocconi University Graduate Dataset:

- *Entrepreneur*: dummy=1 if, in a given job spell, an individual reports to be non-dependent worker in one of the following categories: advisor, entrepreneur, craftsman or a managing partner of a society.
- *Age*: individual's age at a given employment spell.
- *Female*: dummy=1 if the individual is female.
- *Married*: dummy=1 if the individual is married at a given employment spell.
- *N.Children*: total number of children at a given employment spell; the following dummies have been generated: No children, One child, Two children, Three or more children.
- *High Sch.Grade*: High School graduation mark.
- *B.A.Grade*: B.A. graduation mark.
- *Maths Grade*: average grade at mathematics exams taken at university.
- *Stats Grade*: average grade at statistics exams taken at university.
- *Grdiff*: JAT Attitude proxy; see body text.
- *Specdiff*: JAT Attitude proxy; see body text.
- *N. Entrep.Classes*: number of entrepreneurial classes attended at university.
- *Entrep.Father*: father declared to be an entrepreneur (same definition as for *Entrepreneur*) when individual graduated.
- *Total N.Jobs*: number of previously held jobs.

6.2 ILFI Survey

The following variables have been constructed for the ILFI Survey:

- *Entrepreneur*: dummy=1 if, in a given job spell, the individual reports to be self employed with or without partners or to work as a managing partner of a cooperative society.
- *Age*: individual's age at a given employment spell.
- *Female*: dummy=1 if the individual is female.
- *Married*: dummy=1 if the individual is married at a given employment spell.
- *N.Children*: total number of children at a given employment spell.
- *Italian*: dummy=1 if the individual is Italian.
- *Out Orig.Family*: dummy=1 if the individual is not living with his/her original family.
- *Entrep.Father*: dummy= 1 if father declared to be an entrepreneur (same definition as for *Entrepreneur*) when individual was fourteen.
- *High Edu.Level*: highest educational level obtained. The following dummies have been generated: No schooling degree, Primary School, Secondary school, High school, University, Post-graduate degree.
- *N.Siblings*: number of siblings living at home when the individual was 14 year-old.
- *N.Years Unempl.*: total number of years of unemployment at a given employment spell.
- *Av.Job Tenure*: average job tenure.
- *Tot.N.Roles*: JAT Attitude proxy; see body text.

Table 1: Bocconi University Graduates, Descriptive Statistics

	Variable	N	Mean	St.-Dev.	Min	Max
Worker	*Age*	4164	28.7	4.21	22	45
	Female	4256	0.34	0.47	0	1
	Married	4256	0.26	0.44	0	1
	High Sch.Grade	4239	51.8	6.93	36	60
	B.A. Grade	4256	102.6	6.91	80	112
	Maths Grade	4251	22.8	3.76	18	31
	Stats Grade	4247	23.6	3.97	18	31
	Grdiff	4256	6.85	2.36	1.12	13
	Specdiff	4256	4.74	1.57	1.18	10.5
	N. Entrep.Classes	4256	1.97	0.75	0	6
	Entrep.Father	4256	0.19	0.39	0	1
	Total N.Jobs	4168	0.88	1.19	0	10
Entrepreneur	*Age*	384	28.9	4.69	23	48
	Female	394	0.30	0.46	0	1
	Married	394	0.25	0.43	0	1
	High Sch.Grade	394	50.5	7.34	36	60
	B.A. Grade	394	100.7	7.60	81	112
	Maths Grade	394	22.2	3.75	18	31
	Stats Grade	394	23.1	3.96	18	30
	Grdiff	394	7.31	2.33	1.44	13
	Specdiff	394	4.51	1.40	1.27	10.5
	N. Entrep.Classes	394	1.20	0.75	0	6
	Entrep.Father	394	0.28	0.45	0	1
	Total N.Jobs	387	0.76	1.23	0	10

Table 2: Entrepreneurial Choice: Cross-sectional Estimates

Model 1: Baseline Lazear Model, Linear
Model 2: Baseline Lazear Model, Logit
Model 3: Baseline Lazear Model, Probit
Model 4: Baseline Lazear Model + Ability & Family Controls, Linear
Model 5: Baseline Lazear Model + Ability & Family Controls, Logit
Model 6: Baseline Lazear Model + Ability & Family Controls, Probit

