



## THE ROLE OF HUMAN CAPITAL WITHIN THE UNIVERSITY ADMINISTRATION

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## ABSTRACT

*Administrative ability is important to structure, effectiveness. Yet, few studies check, however, human capital investments over a career have an effect on choice into administration. We tend to use panel knowledge for economists to estimate the choice of an administration over a pure tutorial track. The results show that, since research-specific human capital reduces to make a choice changing into an administrator, general human capital will increase it. There are inferior administrative opportunities for women that haven't improved over time and variation within the role of human capital per institutional analysis mission. Thus, our results suggest tutorial leaders don't seem to a just born, however cultivated through their human capital investments.*

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## 1. INTRODUCTION

Although directors in educational activity play a vital role within the success or failure of one of the nation's oldest, largest and important non-profit sectors, lecturers have traditionally perceived to go into administration as a backhanded promotion (Pfeffer and Davis-Blake, 1992; Baron, 2008). Specifically, since there has been recognition that flourishing directors are likely to have fascinating innate and learned leadership qualities (Garvan, 2012) there has usually been the suspicion that the administration is that the career path followed by lecturers who are comparatively less productive a minimum of within the analytical dimension (Ellis *et al.*, 2006). Nonetheless, earlier work that has studied the consequences of pay dispersion on turnover, job satisfaction and productivity for administrative places has not expressly examined the non-public or career attributes of directors (Nongmaithem and Kassa, 2016). This paper uses unambiguously elaborated knowledge of the careers of tutorial economists to look at whether the career development of lecturers who become directors differs consistently from their colleagues who stay within the strictly academic track. Our analysis provides a number of the primary formal proof that general versus research-specific human capital investments facilitate choice into administration that is generally in keeping with findings for managers in alternative occupations (Singell, 1991; Fakhraddin, 2012). The academy provides a very helpful institutional setting to check the choice of an administrative career path versus a well-defined strictly tutorial different career choice (Cameron, 1978). Specifically, Iran, universities often shares a long-standing, common internal hierarchical data structure and simply identifiable administrative places that build comparisons across

establishments simpler than in most public-sector or private sector industries (Fakhraddin, 2011). Moreover, in contrast to the non-public sector, the relative name of those establishments is extremely stable over time such comparisons over the course of a particular lecturer career, or between two lecturers at constant purpose in their careers, however, in several vintage cohorts, stay valid over a protracted span of your time. Tutorial professionals also do a comparatively homogenous set of job tasks (teaching, analysis and service), turn out without delay noticeable measures of output (published journal articles) and face promotion standards that are directly associated with discovering output (McDowell *et al.*, 2001; Fakhraddin, 2012). A focus on tutorial economists also yields particular benefits for a study of the executive career alternative. Economists will represent in higher levels of educational administration on their proportion of the academia (e.g., 2.6% of school presidents and 1.6% of provosts; Siegfried (1997) and have economic reasoning skills helpful in the administrative work (Ehrenberg, 1999; Jassawalla *et al.*, 2008; Ishrat, 2015). Though the market basket of skills possessed by economists might not build them fully representative of all directors who hail from several disciplines, the relatively high salaries of economists yield higher chance prices for each economist choosing into administration as compared to college from alternative disciplines, which is able to tend to create the choice less about pay and a more about the job-skill match. We develop a probit model of the choice between the administration and the pure tutorial track that's conditioned on an academic coaching, career background, and tutorial performance. The empirical analysis uses elaborated panel knowledge of the Iranian Economic Association (IEA) members to investigate whether personal and organizational characteristics prove the chance that an economic expert will discover as an administrator. Our findings show that research-specific human capital investments and gender tend to cut back the case of changing into an administrator, however, also show that some tutorial tasks offer general human capital that facilitates to make a choice administration. Many sensitivity tests that estimate the model by Carnegie analysis classifications show that the role of human capital within the economist's alternative of administration differs with the analysis orientation of the establishment (Kim, 2002; Fakhraddin, 2012). We tend to also investigate the link between commercial enterprise productivity at the start of a 10-year career window and the choice of holding an administrative position at the end of the window that confirms that research specific productivity reduces to select of choosing an administrative job.

## 2. EMPIRICAL METHOD

We adopt a random utility approach wherever an economic expert becomes an administrator if the use of undertaking this activity exceeds the use of the next-best different use of the economist's time and resources. Thus, suppose the utility that tutorial is received from an administrative on a non-administrative college assignment at time  $t$  ( $U_{it}$ ) will be a linear do of a vector of noticeable personal attributes ( $x_{it}$ ) and a random error term ( $\varepsilon_{it}$ ):

$$U_{it} = \beta x_{it} + \varepsilon_{it} \quad (2.1)$$

The economic expert becomes an administrator if  $U_{it} > 0$ , i.e., if  $\beta x_{it} > -\varepsilon_{it}$  which might be calculated with a regular Probit model:

