# Factors of Entrepreneurial Intention of the Public Civil Servant: Empirical Evidence in the case of Tunisia

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#### Abstract

In spite of the interest related to the entrepreneurship, the problems related to the creation of companies by the public civils servant still remain unanswered and not unanimously identified. In fact, a central question arises in this respect: "which are the factors which encourage the public civils servant to launch out in the creation of their own company?" or "how can one explain the entrepreneurial intention of the public civils servant?".

For this end, and after having reviewed the principal subjacent factors of the entrepreneurial intention as well as the central assumptions of our research task, we will devote the second part to the empirical validation of the explanatory factors of the entrepreneurial intention in the specific case of the Tunisian public civils servant while proposing some recommendations on the matter.

Keywords: Entrepreneurial intention, entrepreneurship, Tunisia.

# 1. Conceptual framework and factors of the entrepreneurial intention

The intentional process is interested in the question of the transformation of a simple idea of creation as a possible act into a mental representation of the creation of company. This process explains also the formation and the transformation of this vision into a true intention of creation.

#### 1.1. Vision and entrepreneurial intention

For some authors the concept of vision is defined as a representation of the future of a person and his company. At this level, Fillion (1989) proposes the following definition: "the vision is a projection (or image of the firm projected in the future)". Moreover, Carrière (1991), D'Amboise and Bouchard (1990) define the vision as a mental construction (or image) of a possible and desired future state of the organization.

In the cognitive approach, the vision can be presented as a cognitive product which helps the individuals in the interpretation of the events and the actions to be undertaken (Cossette, 1993). Varraut (1999) combined between these two prospects and he defined the vision as: "a mental representation of the future of the company, its activities and its environment". In 2001, Verstrate advances that the vision is besides the representation which the contractor carries out of the organization that it creates, corresponding to the articulation of his cognitive diagrams to the future that it wishes to reach, with the reality that confronted and its knowledge. Thus, the vision is regarded as the starting point of the intention of creation of a company.

Concerning the entrepreneurial intention, C. Bruyat (1993, p. 244) shows that it is comparable with a will. This idea is consolidated by A. Fayolle (2000, p.405), which shows that "the intention is a will to achieve an act". Moreover, Bird (1988, p. 443;1992, p. 11) presents also the intention like a freedom and an individual will; it is a state of mind which directs the vision, attention, experiment and action of the individual towards his own objective (to create a company, decisions of growth, changes). Even if the vision born with the constant inspiration, attention and the intention are necessary to return it proclamation.

In addition, Varraut (1999) states that the strategic intention consists, on the one hand, to distinguish the position from the leadership wished and, on the other hand, to identify the criteria which the company will use to present its improvement.

In other words, the intention will represent the vision of the creators and would be one of its mental demonstrations. It would express the will to achieve a certain goal, i.e. to launch out in the creation of company. The intention occurs its starting from the needs, values, practices and the beliefs of the businessman (Bird, 1988). Thus, the intentions of the civils servant of the public companies are not clearly joined together with the assumptions that they even have on them and the world which surround them. They depend on their perceptions and their experiments (Krueger and Carsrud, 1993).

The models relating to the entrepreneurial intention generally rested all on the same way of analysis. According to these theories, we formulate first of all the assumptions of our research relating to the formation of the entrepreneurial intention.

# 1.2. Modeling of the entrepreneurial intention and research assumptions

Initially, we will try in what follows to represent the restricted model of the intention to create a company adapted to our context. Moreover, we will try to integrate in a second stage the other factors which represent the complementary variables adapted to our study.

# 1.2.1. Reduced modeling of the intention to create a company by a civil servant of a public company

In fact, the models of the intention rest on a fundamental assumption such as the intention can be explained starting from two independent variables: perceived desirability of the act of Shapero (comparable with the attitude towards the action and the perceived social standard of Ajzen) and its perception of feasibility. Then, we add the variables which seem to us interesting to mobilize in the context of the creation of company for the civils servant of the public companies. Thus, we present the concepts which we must use to distinguish and assemble the close concepts. These concepts relate to a variables of desirability then variables of feasibility and finally variables of the perceived social standard.

#### 1.2.1.1. Desirability of the entrepreneurial event

Shapero, proposes in its model of the entrepreneurial event two explanatory variables of the entrepreneurial intention: desirability and feasibility. Several authors develop models to starting from the initial conceptualization of the theory of the planned behavior of Ajzen and propose the variable of perceived control which is connected with that of feasibility of Shapero. There are two variables which can influence the individual so that the creation of their own company and so the desire: the personal attitude towards the behavior and the perceived social standard. The variable "desirability" which explains the degree of attraction that an individual declares for a given behavior (the entrepreneurial event) will be developed here in its two variables: the personal attitude and the perception of the attitude of the social environment (or social perceived standard).

The theory of planned behavior of Ajzen is based on a concept relating to the attitudes. The word attitude comes from Latin aptus what means capacity of adaptation. In 17th century, the attitude referred to the manner of holding its body. At the end of 18th century, Charles Darwin uses it to indicate the physical expression of a certain feeling. In 20th century, many work tried to connect the ways of feeling with the psychological provisions<sup>1</sup>.

Then, the attitude is defined as:"a manner of being correspondent at a certain psychological disposal or beyond, with a provision, a state of mind (with regard to something or somebody), a whole of judgment and tendencies which lead to a behavior" (Petit Robert).