Model:	1-Linear	2-Logit	3-Probit	4-Linear	5-Logit	6-Probit
N.of obs:	4461	4461	4461	4436	4406	4406
Age	0.000	0.003	0.001	0.001	0.015	0.007
	(0.001)	(0.014)	(0.007)	(0.001)	(0.017)	(0.009)
		[.000]	*[.000]*		*[.001]*	*[.001]*
Female	-0.010	-0.135	-0.066	-0.005	-0.069	-0.031
	(0.009)	(0.117)	(0.058)	(0.009)	(0.122)	(0.060)
		[-.010]	*[-.010]*		*[-.005]*	*[-.004]*
Grdiff	0.006**	0.073**	0.039**	0.003	0.045	0.024
	(0.002)	(0.024)	(0.012)	(0.003)	(0.033)	(0.017)
		*[.006**]*	*[.006**]*		*[.003]*	*[.003]*
Specdiff	-0.008*	-0.106*	-0.054*	-0.009**	-0.123**	-0.065**
	(0.003)	(0.044)	(0.022)	(0.004)	(0.046)	(0.023)
		[-.008]*	*[-.008*]*		*[-.010**]*	*[-.010**]*
N.Entrep.Classes	-0.009	-0.121	-0.063	-0.008	-0.096	-0.048
	(0.007)	(0.100)	(0.048)	(0.010)	(0.139)	(0.066)
		[-.009]	*[-.010]*		*[-.007]*	*[-.007]*
Total N.Jobs				-0.010*	-0.140	-0.068*
				(0.005)	(0.072)	(0.034)
					[-.010]*	*[-.010**]*
Married				-0.001	-0.008	-0.015
				(0.014)	(0.197)	(0.099)
					[-.000]	*[-.002]*
Entrep.Father				0.048**	0.553**	0.278**
				(0.013)	(0.133)	(0.067)
					*[.047**]*	*[.047**]*
B.A.Year	Yes	Yes	Yes	Yes	Yes	Yes
Class Controls	No	No	No	Yes	Yes	Yes
N.Children	No	No	No	Yes	Yes	Yes
Various Grades	No	No	No	Yes	Yes	Yes

Note: Marginal FX for logit and probit in square brackets; S.E. in parentheses with p<0.05 = *, p<0.01 = **.

Table 3: Can the JAT be Trained? Panel Estimates

Model 1: Reduced Specification, OLS
Model 2: Reduced Specification, Random FX
Model 3: Reduced Specification, Fixed FX
Model 4: Reduced Specification, Amemyia-MaCurdy Panel IV*

Model:	1-OLS	2-Random FX	3- Fixed FX	4- Panel IV*
N.of Obs:	4461	4284	4284	4284
Age	0.001	0.002	0.005**	0.005**
	(0.001)	(0.001)	(0.002)	(0.001)
Female	-0.007	-0.006		0.014
	(0.009)	(0.010)		(0.026)
Married	-0.002	-0.009	-0.025	-0.022
	(0.014)	(0.014)	(0.017)	(0.014)
Specdiff	-0.008*	-0.009*		-0.162
	(0.003)	(0.004)		(0.108)
Grdiff	0.001	0.001		-0.037
	(0.002)	(0.002)		(0.041)
N.Entrep.Classes	-0.013	-0.014		0.185
	(0.007)	(0.008)		(0.132)
Total N.Jobs	-0.009*	-0.011**	-0.020**	-0.020**
	(0.005)	(0.004)	(0.005)	(0.004)
Entrp.Father	0.041**	0.043**		-0.097
	(0.012)	(0.012)		(0.248)
B.A.Grade	Yes	Yes	Yes	Yes
N.Children	Yes	Yes	Yes	Yes
Breush-Pagan Test for Unobservables:				
Stat.Value:	184.55	–	–	–
P-Value:	0.000	–	–	–
Hausman Test for FX Consistency				
Stat.Value:	–	17.97	–	0.39
P-Value:	–	0.006	–	0.99

Note: S.E.in parentheses with p<0,05 = *, p<0.01 = **.
*Exogenous Regressors: Age, Married, N.Children (Time Varying); N.Entrep.Classes, Female (Time Fixed).

Table 4: ILFI Survey, Descriptive Statistics

	Variable	N	Mean	St.-Dev.	Min	Max
Worker	*Age*	4188	28.9	8.05	18	60
	Out Orig.Family	4171	0.52	0.50	0	1
	N.Siblings	4188	2.28	2.01	0	16
	Married	4188	0.48	0.49	0	1
	N.Children	4188	0.64	0.94	0	7
	Female	4188	0.11	0.31	0	1
	Italian	4188	0.99	0.10	0	1
	N.Years Unempl.	4188	0.90	1.17	0	16
	Tot.N.Roles	4188	1.56	0.92	1	8
	Av.Job Tenure	4188	3.06	2.23	0	17
	Entrep.Father	4031	0.30	0.46	0	1
Entrepreneur	*Age*	985	31.64	8.49	18	60
	Out Orig.Family	980	0.58	0.49	0	1
	N.Siblings	985	2.27	1.96	0	16
	Married	985	0.63	0.48	0	1
	N.Children	985	0.86	1.02	0	5
	Female	985	0.07	0.25	0	1
	Italian	985	0.99	0.09	0	1
	N.Years Unempl.	985	0.32	1.13	0	15
	Tot.N.Roles	985	1.76	1.08	1	8
	Av.Job Tenure	985	3.92	2.56	0	17.5
	Entrep.Father	939	0.40	0.49	0	1