$$\Pr [A_{it} = 1] = \varphi(x_{it}\beta) \quad (2.2)$$

where  $A_{it}$  will be a dummy variable that equals one if economic expert  $i$  is an administrator at time  $t$ , and  $\varphi$  is that the additive commonplace distribution do. Since a panel of observations is accessible for every economic expert in our knowledge, another is to estimate the model with strategies that consider the effect person specific imperceptible attributes  $\lambda_{it}$  that have an effect on the use of the administrative relative to non-administrative assignments. The quality Probit model (2.2) imposes the intense assumption that  $\lambda_i$  is perfectly related to with the variables in  $x_{it}$ . At the alternative extreme is that the assumption that  $\lambda_i$  is perfectly unrelated with  $X_{it}$  that results in a random effects probit model:

$$\Pr[A_{it} = 1] = \varphi(x_{it}\beta + \lambda_i) \quad (2-3)$$

Since (2.2) and (2.3) represent opposite extremes, the resulting estimates are often understood as higher and lower bounds for reality effects. Generally, the random effects estimates are smaller than the pulled probit estimates

as a result of their derived below the belief of no influence from the person-specific error element. We tend to present and discuss the results of each specification for comparison.<sup>1</sup>

The variables in  $X_{it}$  are often classified into human capital measures, demographic and social science factors, job-related attributes, labor market conditions and time. Among the human capital measures is quality-and-author adjusted commercial enterprise productivity. For every economic expert, the amount of articles revealed will weight by a journal quality measure that uses the "Impact Factor" provided by the SSCI Journal Citation Report as a weight (Ishrat, 2015). The publication measure also uses the simple  $1/n$  rule to regulate for the amount of authors. Thus, changes in our publication variable show the impact of a further quality-and-author adjusted journal publish on the choice of becoming an administrator. However, real productivity is probably going to endogenous with relation to administrator standing as a result of directors have less time to devote to analysis and people with comparatively low tastes for analysis could also be more likely to pursue administrative work. Therefore, in our first base models, we tend to don't embrace actual publication measures. Instead, we tend to indirectly management for productivity with variables describing the age of an economic expert at the time of his or her Doctor of Philosophy, the status of the PhD-granting establishment, the dimensions of the economist's coming into Cohort, his/her primary field of analysis and the field's share within the profession. In our ulterior analysis of the 10-year career window we tend to introduce an approach that examines the consequences of our direct productivity measures.

### 3. DATA

The data are primarily drawn from the 1990, 2000, 2004, 2009, 2012 and 2015 Iranian Economic Association (IEA) directories, wherever the sample includes Doctor of Philosophy economists who add an academic job placed within the Iran. The info includes (about) a 19 % random sample of male economists showing in every crosswise year likewise as all feminine economists who had a Doctor of Philosophy and were operating during a tenure track tutorial job placed within the Iran in any of the directory years.<sup>2</sup> We've got deleted from the first IEA membership lists those economists operating in private industry, government or non-profit jobs, as our sole interest is on the determinants of educational administrator standing. Our final sample so includes 1036 economists-years. The focus of our analysis is on whether or not, during a particular directory year, an economic expert within the sample will discover to an administrator. Thus, we tend to build a binary variable that equals one if an economic expert holds the place of department chair, analysis or service institute director, Faculty or faculty dean or university president.<sup>3</sup> We tend to adopt this comprehensive definition of administration to develop a broad understanding of the attributes that help choice in university administration. However, the results are usually not sensitive to narrowing the definition of administration to department-level service, mostly as a result of chairs and administrators comprises 80% of the directors within the sample. Specifically, unreported specifications that exclude university-level directors like deans, provost's, and presidents yield qualitatively similar results.<sup>4</sup> Thus, within the interests of brevity, the

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<sup>1</sup> An intermediate assumption between these two extremes is that the heterogeneity has a nonzero but imperfect correlation with the covariates (a fixed effects probit model). However, fixed effects estimation primarily exploits within-person variation, which entails the need to observe the same economist as both an administrator and non-administrator. Relatively few economists in our sample have served both roles.

<sup>2</sup> An initial 10% random sample was taken from every crosswise. However, every sampled observation was followed forward and backward in time and enclosed within the sample if found in alternative directories. This procedure yielded just about a 19% random sample from each directory.

<sup>3</sup> Chancellors and provosts are enclosed within the same class as presidents as a result of solely a little share of lecturers in our sample hold any of those positions. Moreover, these appointments represent the highest ranks of educational administration and, therefore, usually entail similar responsibilities.

<sup>4</sup> We tend to additionally estimate the chance of being an administrator separately for department-level and college/university-level directors. The indirect productivity controls have a lot of pronounced impact at the department-level than the college/university level. A potential rationalization is that department positions are the entry points into tutorial administration and so the individual should weigh the tradeoff between analysis and non-research time a lot of heavily during this call. Some variations among field controls are discovered, that are noted below in footnote 8.

remaining analysis focuses on a Probit model that uses the broader idea of administrative choice. The data contain many classes of instructive variables which will classify as human capital, demographic and social science, job-specific, and time specific controls. Human capital controls embrace a Doctor of Philosophy establishment quality measure (outlined to equal 0 if the institution's publication ranking is outside the highest 24 and to equal one divided by the publication rank if it's hierarchical within the highest 24); the individual's age at the time of the PhD; and the individual's expertise within the community. The highest 24 Doctors of Philosophy and age at Doctor of Philosophy variables indirectly manages for analysis, productivity within the reduced-form Probit models (2.2) and (2.3). These variables relate to the analysis, productivity (positive for prime 24 Doctors of Philosophy and negative for age at PhD), however, is planned well before of career milestones that effect on an academic's final career track. They can, therefore, be treated as exogenous, so a person becomes an administrator later in his or her career.<sup>5</sup>