Stoetzel (1963), Dubois and Jolibert (1998), present the attitude as an acquired capacity and likely to undergo the effects of the external influences. Indeed, an attitude is "an interior provision of the person who results in moderate emotive reactions which are learned then felt each time this person is in the presence of an object (or of an idea or an activity); these emotive reactions lead it to approach (to be favorable) or to move away (unfavorable) from this object " (Morisette and Gingras, 1989).

From their side, Rosenberg and Hovland (1960) defined the attitude by three components: the first is that of cognition (beliefs), the second is that of the assignment (or feelings) and the third that of the tendency to action (or the intention of behavior).

Fishbein and Ajzen (1980), define the attitude as the situation of an individual who must react in a way more or less favorable or unfavorable opposite an object, a person, an institution, an event or any other aspect different from the world to which the individual belongs. In this vision, the beliefs determine the attitudes (the emotional direction) acting on the intentions to behave (cognitive dimension) and on the behavior (action). The models of intention rest on this conceptualization of the attitude. One of the first antecedents of the intention is thus the attitude proposed by the literature.

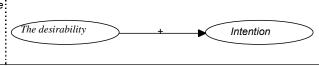
According to Ajzen and Fishbein (1980), so that a model correctly appears a behavior starting from an attitude, it is essential that the definition of the latter is in perfect relationship to the behavior to be predicted.

Thus, the desire would be a direct antecedent of the intention and plays the role of a total intermediary between attitude and intention. This concept approaches that of the "perceived desirability" of Shapero which explains the degree with which engagement in a creation of company is a behavior wished by an individual.

In the light of these two last designs, we are based on the desire to determine the entrepreneurial intention with an aim to create a company developing competences, formations and relations resulting from the public office.

Thus, we can represent the first assumption A1 as follows:

**A 1:** The desire to act exerts a positive and significant effect on the entrepreneurial intention of a public civil servant to create its own company by developing the formations, competences and the relations resulting from the public office.



<sup>&</sup>lt;sup>1</sup> This short history of the attitudes was stated by Petty et al..(1981). This passage is taken again by Froloff-Brouche(2000).

#### 1.2.1.2 The perceived social standard

The perceived social standard translates the opinion of an individual thanks to his relevant social entourage, in favorably or unfavorably, for the realization of a certain particular action. The impact of the social entourage is evaluated with the decision-making of action or not of the individual. According to Cialdini, Reno and Kallgren(1990)<sup>2</sup>, the perceived social standard is the action of what the majority of people carry out in a given situation. Thus, which thinks individual concerning what others can make in a given situation (what it is normal to do for them), results from the observation of their behavior.

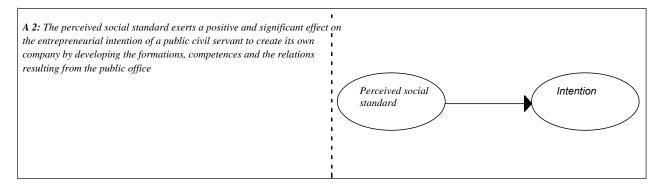
The research and the results of the studies centered on the intention are not clear to determine the place occupied by the perceived social standard in the models of intentions. In the model of Aizen (1991) and in other models of intention (Bagozzi and al., 1992), the perceived social standard acts on the intention without intermediary. In the design of Shapero, this variable constitutes only one of dimensions of the desirability of the action.

Several authors having tried to solve the limits of the theory of the planned behavior (and of the reasoned action) which are connected with this approach. Then, the attitude or the desirability must be consisted personal and social elements. Thus, Miniard and Cohen (1979), under the effect of the problems often observed between measurements of desirability and social standard of the model, wonder about the conceptual separation of these two components.

Kruglanski and Klar (1985)<sup>3</sup>, regard the perceived social standard as an antecedent and a factor of entrepreneurial intention which is summarized by the personal attitude towards the behavior. Miniard and Cohen (1983) present the assumption that only the perceived social standard which can possibly influence the attitude, which is affirmed by a certain number of studies carried out (Ryan, 1982; Shimp and Kavas, 1984; Oliver and Bearden, 1985).

Ajzen (1991), shows that in certain case, the attitude and control perceived are sufficient to explain the intention. In other research, the perceived social standard is an antecedent of the attitude.

Thus, even if it does not have a direct influence on the intention, it indirectly influences it by its effect on the attitude. In the light of the above mentioned ideas, we can present our second assumption A2:



## 1.2.1.3. Perceived feasibility

Several close concepts are used in various studies such as: perceived behavioral control, facilitating condition, perceived personal effectiveness. We first of all will define these concepts before justifying our choice.

Ajzen takes into account the facility or the difficulty which the potential creator can face for the realization of the behavior, by the concept of behavioral control. This concept is also defined as the perception of "... the presence or the absence of the resources and necessary opportunities" (Ajzen and Madden, 1986, p.457) to complete a behavior. One can associate the concept of facilitating condition of the model of interpersonal behavior of Triandis (1977) which represents the existence of the external factors (the availability of the necessary resources to engage in a given behavior) and sufficient factors of motivations for carrying out well the behavior. These concepts are close to the concept of perceived personal effectiveness of Bandura (1977, 1982). This last shows the confidence of an individual in his capacity to take well a certain action to arrive at a certain result (Bandura, 1977:193). This concept shows also the way in which it can realize to face the future situations (1982:122) or the belief in its personal capacity to carry out a task (Gist, 1987 p.472). The personal effectiveness is obtained in the course of

<sup>&</sup>lt;sup>2</sup> Authors quoted by Pillutia and Chen(1999).