Table 5: Entrepreneurial Choice: Cross-sectional Estimates

Model 1: Baseline Model, Linear
Model 2: Baseline Model, Logit
Model 3: Baseline Model, Probit
Model 4: Baseline Model + Lab. Mkt & Family Controls, Linear
Model 5: Baseline Model + Lab. Mkt & Family Controls, Logit
Model 6: Baseline Model + Lab. Mkt & Family Controls, Probit

Model:	1-Linear	2-Logit	3-Probit	4-Linear	5-Logit	6-Probit
N.of Obs.	5169	5169	5169	4820	4817	4817
Tot.N.Roles	0.027**	0.164**	0.095**	0.025**	0.168**	0.096**
	(0.007)	(0.042)	(0.024)	(0.007)	(0.050)	(0.028)
		*[.024**]*	*[.025**]*		*[.020**]*	*[.022**]*
Av.Job.Tenure	0.022**	0.128**	0.075**	0.020**	0.133**	0.074**
	(0.004)	(0.022)	(0.012)	(0.004)	(0.026)	(0.015)
		*[.0189**]*	*[.020**]*		*[.016**]*	*[.017**]*
Age	0.002	0.010	0.006	0.001	0.010	0.007
	(0.001)	(0.007)	(0.004)	(0.001)	(0.009)	(0.005)
		[.001]	*[.001]*		*[.001]*	*[.001]*
Female	-0.060**	-0.467**	-0.263**	-0.067**	-0.536**	-0.277**
	(0.016)	(0.140)	(0.075)	(0.018)	(0.165)	(0.090)
		*[-.061**]*	*[-.063**]*		*[-.054**]*	*[-.056**]*
Italian	-0.024	-0.213	-0.125	-0.093	-0.675	-0.382
	(0.057)	(0.379)	0.215)	(0.074)	(0.441)	(0.262)
		[-.033]	*[-.035]*		*[-.099]*	*[-.105]*
N.Years Unempl.				0.000	-0.016	-0.005
				(0.005)	(0.044)	(0.023)
					[-.002]	*[-.001]*
Entrep.Father				0.059**	0.410**	0.229**
				(0.012)	(0.088)	(0.049)
					*[.051**]*	*[.055**]*
Educational Level	Yes	Yes	Yes	Yes	Yes	Yes
Family Controls	No	No	No	Yes	Yes	Yes
Region Dummies	No	No	No	Yes	Yes	Yes
Sector Dummies	No	No	No	Yes	Yes	Yes
Father's Education	No	No	No	Yes	Yes	Yes

Note: Marginal FX for logit and probit in square brackets; S.E. in parentheses with p<0.05 = *, p<0.01 = **.

Table 6: Can the JAT be Trained? Panel Estimates

Model 1: Baseline Model, Fixed FX
Model 2: Baseline Model, Conditional Logit
Model 3: Baseline Model + Lab. Mkt & Family Controls, Fixed FX
Model 4: Baseline Model + Lab. Mkt & Family Controls, Conditional Logit

Model:	1-Linear	2-C.Logit	3-Linear	4-C.Logit
N.of Obs.	4313	1639	4046	1523
Tot.N.Roles	-0.004	-0.229*	-0.009	-0.307*
	(0.011)	(0.103)	(0.012)	(0.126)
Av.Job Tenure	0.007	0.036	-0.003	-0.106
	(0.009)	(0.095)	(0.009)	(0.112)
Age	0.009**	0.104**	0.008**	0.112**
	(0.002)	(0.019)	(0.002)	(0.025)
N. Years Unempl.			-0.011	-0.204
			(0.012)	(0.125)
Family Controls	No	No	Yes	Yes
Region Dummies	No	No	Yes	Yes
Sector Dummies	No	No	Yes	Yes
Breush-Pagan Test for Unobservables:				
Stat.Value:	174.75	–	95.75	–
P-Value:	0.000	–	0.000	–
Hausman Test for Random FX Consistency				
Stat.Value:	25.13	–	70.64	–
P-Value:	0.000	–	0.000	–

Note: S.E.in parentheses with p<0.05 = *, p<0.01 = **.

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