The experience is close within the model to capture the increasing chance of sending a leadership role joint accumulates general and institution-specific human capital, wherever a quadratic in expertise permits for a depreciating impact. Also, analysis, productivity tends to say no with age that may lower the chance prices by choosing administration over time (Oster and Hamermesh, 1998). An economist's analysis field represents another indirect productivity management. Fields are captured by a collect of dummies that equal one if the first field is in History, Growth, Quantitative strategies, Monetary/Fiscal, International, Industrial Organization, Labor, or alternative connected Field, wherever Theory is that the excluded group. To isolate a selected field's inherent knowledge-related effects of the size-related effects, an effect for a field's share of IEA members is also enclosed. These field management variables are related to with commercial enterprise as a result, there could also be fielded-specific norms and time lags for publication activity. Also, for specific information and ability sets could dissent across subfields, these field controls may show differential chance prices related to carrier departures into administrative work. As an example, as compared to a more paper homeward-bound field, an applied economics discipline (e.g., Labor) may well convey an interest in administrative and/or to have of skills that are more easily transferable into administration. The depreciate of data during a field can also have an effect on the sort of administrative position command. As an example, wherever as economists in fields where information is relatively sturdy would be expected and more likely to carry temporary, department-level positions. Economists who accumulate information more quickly depreciating analysis fields are expected, more likely to hand-picked into higher college/university levels of administration (McDowell, 1983). Demographic and social science variables embrace controls for gender and whether or not the economic expert immigrated to the Iran. The binary gender management equals one for feminine economists and permits Iranian to look at whether or not women enter careers in administration at similar rates as men. Current job-specific attributes embrace department size and the division publication ranking. A publication ranking estimate with a dummy of whether or not or not the department is hierarchical within the prime 30 of the publication rankings within the directory year.<sup>6</sup> Departments that show publication excellence have a college who is among the most effective in their field and who are likely to have comparatively low tastes for non-research tutorial activities. Labor market conditions are captured by the dimensions of the individual's tutorial job market cohort. Specifically, the cohort size is that the variety of alternative economists within the sample who entered the profession inside a 5-

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<sup>5</sup> The empirical analysis excludes measures of teaching and repair ability, that don't seem to be elaborated within the IEA directories. Communication (teaching) skills and repair orientation could also be completely related to with the chance of choosing into administration and, therefore, the omission of such measures could bias the calculable impact of analysis. However, the direction of the bias is unclear as a result of these activities could either be substitutes or enhances. Therefore, our discussion centers on the sign of the calculable impact of research instead of the magnitude of the impact.

<sup>6</sup> The rankings square measure from Graves, Marchand and Thompson (1982). The easy coefficient of correlation between a prime 24 Doctor of Philosophy establishment and a prime 30 current job is 0.23. This comparatively low price indicates that the standard of the Doctor of Philosophy department and current job placement are distinct measures of analysis ability.

year window encompassing the individual's own entry. Though this measure clearly understates the cohort size within the profession as an entire, it'll yield an unbiased estimate of the impact of true cohort size as long because the share of recent economist's change of integrity the IEA is consistently associated with the amount of freshly minted PhDs. This variable is expected to have a positive impact on the chance of being an administrator, as a result of in areas that turn out an oversized variety of lecturers, functionary structures can become a more layered and advanced, leading to a comparatively high institutional demand for university-level directors. Likewise, sometimes once there's a larger potential offer of administrative labor, tutorial departments could rotate places a more often to conserve analysis or teaching time for college who serve in the administration. To identify separate cohort effects from potential overall trends within the choice into administration, the analysis embraces 2 binary variables that equal one of the decades depicted in our sample: the 2000s that has the directory dates 2012 and 2015; and include directory dates 2004 and 2009. The excluded management group includes the directory dates 1990 and 1999. These binary variables enable us to see temporal patterns within the tendency to become an administrator that will reflection changes within the relative valuation of the various elements of educational work (i.e., increasing stress on research). Specifically, though departments can after all not want fewer chairs or heads whilst the community becomes a more technically advanced, these positions could also be revolved among college less often to let for a larger specialize in analysis among those with the very best analysis ability (Hansen and Guidugli, 1990). This may end in longer administrative carriers a lower chance of any given economic expert holding an administrative position over time.