<sup>&</sup>lt;sup>3</sup> In this analysis, they comment on the theory of the reasoned action, which explains why perceived behavioral control is not mentioned

experience and results from the development of cognitive, social, linguistic, and/or physical competences (Bandura, 1982; Gist, 1987).

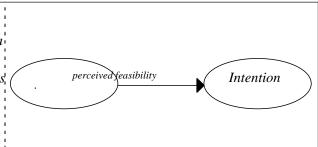
The personal effectiveness and perceived behavioral control were associated with the internal audit (Gist, 1987;Ajzen, 1991, 2002). However, a significant differentiation can be carried out between these two concepts (Gist, 1987). Whereas the place of control does not change in all the situations, the personal effectiveness (and perceived control behavioral) can and must change according to the situations and actions' where the individual is. For example, a person believes that the results obtained are the fruit of its behavior.

Generally, the perceived personal effectiveness is comparable with the perceived feasibility of the model of the shapero, which answers the degree with which one feels personally able to create a company (Krueger and Al, 2000, p.419) whereas the internal place of audit would be attached to the psychological variable introduced by Shapero (propensity of the action)

According to the reasoning of Krueger et al. (2000), in their modeling of the theory of the planned behavior, the measurement of perceived feasibility is raised from personal perceptions of effectiveness. For Armitage and Conner (1999), these two concepts would be distinguished Insofar as the personal effectiveness would do reference to internal resources whereas perceived control would refer to external resources. Ajzen divides perceived behavioral control into two evolutions. First is connected to the beliefs of personal effectiveness of Bandura (1977, 1982) (facility or difficulty perceived to carry out an action), whereas second refers to perceived controllability. The analysis of Cheung and Chan (2000) differentiated the studies according to the items used to measure how perceived behavioral control shows that the personal effectiveness predicted the intentions and the behavior, whereas controllability predicts the behavior but not the intention. Several studies affirms that the perceived personal effectiveness exert a significant effect on the intentions (and in certain cases on the behavior), whereas perceived controllability does not have significant effects on the intentions. These studies show that the perceived personal effectiveness explains in a significant way the intentions and the behavior, but that the items of controllability explain the intentions only when they are ordered with the items of perceived effectiveness.

Insofar as our research concentrates on the explanatory factors of the intention, we preferred to choose the personal effectiveness rather than perceived controllability (or more generally perceived control). Moreover, the perceived effectiveness was theoretically and empirically attached to many phenomena of management of which the entrepreneurship. Bandura (1986) finds correlations ranging between 0.3 and 0.6 between the personal effectiveness and the intention. Thus, in our study, we use a measurement of perceived feasibility understood with the traditional direction of the personal effectiveness<sup>4</sup>. In others words, we can present our third assumption A3 as follows:

A 3: The perceived feasibility exerts a positive and significant effect on the entrepreneurial intention of a public civil servant to create its own company by developing the formations, competences and relations resulting from the public office.



At this level, we retained three principal explanatory variables of the intention to create a company by a civil servant of a public company by developing the formations, competences and relations resulting from the public office: the desire of the public civil servant, the perceived social standard and its perception of the feasibility of such an action. These three assumptions mean that the three variables have a significant effect on the entrepreneurial intention of a civil servant of a public company to create their own company. What interests us is the participation relating of each one to the explanation of the entrepreneurial intention in the specific context of the public civils servant.

# 1.2.2. Complementary variables adapted to the context of study

We will try in what follows to add other explanatory variables of the behavioral intention beside those expressed by Ajzen (1991). We suppose that the addition of some variables to the announced variables will improve the explanation of the intention to create a company. These variables which we will define and place within our model are *the entrepreneurial identity* and *the political role*.

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<sup>&</sup>lt;sup>4</sup> We prefer to retain the term of feasibility perceived rather than that of perceived personal effectiveness because of the greatest clearness of the concept

#### 1.2.2.1. The entrepreneurial identity

Ajzen and Fishbein (1980), described the concept of personal identity as an idea that a person is done on itself. These authors rely on an assumption according to which when an element becomes central in the personal identity of an individual, its behavioral intention is automatically adapted. DeBono and Snyder (1995) highlighted that the individuals are motivated (having the intention) to live new situations which are in agreement with their values.

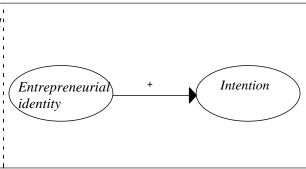
Therefore, in our specific context a civil servant of a public company will be regarded as a creator of company having their own entrepreneurial identity. Greenberger and Sexton (1988) suppose that the personal identity is a significant element of the intention to create a company.

Several authors regard this factor as one of the most significant factors for entrepreneurial dynamics. For Lavoie (1988), the entrepreneurship "is rather a medium, a spirit and a state of heart". Kanter (1984) associates it with an "integrative" manner to approach the problems and the decision-making. Moreover, For Drucker (1985), the entrepreneurship is a behavior and not a "feature of character".

In addition, according to Varlet (1996) the entrepreneurship evokes the passage towards the act to undertake, capacities, qualities, existing internal motivations for individual and which lead him to become contractor. The entrepreneurship is the result, at the individual level, of the influences being exerted on two plans: the formation of the entrepreneurial attitude and the acquisition of the role of contractor.

Thus, we can present our fourth assumption A4 as follows:

A 4: The entrepreneurial identity exerts a positive and significant effect on the entrepreneurial intention of a public civil servant to create its own company by developing the formations, competences and relations resulting from the public office.