## 4. RESULTS AND DISCUSSION

### 4.1. Regression Results for Full Sample

For each the bottom specification and for a specification within which the time dummies will interact with the feminine dummy, the empirical results for the quality and random effects probit models are presented in Table one. The coefficients of most of the instructive variables are vital at ancient levels and have the expected signs. The coefficients don't qualitatively dissent between the bottom and interactive specifications; so, the discussion can specialize in the essential specification except to notice the potential time interactive effects with gender. The results for the human capital variables show that the chance an instructional economic expert selects an administrative track relates to "administrator-specific" skills. The coefficients of the ability variables in each the quality a random effects model show that the chance of changing into an administrator will increase at a decreasing rate up to an ability level of roughly 25 years. The coefficients on the indirect productivity controls show that economists who have accumulated human capital associated with analysis, production are less likely to become directors.<sup>7</sup> Specifically, the findings show that receiving a Doctor of Philosophy from a prime 24 program reduces the likelihood of changing into an administrator. The constant on age at Doctor of Philosophy is positive and vital, suggesting that economists who take longer to finish their PhDs are a more likely will be a director later in their careers. The size of the Doctor of Philosophy cohort also seems to be more important, indicating that tutorial economists from the larger Doctor of Philosophy cohorts are a more likely to pick into administration. This result could show a larger institutional demand for directors because the tutoring profession grows larger. Alternatively, it should suggest that larger competition within the tutorial labor market places a larger limit on analysis opportunities, inflicting a larger variety of Doctor of Philosophy economists to select administrative places. The coefficients on Growth and Labor are positive and vital in each the quality and random effects probit specifications. Thus, economists in these fields are a more likely to be discovered in an administrative position. This finding could show that economists in these fields have a more interest in administrative matters, or that they have human capital skills that are a more simply transferable into the

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<sup>7</sup> The IEA directory for a given year will repeat the previous directory's data if the economic expert doesn't update the shape. Thus, our knowledge could misclassify some lecturers as non-administrators. but this can be less of a priority within the career interval approach mentioned in Section 4.3 as a result of such a misclassification would need an absence of change for an amount of up to ten years.

perform administrative duties. This finding also could show variations across fields with relation to the speed at that research-related information depreciates.<sup>8</sup> In the random effects specification, the findings show that economists are a more likely to hand-picked into administration if they're during a field that includes a comparatively giant share of the profession. This could show that, given the set of journal shops, a bigger field share or relative group size is related to a lower chance of publishing in an elite journal outlet and so a lower cost related to changing into an administrator. The constant on a top-35 department is negative and vital, indicating that economists who place in more research-oriented departments are less likely to pick administration. This also suggests that larger tutorial productivity, all else equal, raises the chance value of changing into an administrator. Whereas its potential that analysis, productivity also raises the productivity of an academic in administrative tasks. Our results suggest that these skills are comparatively a more valued within the tutorial research oriented track, all the same, ulterior analyses check this issue in larger detail by examining a more direct measure of analysis productivity. The binary variables for the 2004 and the 2009 are each negative and vital, suggesting that economists discovered at later dates are less likely will administrators. This result could also be owing to the increasing specialization of the profession over time. That is, because the profession has become progressively advanced, economists could have found it best to a more centered inside explicit career methods, since the shift into them later back out of an administrative position (i.e., to come another time to a more research-oriented career path) has become more price. Consequently, those tutorial economists who do become directors can have longer tenures doing this, and so the chance for any at random hand-picked tutorial economic expert being in administration can decline over time. Alternatively, since the salaries of economists have full-grown about salaries in alternative disciplines over time, they should have also full-grown on the salaries of directors. This may decrease the chance of economists changing into directors. To check whether the overall growth of women in political economy from the 1990 of the 2009 will be accompanied by their magnified illustration in administrative positions, the feminine binary variable is interacting with the binary variables indicating the last decade. The coefficient on the feminine binary variable roughly doubles within the interactive versus non-interactive, suggesting that feminine economists within the 1990 and 2000 had fewer administrative opportunities. Moreover, the coefficients of the interaction terms are each insignificant, indicating that administrative opportunities haven't improved for women over time."<sup>9</sup>

#### 4.2. Regression Results by Tier of Establishment

The previous results indicate that research-specific investments cut back the chance of choosing into an administrative position. However, establishments dissent distinctly in their analysis expectations, which can have an effect on the importance of data and capability for analysis in effectively administering a department. Thus, to check the sensitivity of our human capital findings, we tend to re-estimate our specifications bestowed in Table one individually by the analysis orientation of the establishment. Specifically, we tend to use the Carnegie Tier one analysis, classification to point those establishments that have a high analysis expectation across fields relative to

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<sup>8</sup> Empirical results for specific varieties of administration offer additional insights into the influence of field-specific information depreciation. Estimation of the bottom model with solely department chairs being enclosed as an "administrator" indicates that economists are considerably a more likely to be chairs if their fields are History, Growth, International, or Labor. On the opposite hand, estimation of the bottom model with solely college/ university level directors being enclosed as an "administrator" indicates that economists are considerably less likely to be in administration if their fields are History, Quantitative strategies or International. These findings suggest that History and International, and maybe Quantitative Methods, are fields within which information is comparatively sturdy, and so the chance value would be comparatively high for these economists to become permanent directors. Labor, on the opposite hand, seems to be a field within which skills are a more simply transferable into administrative duties.

<sup>9</sup> We tend to also realize in unreported models that interactions of gender with expertise, top 24 PhD, prime fifty current job placements, and field are all insignificant at ancient levels.

those establishments that fall outside the Tier one analysis classification.<sup>10</sup> These specifications are presented in Table 2 for the gender-time interactive specifications. The results usually suggest that the role of research specific human capital investments differs clearly with institutional mission. Specifically, the marginal impact of expertise includes a praise career profile with a peak between 20 and 24 years of expertise in Tier one establishment, whereas the height is between 27 and 34 years of expertise of non-Tier one establishment.

Thus, time on the task seems to be comparatively a more necessary in establishments with less of an inquiry orientation. The relative importance of the indirect measures of productivity also varies between Tier one and non-Tier one institution. Specifically, tutorial economists who earn their Doctor of Philosophy at an older age are considerably a more likely to modify into administration at Tier one establishment, whereas this age impact has a solely marginal significance of non-Tier one institution. This result suggests that the drive towards tutorial career advancement at an earlier age could also be comparatively necessary within the call to not become an administrator at Tier one establishment. However, the impact of a Doctor of Philosophy from a prime program includes a comparatively giant negative impact on the chance of changing into an administrator at a non-Tier one establishment. This result could indicate that departments in less research orientated establishment steer extremely research productive lecturers far from an administrative track.<sup>11</sup> Likewise economists from larger cohorts are a more likely to pick into administration in non-Tier one establishment, whereas there's no vital impact of cohort size in Tier one establishment. Once again, the proof suggests Labor economists are a more likely to become directors. However, it's unclear why economists within the International field are less likely to be directors in Tier one establishment, whereas they seem to be a more likely if in non-Tier one establishment. Thus, the factors that cultivate an administrative alternative (i.e., drive, tutorial performance and market opportunities) varies with institutional missions. The impact of department-level factors also varies with the analysis tier of the establishment. Specifically, economists from larger departments are less likely to pick into administration if placed during a non-Tier one establishment, whereas this impact is insignificant for Tier one college. This could reflect, as an example, that administrative position like chair are a more frequently revolved among the school inside research-oriented departments, maybe as a result of administration is viewed as a measured service to the department as against a more permanent career go into administration. On this, same line of reasoning, it should be noted that, whereas the coefficients of the binary variables distinguishing the 2004 and 2009 decades are negative and vital for each Tier one and non-Tier one establishment, the magnitudes of the coefficients for Tier one establishment are just about half the size of those for non-Tier one institution. This might be explained by a rise over time within the movement of non-Tier one academicians into comparatively more permanent (and so long tenured) administrative positions. This general hypothesis is in keeping with the finding that inserting during a top-35 political economy department is related to a lower chance of choosing into administration for non-Tier one establishment; however this tendency is a smaller amount apparent for Tier one establishment. Thus, non-Tier one universities seem less likely to draw college into higher levels of administration of their comparative research-oriented departments in the field, like a prime 24 academic department.<sup>12</sup> The importance of non-public attributes also can vary with the analysis orientation of the establishment. The gender variables and also the interaction terms are usually insignificant for Tier one establishment; however the constant on feminine for non-Tier one establishment is negative and vital. This result suggests that feminine economists had comparatively lower

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<sup>10</sup> Data on Carnegie analysis Classification is obtained from the Carnegie Foundation's web site ([www.Carnegie.org](http://www.Carnegie.org)). Tier one establishments are the foremost analysis-intensive establishments that attract the best amounts of external research funding relative to non-Tier one establishments.

<sup>11</sup> Hansen, Weisbrod and Strauss (1978).

<sup>12</sup>The Summary Statistics indicate that 76% of faculty place in top-35 departments in Tier 1 institutions, whereas only 5% of faculty place in top-35 departments in non-Tier 1 departments. Thus, because a top-35 economics department is likely to be relatively strong unit in a non-Tier 1 compared to a Tier 1 institution, the opportunity costs of members of top-35 departments becoming administrators are relatively higher in non-Tier 1 than in Tier 1 institutions.

administrative opportunities throughout the 1990 and 2000 in less research oriented departments. This result's in keeping with previous findings suggesting that the girls had lower placement and promotion opportunities than their male counterparts inside political economy (e.g., McDowell *et al.* (2001)). However, the interaction terms, though positive, are insignificant all told specifications suggesting no vital improvement in feminine economist's opportunities as administrators.

#### 4.3. Career Interval Approach

The analysis within the previous section includes indirect (predetermined) measures of analysis, productivity as a result of the contemporaneous choices to pick into administration and publish are likely to be endogenous (administration will have a reverse-causal impact on analysis output). However, to a more directly examine the consequences of (exogenous) changes in productivity on the likelihood of being an administrator, we tend to adopt another approach that focuses on a career interval (e.g., between 1990 and 2000) because the unit of observation instead of a specific purpose of your time. Specifically, for those economists showing in consecutive cross-sections that are a minimum of six years apart, we tend to examine whether or not commercial enterprise productivity measured at the start of the amount affects the probability of holding an administrative position at the tip of the amount. Within the career interval approach, we tend to estimate Probit models just like (2.2) and (2.3) that embrace as instructive variables the amount of quality-and-author adjusted journal articles revealed at the start of the career interval, a dummy for whether or not the economic expert captive to a different establishment (at least once) over the career interval, and a dummy for whether or not the economists was discovered as an administrator at the start of the amount.<sup>13</sup> These extra variables are often thought of as planned with relation to the end of the period. Table 3 includes the results victimization the 367 observations from the total sample of economists discovered in a minimum of one among four career intervals: 1990-2000, 2000-2004, 2004-2012, and 2009-2015. The end up in Table 3 of the variables enclosed in previous specifications are usually of constant sign and similar magnitude, though the smaller sample results in a decline within the level of significance for a few variables like gender.<sup>14</sup> What is more, in the specifications that we tend to don't report, the addition of the direct publication measure (with the career variables excluded) doesn't usually have an effect on the sign or the significance of the opposite instructive variables. Likewise, the non-career coefficients are comparatively insensitive to the exclusion of the career variables. These findings are in keeping with the assertion that the direct productivity and career variables are planned. Thus, for brevity, the discussion focuses on the fresh introduced controls for publications previous administrative experience and movers.