# 1.2.2.3. The political role

The néo-institutional approach is developed at 1980 (Meyer and Rowan, 1977; DiMaggio and Powell, 1983). The theory is based on the idea that the organizations adopt structures in response to various external actors who exert an influence on them (Meyer and Rowan, 1977). The accompaniment of the creators is declined in services of sensitizing, reception, information, accompaniment and council, formation, logistical support, financing, establishment and follow-up (Bruyat, 2000). According to Albert *et al.*. (1994), the support for the carriers of project is initially developed around three axes: financing, formation and logistical support.

The assistance to contactors<sup>5</sup> requires several speakers. These structures are reduced to a simple consultation of rules and laws for the accompaniment of the carriers of projects. They gather institutional actors, government officials, associations, liberal professions, various councils, large companies, banks, insurances, etc. Bruyat (2000) prepares a representation of the die to support the creation of company. He initially defines the reception and information facilities. Their principles consist in assisting the first contact of the carrier with the concrete aspects of its project. In the second place, he defines the incubators. Their activities turn primarily around the training and of the setting of the creators in network. In third place, the seedbeds are listed. Their function is to accommodate young companies during their creation and during a limited lapse of time with an aim of providing them, localized skills and specific resources.

Under these conditions, the institutional environment is regarded as determinant between the fundamental missions of the systems of assistance to the creation and the intentional behavior of the carrier of project. The defenders of the neo-institutionnalist current highlight the impact of such external pressures on the intention of the carriers of projects, and particularly those in phase of creation.

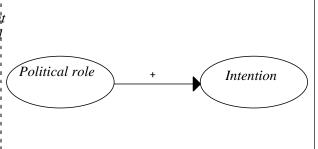
<sup>&</sup>lt;sup>5</sup> Here we regard the creation of company as being spread out first steps of the carrier of project to the launching phase.

In addition, some authors (Balenghien, 1994; Boissin, Castagnos and Deschamps, 2003; Ranaïvo, 2004) find that the major obstacles related to the creation of company are those of the financial capital. During the launching phase, the requirements of the contractor are primarily judged of a financial nature. For that, the contractor especially makes return at personal funds or funds coming from his knowledge and to a lesser extent at the banking institutions. In this case, the government took into account the problems of financing for the carriers of projects. It negotiated with the banking structure about the possibility of installation of a system or a structure of support which can benefit the young creators. This system allowed the appearance of an increasingly competing structure of support.

This structure is an organization and a space of support in terms of council and financing for carriers of projects. It also aims at regulating a new need as the possibility of providing the necessary resources to the creation of companies, to influence the intentions of the carriers of projects, to give a new dash to the concretization of the initiatives and to cause a greater participation of all the actors for a basic development.

This approach is based on the influence of the institutional factors (accompaniment, financing, seedbed...) on the behavior and the intention of an individual. Thus, we can expose our fifth assumption A5:

A 5: The political role exerts a positive and significant effect on the entrepreneurial intention of a public civil servant to create its own company by developing the formations, competences and relations resulting from the public office.



#### 2. METHODOLOGY AND RESULTS OF RESEARCH

Our preliminary stage consists in specifying the methodological approach adapted for the empirical validation of the conceptual model and to present with detail the results of the estimates and the necessary interpretations.

#### 2.1. Methodology of research

The sample object of our study is a sample built by the civils servant of the Tunisian public companies. The data acquisition carries a list of the statements proposed to 60 public civils servant of the Tunisian companies as a unit of relevant analysis, and the questionnaire was managed according to our selected sample.

Initially, we were interested in the validation of the questionnaire and thereafter the methods of data analysis on the one hand, and the validity of the structural model (assumptions of research) on the other hand. A certain number of items were retained to measure each one of dimensions of the entrepreneurial intention and thus, the scale of measurement was formed with a scale of Likert in 4 points varying from a very unfavorable report to a very favorable opinion.

In addition, a convergent validity on each measuring instrument is initially analyzed by the inter-items matrix of correlation which makes it possible to eliminate the least significant items (to accept the assumption of nullity of the coefficient of correlation of Pearson<sup>6</sup> between two items whose correlation is very weak) and thus, the factorial analysis in principal component (ACP) adapts enough with many situations when a certain level of multi-colinearity exists between the items for each treated dimension.

Our objective in this section is to validate empirically our assumptions of research in order to study the nature of the bond between the factors which can generate the intention or not of 60 civils servant of public companies. With this intention, we also propose for that a multinomial logit specification.

This is why an effective analysis of our model requires the recourse to various econometric techniques and these last will help us for better explaining the relation between our variables and the attitude with respect to the intention. At this level, we must justify the use of the model of discrete choice for a presentation of the multinomial log it.

<sup>&</sup>lt;sup>6</sup> The coefficient of correlation of Pearson makes it possible to measure the intensity of dependence between two items.

#### 2.2. Results of the estimates

Under the effect of the absence of a direct or reliable measurement of our variable dependent associated to the intentionality of the civils servant of the Tunisian public companies to create their own company, we resorted to the following question: Are you intend to create a company based on competences, formations and relations resulting from the public office?.

| <b>Table no°1:</b> Distribution of the entrepreneurial intention |
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|--|

|                   | Number | Percentage | Cumulated  |
|-------------------|--------|------------|------------|
|                   |        |            | percentage |
| Not agree         | 13     | 22,6%      | 22,6%      |
| I agree           | 18     | 29,5%      | 52,1%      |
| I perfectly agree | 29     | 48,2%      | 100%       |

According to the answers obtained, we note that almost 22,6% of the civils servant of the Tunisian public companies of our sample are not intensive, and this translated that they are downpours with the risk. The 18 which presents 29 5% of the sample choose the prospect B (I agree) what translates that these civils servant do not make an optimal decision but rather a satisfactory decision.

Moreover, the majority of the individuals of the sample choose the prospect C (I am very agree), that is to say 48,2%, and we note that the civils servant of the Tunisian public companies preferred the most favorable situations for the creation of a company based on the three alternatives: competences, formations and relations resulting from the public office.

On the basis of our descriptive result, it seems that the degree of intentionality for the civils servant of the Tunisian public companies in our sample is associated with a probabilistic measurement and that our model must depend at the same time on the degree of intentionality and the civils servant of the Tunisian public companies which represents the statistical unit in our study. At this level, the choice of a multinomial logist specification is most appropriate comparatively to that of a linear regression. Thus, the choice of the multinomial logistic regression is justified by the impossibility of the recourse to the linear regression for three reasons:

- The estimated model must depend at the same time on the individuals, alternatives and also on the explanatory factors of the intentionality;
- The linear regression tends ad infinitum when the value of the independent variable increase until the infinite
  one:
- The no-normality which is due to the asymmetry of information that is not respected by the linear regression.

For these reasons, we propose a multinomial logit specification. This is why, an effective analysis of our model requires the recourse to various econometric techniques and these last will help us with better explaining the relation between our variables and the attitude opposite with the intention.

The choice of the logit model depends on the measuring instrument inspired from the three alternatives acquired by the creators which are calculated taking into consideration the degree of intentionality.

<u>Alternative 1</u>: I not intend to create a company based on the competences, formations and relations resulting from the public office (**Degree of intentionality =1**)

<u>Alternative 2</u>: I intend to create a company based on the competences, formations and relations resulting from the public office (Degree of intentionality = 2)

<u>Alternative 3</u>: I am very intensive to create a company based on the competences, formations and relations resulting from the public office (Degree of intentionality = 3)

On the basis of these alternatives, one can identify how much the creators having the intention to create a company and the probability of chance so that the civils servant of the Tunisian public companies carry out a given level of intention on the one hand, and the profit of effectiveness as regards precision of the estimates on the other hand.

Thus, the model describing the probability of realization of a degree of intentionality compared to those which not intending to create a company is written as follows:

Log [Pr(Intention=2)/Pr(Intention=1) ] =  $\beta$ 0+  $\beta$ 1\*Desirability +  $\beta$ 2 Perceived Social Feasibility +  $\beta$ 3\* perceived Social Standard +  $\beta$ 4\* Entrepreneurial Identity +  $\beta$ 5 \* Political Role +  $\mu$ i (Equation1)

Analogically with the explanatory factors previously retained, the relation for causal purpose between highly disposed individuals compared to those nondisposed to create company is written as follows:

Log [Pr(Intention=3)/Pr(Intention=1) ] =  $\lambda$ 0 +  $\lambda$ 1 \* Desirability +  $\lambda$ 2 Perceived Feasibility +  $\lambda$ 3 \* Perceived Social Standard+  $\lambda$ 4 \* Entrepreneurial Identity +  $\lambda$ 5 \* Political Role +  $\xi$ i (Equation2)

With  $\mu$ i and  $\xi$ i indicate the term of error of null average and of variance equalizes with  $\sigma$ 1 and  $\sigma$ 2.

The statistical quality of the multinomial logit model rests on the predictive tools: Axiom of independence of the alternatives, calculation of the ratios of chance and calculation of the marginal effects and theory of predicted probability. In others words, we will empirically try to identify the predictive quality of our model by stressing the probability of good prediction for the realization of a high degree of intentionality and the probability of good prediction for the realization of a fairly high degree of intentionality. This approach will be initially justified by the axiom of independence between the three alternatives.

The assumption of independence of the nonrelevant alternatives (IIA<sup>7</sup>) is among the limits of the multinomial logit and which leads to the skews in the estimates. According to Debreu (1960), the respect of this axiom having harmful effects on our results since the application of a multinomial logit results in predicting the probabilities of intentionality for each civil servant in our study.

To check the connection or not between the three alternatives of degree of intentionality, we base ourselves on the statistics of Hausman (HM<sup>8</sup>) and Small (HS) which are based on the measure of the difference between the estimated parameters in the complete model and those in a model in which an alternative was removed. The table below reveals the results of this test.

**Table no 2:** Axiom of independence of the nonconcerned alternatives.

| Equations                                  | HM            | (SH)             |
|--|---------------|------------------|
|  | p-value       | p-value          |
| Degree of intentionality =1 in reference   |               |                  |
| Degree of intentionality =2 omitted Degree | 28,93(0,4)    | 2, 342(0,742) 9, |
| of intentionality =3 omitted               | 13,86(0,675)  | 21(0, 213)       |
| Degree of intentionality =2 in reference   |               |                  |
| Degree of intentionality =1 omitted Degree | 23,645(0,342) | 4,89(0, 456) 2,1 |
| of intentionality =3 omitted               | 19,76(0,894)  | 6(0, 876)        |
| Degree of intentionality =3 in reference   |               |                  |
| Degree of intentionality =1 omitted Degree | 34,76(0, 34)  | 8,34(0,117)      |
| of intentionality =2 omitted               | 7,23(0,54)    | 2,76(0,966)      |

H0:To accept the assumption of independence

Ha: To accept dependence

p-value :probability of accepting the alternative assumption which must be lower

than 10%

The results of the estimates show the independence between the three degree of intentionality. Indeed, the test of Hausman based on the statistics of Chi2 shows that one will accept the null assumption of independence (p-value is higher than the threshold of significativity of test which is lower than 10%). These results are confirmed by Small-Hsia<sup>9</sup> and so, our model is of type of independence of the alternatives and per consequence the dissimilarity of degree of intentionality.