The results for the total sample presented in columns two and three in Table 3 indicate every of the new controls are critical. Specifically, the constant on the direct productivity measure is negative and vital, indicating that

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<sup>13</sup> The IEA knowledge is supplemented with data relating to articles revealed within the years of the sample. As a result of it's cheap to expect that analysis made over a brief interval of your time depends on the current scientist attributes on the market within the knowledge, we tend to get data associated with contemporaneous publication activity for every of the sample years. For the membership years between 1990 and 2012, the publication records are obtained from the IEA Index of Economic Articles. For the 2015 crosswise the knowledge is obtained from Econ Lit. Contemporaneous commercial enterprise productivity is measured by enumeration the amount of quality-and-author adjusted articles revealed within the year of the cross-section and also the ulterior year (i.e., 1990-1991, 2000-2001, 2004-2006, and 2009-2010). The results don't seem to be sensitive to many different publication measures. Also to the amount of quality-and-author adjusted articles, we tend to also examined the subsequent different productivity measures: the amount of quality-and-author adjusted revealed pages; the amount of articles un-weighted by either the amount of coauthors, or the journal's Impact issue, or both; and also the variety of revealed pages un-weighted by either the amount of coauthors or the journal's Impact issue, or both.

<sup>14</sup> The specifications in Table 3 exclude the quadratic expertise term as a result of its constant is insignificant. This result's not stunning since expertise currently relates to the come over an interval of your time as against one year. It also might not be stunning that the sphere controls don't seem to be significant once the model specification includes an immediate measure of analysis productivity likewise as dominant for previous administrative expertise.



tutorial economists are less likely to pick into administration at the end of the period as they publish a more at the start of the amount. On the opposite hand, the coefficients of the binary variables that equal one for previous administrative expertise and for movers are each positive and extremely vital. Thus, there's a high degree of reverting in administration, suggesting that it should be hard to come to a pure tutorial track once an economic expert enters into administration. Moreover, dynamic establishments are an avenue into administration. The tier-specific regressions are presented in columns 4- 7 of Table three. The impact of the amount of articles at the start of the amount is negative and vital at Tier one establishments however insignificant at non-Tier one institution. However, the impact of being an administrator at the start of the amount is positive, significant, and of constant magnitude for each Tier one and non-Tier one institution. Thus, whereas the impact of productivity could dissent with analysis mission, the reverting of the executive track seems to be similar across establishments with completely different analysis orientations. However, the constant for changing jobs over, the amount is considerably positive just for Tier one establishment, suggesting that dynamic establishments to enter the executive track are prevailing solely among relatively research oriented establishments. This could be as a result of administrative productivity in Tier one establishment is a more closely tied to analysis, productivity, which will a more simply be discovered by alternative universities.<sup>15</sup>

## 5. CONCLUSIONS

Quality administrative place is crucial to the success of the Iranian educational activity system, that is each an across the country important and internationally known trade. Yet, few studies check the factors that confirm who chooses to enter university administration. This paper uses wealthy panel knowledge from Iranian Economic Association membership directories over an amount of over 25 years to look at the role human capital investments play within the administrator. The results show that tutorial economists who eventually enter university administration consistently show general skills and do less research specific investments over their careers than people who stay within the strict tutorial track. As an example, Economists who get PhDs from our place in more research-oriented political economy departments are less likely to pick into administration, because years of ability increase the case of selecting administration. Also, feminine economists are found to a less likely to Place in an administrative job, suggesting that sharing common experiences or language with the historical majority of the academy could help change into an administrator. Sensitivity tests make sure the broad findings drawn from the bottom specifications, however, also show that the role that human capital plays within the administrative alternative depends on the institutional setting and career profile. Specifically, separate estimates for establishment classified and not classified as Tier one analysis establishments show that analysis, production is comparatively a more valued and general experience is a smaller amount valued for directors in universities that have analysis as a primary mission. Likewise, specifications that check, however an academic's behavior at the beginning of a career interval have an effect on his or her choice into administration at the end of the interval show that the early career decisions become active in analysis, stay at a constant establishment and to not enter administration cut back the chance of the

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<sup>15</sup> In unreported models we tend to expand the career interval analysis by estimating the chance that an individual who is an administrator at the start of the interval leaves administration by the end of the interval. In general, the marginal effects don't seem to be vital however do dissent by analysis tier. For Tier one establishment, the results indicate that college from higher hierarchical departments and people hailing from larger fields are a more likely to exit administration. This result could suggest that administrative specialization will increase with analysis orientation or the chance value of past analysis. Also, Tier one college who focuses on history, that includes a lower charge per unit relative to a more technical fields, have a better probability of exiting administration and so a larger likelihood of returning to a more research-oriented career path. For college outside Tier one departments, feminine economists who are found to be less likely to enter administration are a more likely to exit administrative duties once there. On the opposite hand, non-Tier one college has usually been less likely to exit administration in additional recent decades, suggesting that there could also be a more specialization within the lower tier (perhaps owing to a growth in analysis expectations in these departments).

latter being an administrator. Overall, the results suggest that leaders don't seem to be merely born, however, to cultivate and formed by the human capital investments they create throughout their careers. However, The adage that "those which will, do; those who cannot, teach" could apply in several instances to managers in high-skill professions, as a result of leadership ability results from comparatively general versus skill-specific human capital investments. Thus, University directors are to be congratulated for the breadth, and not essentially the depth, of their talents.