For well predicting the quality of our model, we will try to calculate the ratio of chance or the ratio of risk (**odds Ratio**) which measures the ratio of the probability of high degree of intentionality of creating a company compared to those of weak degree of intentionality.

Under the assumption H0, the model must be specified by a ratio of chance lower than 1 and indicates that there is more chance for no intention to create a company based on the competences, formations and relations resulting from the public office. By opposition, the acceptance of the alternative assumption justifies the criterion of intensivity apprehended by the individuals of our sample and thereafter by a ratio of chance higher than 1. We suppose that RRi denote the ratio of chance conceived by the degree of intentionality.

<sup>&</sup>lt;sup>7</sup> If the variation is statistically significant assumption IIA is then rejected.

<sup>&</sup>lt;sup>8</sup> Hausman and Mc Fadder (1984) take into account that an alternative should not change systematically the estimate of the parameters.

<sup>&</sup>lt;sup>9</sup> Small and Hasio (1985) propose to test this assumption by dividing in a random way the sample.

**Table no °3:** Ratio of chance resulting from the multinomial logit model Explained Variable: "degree of intentionality".

| Determinants resulting from ACP  | Degree                                    | of     | Degree of    |        |  |
|--|---|--------|--------------|--------|--|
|  | intentionality =2                         |        | intentionali | ity =3 |  |
|  | Ratio risks                               | z-stat | Ratio risks  | z-stat |  |
| Desirability 1   | 0.82                                      | -0.18  | 0.69         | -1.55  |  |
| Desirability 2   | 0.89***                                   | -3.29  | 0.56         | -0.68  |  |
| Perceived Feasibility (behavioral control)   | 0.62                                      | -0.73  | 1.15**       | 2.44   |  |
| Perceived Feasibility (personal effectiveness)                                     | 1.74*                                     | 1.61   | 2.11**       | 2.36   |  |
| perceived social Standard  | 1.73*                                     | 1.66   | 1.85*        | 1.57   |  |
| Entrepreneurial Identity   | 0.902                                     | -0.34  | 1.65*        | 1.7    |  |
| Political Role   | 2.16***                                   | 3.31   | 3.06***      | 3.37   |  |
| Number of observations<br>L-likelihood<br>L-R Chi-two<br>p-value<br>R <sup>2</sup> | 60<br>-54.398194<br>27.26<br>0.06<br>0.17 |        |              |        |  |

<sup>(\* \* \*)</sup>Coefficient significant with the threshold of 1%

From the table above, the test of total significativity of Chi-two shows that the model is overall significant (p-value=0.06) and the test of likelihood makes it possible to make sure that the coefficients estimated on the two equations are simultaneously different from zero. The estimates exposed by the table above emphasize the crucial role played by these factors in the explanation of the intention of the civils servant of the Tunisian public companies and this idea is consolidated empirically by the presence of a fairly acceptable coefficient of determination ( $R^2 = 0.17$ ) and thus, a good quality of adjustment.

Our results of estimate based on the coefficient of ratio of risk show that one cannot accept the assumption A1 of the effect of the variable of "desirability" on the ratio of the chances to have an intention to create a company based on the competences, formations and relations resulting from the public office compared to those which they are not intensive (RR<1).

In addition, the results obtained show also that the coefficient associated with the variable **"entrepreneurial identity"** relating to the intention, is not statistically significant. This result is completely contradictory to the theoretical framework in our research. This assumption could not be validated. Indeed, the non-validity of this assumption can be explained by the sensitivity of this studied behavior in the exploratory phase.

Concerning the other factors, the test reveals the impact of a rise of these explanatory variables on the report of the chances of a high intention compared to those under-intensives (Intention=1). In others words, more chance than the individuals are intensive, than they are not. However, the effects of each variable differ according to two degrees' of intensivity.

Therefore, our model highlights the significant effects of "perceived feasibility", "perceived social standard" and "political Role" on the explanation of the intention. Indeed, if perceived feasibility increase by a unit, the logarithm of the probabilities report of the realization of intention 2 and intention1 increases by 1.74 with the threshold of significativity of 10% and that the logarithm of the probabilities report of the realization of intention 3 and intention1 increases by 2.11 with the threshold of significativity of 5%.

This indicator shows that more "the personal effectiveness" increases more their attitude with respect to the intention to create a company increases, and these results validate the assumption of Chering and Char (2000) according to which "perceived feasibility" apprehended by the personal effectiveness predicts the intentions for the creation of the companies since the individual has the capacity to take the actions well.

Thus, one can accept the assumption A2 of the effect of the variable "feasibility perceived" on the report of the chances to have the intention to create a company based on the competences, formations and relations resulting from the public office.

<sup>(\* \*)</sup>Coefficient significant with the threshold of 5%

<sup>(\*)</sup>Coefficient significant with the threshold of 10

Concerning the variable "perceived social standard", our results of the estimates show the significant and positive influence of this variable on the degree of intentionality. Indeed, a rise of 1% of the perceived social standard generates an increase by 1.73 in the logarithm of the probabilities report of the realization of a degree of intentionality 2 and 1, and by 1.85 in that of a degree of intentionality 3 et1. Therefore, these results obtained validate the assumption A3 according to which the behavioral intention would be identified by the attitude of the person and its relative social standards.