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**Table-1.** Marginal effects from a probit analysis for choice of administration: full sample

Variables	Standard probit	Random effects probit	Standard probit	Random effects probit
Experience	0.0112*** [0.0008]	0.00231 [0.0003]	0.0113*** [0.0008]	0.0020*** [0.0003]
Experience squared	-0.0005*** [0.0000]	-0.00007 [0.00001]	-0.0005 [0.0000]	-0.0006*** [0.00004]
Age at PhD	0.0018*** [0.0002]	0.0003*** [0.0001]	0.0018*** [0.0002]	0.0003*** [0.0000]
PhD institution in top 24 (=1)	-0.0239*** [0.0076]	-0.0046* [0.0019]	-0.0237*** [0.0078]	-0.0046* [0.0012]
Cohort size	0.1329*** [0.0368]	0.0172** [0.0092]	0.1317*** [0.0369]	0.0168* [0.0087]
History (=1)	0.0012 [0.0146]	0.0002 [0.0035]	0.0010 [0.0146]	0.0002 [0.0032]
Growth (=1)	0.0222*** [0.0102]	0.0074* [0.0041]	0.0218** [0.0103]	0.0073* [0.00437]
Quantitative methods (=1)	0.0051 [0.0104]	0.0006 [0.0019]	0.0051 [0.0104]	0.0002 [0.0023]
Industrial organization (=1)	0.0103 [0.0092]	0.0011 [0.0022]	0.0102 [0.0087]	0.0013 [0.0020]
Other related fields (=1)	0.0065 [0.0108]	-0.0009 [0.0018]	0.006 [0.0101]	-0.0009 [0.0018]
Field share in profession	0.0009 [0.0010]	0.0001** [0.0000]	0.0009 [0.00003]	0.0002** [0.0000]
Department size	-0.0008 [0.0001]	-0.00007 [0.00004]	-0.0008 [0.0001]	-0.00009 [0.0000]
Top 35 current job placement (=1)	-0.016*** [0.0052]	-0.0045*** [0.0013]	-0.0198*** [0.0046]	-0.0047*** [0.0012]
Female (=1)	-0.0102** [0.0036]	-0.0015** [0.0009]	-0.0229** [0.0081]	-0.0049*** [0.0012]
2000s (=1 if 2004 or 2009)	-0.0565*** [0.0041]	-0.0121*** [0.0013]	-0.0597*** [0.0051]	-0.0136*** [0.0013]
2012s (=1 if 2012 or 2015)	-0.0767*** [0.0052]	-0.0165*** [0.0014]	-0.0756*** [0.0055]	-0.0168*** [0.0020]
(Female)×(2000s)	-----	-----	0.0340 [0.0217]	0.0113 [0.0084]
(Female)×(2012s)	-----		0.0062 [0.0146]	0.0022 [0.0042]
Observations	1036	1036	1036	1036
Log likelihood	-2998.78	-2684.44	-2999.45	-2623.13
Number of persons		2505		2505

Standard errors in brackets. \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$ .

Table-2. Marginal effects for choice of an administration: by Carnegie classification

Variables	Standard probit	Random effects probit	Standard probit	Random effects probit
Experience	0.0086*** [0.000]	0.0011*** [0.0001]	0.0134*** [0.0011]	0.0021*** [0.0002]
Experience squared	-0.0005*** [0.0000]	-0.0006*** [0.00001]	-0.0006*** [0.0000]	-0.00009*** [0.00001]
Age at PhD	0.002*** [0.0001]	0.0002*** [0.0000]	0.0009*** [0.0004]	0.0000*** [0.0001]
PhD institution in top 24 (=1)	-0.0137*** [0.007]	-0.0019* [0.0015]	-0.0486*** [0.00176]	-0.0099* [0.0045]
Cohort size	0.1287*** [0.03412]	-0.0016** [0.0073]	0.3032*** [0.0645]	0.0427* [0.0160]
History (=1)	0.0317 [0.0110]	-0.0026 [0.0012]	0.00272 [0.0326]	0.0101 [0.0124]
Growth (=1)	0.0143*** [0.0103]	0.0042* [0.0031]	0.0234** [0.0191]	0.0083* [0.0057]
Quantitative methods (=1)	0.099 [0.0102]	0.0012 [0.0023]	-0.0138 [0.0172]	-0.0019 [0.0033]
Industrial organization (=1)	0.0033 [0.0094]	0.0001 [0.0017]	0.0174 [0.0162]	0.0011 [0.0035]
Other related fields (=1)	0.0111 [0.0120]	-0.0018 [0.0012]	0.0003 [0.0187]	-0.00037 [0.0019]
Field share in profession	0.0001 [0.0010]	0.0000** [0.0001]	0.0023 [0.00014]	0.0004** [0.0002]
Department Size	-0.0000 [0.0001]	-0.00009 [0.00000]	-0.0039 [0.0004]	-0.00018 [0.00002]
Top 35 current job placements (=1)	-0.0022*** [0.0060]	-0.0027*** [0.0012]	-0.0446*** [0.00953]	-0.0059*** [0.0012]
Female (=1)	-0.0131** [0.0101]	-0.0028** [0.0011]	-0.0393** [0.0143]	-0.0076*** [0.0021]
2000s (=1 if 2004 or 2009)	-0.0387*** [0.0043]	-0.0069*** [0.0011]	-0.089*** [0.0068]	-0.0190*** [0.0030]
2012s (=1 if 2012 or 2015)	-0.087*** [0.0064]	-0.0098*** [0.0014]	-0.1117*** [0.0105]	-0.0247*** [0.0033]
(Female)×(2000s)	0.0217 [0.0210]	0.0035 [0.0029]	0.0533 [0.0408]	0.0020 [0.0202]
(Female)×(2012s)	-0.0137 [0.0117]	-0.0020 [0.0011]	0.0385 [0.0371]	0.0086 [0.0130]
Observations	1498	1498	1234	1234
Log likelihood	-1619.45	-1417.20	-1437.91	-1346.56
Number of persons		645		456