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Thus, our results of the estimates confirm our theoretical predictions conceived by Fishlin (1975) according to which the perceived social standards appear as a public perceptions of the civils servant and by their motivation to create companies. Moreover, the assumption according to which the political role affects the degree of intentionality is validated. Indeed our results show that the coefficients associated with the variable "political Role" are statistically significant with the threshold of 1% and with a positive sign, which translates the positive relation between the political role and the attitude opposite the intention. Thereafter, these results obtained validate the assumption A5 according to which the behavioral intention would be identified by the political role.

In others words, our empirical results go in par with our theoretical predictions conceived by Kostova (1997) according to which the political role appears as a means of motivation and support of the public civils servant to create companies.

#### **CONCLUSION**

The principal objective of this paper is to validate empirically our assumptions of research in order to study the nature of the bond between the factors which can generate the intention or not of 60 civils servant of public companies. At this level, our analysis shows that there is no significant effect of the desirability and the entrepreneurial identity on the ratio of the chances to have an intention to create a company based on the competences, formations and relations resulting from the public office compared to those which they are not intensive.

By opposition, our results of estimates highlight the significant effects of perceived feasibility, perceived social standard and political role on the explanation of the intention to create a company based on the competences, formations and relations resulting from the public office.

In other words, our empirical analysis confirm the ideas stipulated by Fishlin (1975), Chering and Char (2000) and Kostova (1997) of the factors of the entrepreneurial intention when it is about the category of the public civils servant.

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# Appendex 1 Test of independence of alternatives (IIGA)

| Variable<br>INTENTIONALI  | Q3<br>TY 14,00           | Maximum<br>0 16,00               | 0                  |                         |   |
|---|--------------------------|----------------------------------|--------------------|-------------------------|---|
| Source  | SS                       | df                               | MS                 |                         | Number of obs = $6$<br>F( 2, $58$ ) = $1064.57$                   |
| Model  <br>Residual   | 9950.92743<br>271.072567 | 2 4975<br>58 4.6                 | 5.46372<br>7366494 |                         | Prob > F = 0.0000<br>R-squared = 0.7735                           |
| Total   | 10222                    | 60 170                           | .366667            |                         | Adj R-squared = 0.7726<br>Root MSE = 2.1619                       |
| intentionn~e  |                          | Std. Err.                        |                    | P> t                    | Beta  |
| add_desirab  <br>add_standard   |                          |                                  |                    |                         | .4763727<br>.4066407  |
| Source  |                          | df                               | MS                 |                         | Number of obs = $60$<br>F( 3, $57$ ) = $741.43$                   |
|   | 9966.59516<br>255.404844 | 57 4.48                          | 3078674            |                         | Prob > F = 0.0000<br>R-squared = 0.7750<br>Adj R-squared = 0.7737 |
| Total   |                          |                                  |                    |                         | Root MSE = 2.1168   |
| intentionn~e  | Coef.                    | Std. Err.                        | t                  | P> t                    | Beta  |
| add_standard  <br>add_desirab  <br>add_feasabil                                     | .2588334<br>.2072869     | .1384186<br>.0862643<br>.1032362 | 1.87<br>2.40       | 0.067<br>0.020<br>0.007 | .2650461  |
| Source  | SS                       | df                               | MS                 |                         | Number of obs = 60<br>F(5, 55) = 665.98                           |
| Residual  | 10055.9053<br>166.09467  | 5 2011<br>55 3.01                | l.18107<br>1990309 |                         | Prob > F = 0.0000<br>R-squared = 0.7838<br>Adj R-squared = 0.7823 |
| •   | 10222                    |                                  |                    |                         | Root MSE = 1.7378   |
| intention~  | Coef.                    | Std. Err.                        | t                  | P> t                    | Beta  |
| add_identity  <br>role_profe~1  <br>add_standard  <br>add_desirab  <br>add_feasabil | .4820269<br>0722536      | .0908113<br>.0726678             | 5.31<br>-0.99      | 0.000                   | .6595047<br>1433715<br>.2281914<br>.2315231                       |
| add_feasabil  | .1455118                 | .088864                          | 1.64               | 0.107                   | .143117   |