Standard errors in brackets. \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$ .

Table-3. Marginal effects of an administrative choice: career sample

Variables	All institutions		Tier 1		Non-Tier 1	
	Standard Probit	Random effects Probit	Standard Probit	Random effects Probit	Standard Probit	Random effects Probit
Experience (end of period)	0.0014*** [0.0004]	0.0009*** [0.0002]	0.0022*** [0.0004]	0.0014*** [0.0003]	-0.0012 [0.0008]	-0.0009 [0.0003]
Articles	-9.984*** [3.9736]	-6.9371*** [2.8993]	-9.0641*** [3.8966]	-5.8735*** [2.8451]	-16.0312* [9.9634]	-10.8953* [6.8774]
History (=1)	-0.0200 [0.0466]	-0.0184 [0.0138]	-0.0430 [0.0246]	-0.0222*** [0.0066]	0.0267 [0.0701]	0.0138 [0.0389]
Growth (=1)	-0.0135 [0.0146]	-0.0053 [0.0115]	-0.0198 [0.0162]	-0.0097 [0.0062]	0.0078 [0.0227]	0.0046 [0.0221]
Quantitative methods (=1)	-0.0019 [0.0324]	-0.0026 [0.0121]	-0.0099 [0.0198]	-0.0063 [0.0104]	0.0203 [0.0446]	0.0025 [0.0179]
Industrial organization (=1)	0.0069 [0.0116]	-0.0039 [0.0139]	-0.0499** [0.0119]	-0.0238*** [0.0040]	0.1008** [0.0505]	0.0531 [0.0406]
Other related fields (=1)	0.0302 [0.0318]	0.0208 [0.0204]	0.0307 [0.0342]	0.0225 [0.0222]	0.0200 [0.0355]	0.0174 [0.0217]
Field share (=1)	-0.0023 [0.0020]	-0.0038 [0.0007]	-0.0038 [0.0053]	-0.0049 [0.0008]	-0.00009 [0.0034]	-0.0023 [0.0012]
Department size (=1)	0.0001 [0.0002]	0.0001 [0.0001]	0.0002 [0.0003]	0.0001 [0.0001]	-0.0023 [0.0010]	-0.0021 [0.0001]
Top 35 current job (=1)	-0.0423* [0.0109]	-0.0145* [0.0046]	-0.0425 [0.0120]	-0.0167 [0.0049]	-0.0700** [0.0162]	-0.0340*** [0.0073]
Female (=1)	-0.0244 [0.0112]	-0.0136 [0.0053]	-0.0175 [0.0140]	-0.0083 [0.0072]	-0.0345 [0.0198]	-0.0198 [0.0121]
Year ending 2004 (=1)	-0.0296** [0.0102]	-0.0278*** [0.0032]	-0.0295** [0.0104]	-0.0272*** [0.0023]	-0.0334 [0.0198]	-0.0278** [0.0111]
Year ending 2012 (=1)	-0.0299** [0.0107]	-0.0273*** [0.0031]	-0.0425*** [0.0104]	-0.0292*** [0.0024]	0.0003 [0.0201]	-0.0295 [0.0106]
Year ending 2015 (=1)	-0.0212*** [0.0105]	-0.0384*** [0.0033]	-0.0631*** [0.0232]	-0.0415*** [0.0031]	-0.0423 [0.0206]	-0.0280 [0.0104]
Previous administrative experience (=1)	0.3895*** [0.0234]	0.1747*** [0.0320]	0.3382*** [0.0312]	0.1941*** [0.0387]	0.3845*** [0.0325]	0.2094*** [0.0433]
Changed jobs	0.0245*** [0.0105]	0.0120*** [0.0061]	0.0235*** [0.0144]	0.0246*** [0.0104]	0.0222 [0.0137]	0.0121 [0.0105]
Observations	367	367	212	212	175	175
Log likelihood	-1249.42	-1204.59	-754.43	-699.89	-676.27	-566.89
Number of Person		274		186		162

Standard errors in brackets. \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ ; \* $p < 0.1$ .

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