| Source  | SS   | df   | MS                           |                         | Number of obs                              |   |  |
|---|--|--|------------------------------|-------------------------|--|---|--|
| <br>Model   | 10052.9198   | 4  | 2513.22994                   |                         | F( 4, 56)<br>Prob > F                      |   |  |
| Residual  |  |  | 3.01929007                   |                         | R-squared                                  |   |  |
| +   |  |  |                              |                         | Adj R-squared                              | =                                       |  |
| Total   | 10222  | 60   | 170.366667                   |                         | Root MSE                                   | =                                       | 1.7376   |
| intention~e   | Coef.  | Std. E   | rr. t                        | P> t                    |  |   | Beta   |
| add_desirab   | .127131  | .0723  | 813 1.76                     | 0.084                   |  |   | .2143271   |
| add_feasabil  | .151439  | .0886  | 549 1.71                     | 0.093                   |  |   | .1489466   |
| add_standard  | .1538664   | .1153  | 073 1.33                     | 0.187                   |  |   | .1575596   |
| add_identity  | .4466057   | .0835  | 236 5.35                     | 0.000                   |  |   | .6110418   |
|   |  |  |                              |                         |  |   |  |
| Source  | SS   | df   | MS                           |                         | Number of obs                              |   |  |
| <br>Model   | 9970.81989   | 4  | 2492.70497                   |                         | F( 4, 56)<br>Prob > F                      | =                                       | 555.74<br>0.0000   |
|   | 9970.81989   | 4  |                              |                         | F( 4, 56)<br>Prob > F<br>R-squared         | = =                                     | 555.74<br>0.0000<br>0.7754   |
| <br>Model   | 9970.81989<br>251.180114   | 4<br>56  | 2492.70497                   |                         | F( 4, 56)<br>Prob > F                      | =<br>=<br>=<br>! =                      | 555.74<br>0.0000<br>0.7754<br>0.7737   |
| Model  <br>Residual   | 9970.81989<br>251.180114   | 4<br>56<br>60                                      | 2492.70497<br>4.48535917     | <br>P> t                | F( 4, 56) Prob > F R-squared Adj R-squared | =<br>=<br>=<br>! =                      | 555.74<br>0.0000<br>0.7754<br>0.7737   |
| Model  <br>Residual  <br>   | 9970.81989<br>251.180114<br>   | 4<br>56<br>60<br>Std. E:                           | 2492.70497<br>4.48535917<br> |                         | F( 4, 56) Prob > F R-squared Adj R-squared | =<br>=<br>! =<br>! =                    | 555.74<br>0.0000<br>0.7754<br>0.7737<br>2.1179   |
| Model   Residual   Total    intention~e   add_desirab   add_feasabil                | 9970.81989<br>251.180114<br>10222<br>Coef.<br>.1891698<br>.2850884             | 4<br>56<br>60<br>Std. E:                           | 2492.70497<br>4.48535917<br> | 0.037                   | F( 4, 56) Prob > F R-squared Adj R-squared | =<br>=<br>! =<br>=                      | 555.74<br>0.0000<br>0.7754<br>0.7737<br>2.1179<br><br>Beta                                 |
| Model   Residual   Total    intention~e   add_desirab   add_feasabil   add_standard | 9970.81989<br>251.180114<br>10222<br>Coef.<br>.1891698<br>.2850884<br>.1742499 | 4<br>56<br>60<br>Std. E:<br>.088<br>.1034<br>.1636 | 2492.70497<br>4.48535917<br> | 0.037<br>0.008<br>0.291 | F( 4, 56) Prob > F R-squared Adj R-squared | = | 555.74<br>0.0000<br>0.7754<br>0.7737<br>2.1179<br>Beta<br>.3189169<br>.2803964<br>.1784324 |
| Model   Residual   Total    intention~e   add_desirab   add_feasabil                | 9970.81989<br>251.180114<br>10222<br>Coef.<br>.1891698<br>.2850884             | 4<br>56<br>60<br>Std. E:                           | 2492.70497<br>4.48535917<br> | 0.037<br>0.008<br>0.291 | F( 4, 56) Prob > F R-squared Adj R-squared | = | 555.74<br>0.0000<br>0.7754<br>0.7737<br>2.1179<br>Beta<br>.3189169<br>.2803964             |

# Appendex 2 Result of the estimates

| Multinomial logistic regression | Number of obs | = | 60     |
|---------------------------------|---------------|---|--------|
|                                 | Replications  | = | 50     |
|                                 | Wald chi2(16) | = | 2.57   |
|                                 | Prob > chi2   | = | 0.9999 |
| Log likelihood = -54.084894     | Pseudo R2     | = | 0.1419 |

|              |           | Bstrap *  |       | - 1 1 |            |          |
|--------------|-----------|-----------|-------|-------|------------|----------|
| intention    | Coef.     | Std. Err. | Z     | P> z  | [95% Conf. | Interval |
|              | +<br>'    |           |       |       |            |          |
| 2            | 4544045   | 1.60 5000 |       |       | 222 2454   |          |
| desir_d_a~10 | .4541315  | 169.7988  | 0.00  | 0.998 | -332.3454  | 333.2537 |
| desir_d_a~20 | 1982997   | 59.47609  | -0.00 | 0.997 | -116.7693  | 116.3727 |
| feasabilitél | 6352032   | 382.4043  | -0.00 | 0.999 | -750.1339  | 748.8635 |
| feasabilité2 | .3472028  | 184.7716  | 0.00  | 0.999 | -361.7986  | 362.493  |
| role_pol1    | .4659695  | 275.0873  | 0.00  | 0.999 | -538.6952  | 539.6271 |
| role_pol2    | 2085524   | 27.5134   | -0.01 | 0.994 | -54.13383  | 53.71673 |
| stand_social | .7835463  | 84.40469  | 0.01  | 0.993 | -164.6466  | 166.2137 |
| identity e~p | 5940692   | 36.42372  | -0.02 | 0.987 | -71.98324  | 70.7951  |
| _cons        | -1.675597 | 301.8183  | -0.01 | 0.996 | -593.2287  | 589.8775 |
| 3            | +<br>     |           |       |       |            |          |
| desir_d_a~10 | .3077765  | .5760306  | 0.53  | 0.593 | 8212228    | 1.436776 |
| desir_d_a~20 | .1139173  | .4766549  | 0.24  | 0.811 | 8203093    | 1.048144 |
| feasabilité1 | .673815   | 1.606058  | 0.42  | 0.675 | -2.474     | 3.82163  |
| feasabilité2 | 4055138   | 2.293786  | -0.18 | 0.860 | -4.901252  | 4.090224 |
| role_pol1    | .4143205  | .5082738  | 0.82  | 0.415 | 5818778    | 1.410519 |
| role_pol2    | 129044    | .4272986  | -0.30 | 0.763 | 966534     | .7084459 |
| stand_social | 0304264   | .9601406  | -0.03 | 0.975 | -1.912267  | 1.851415 |
| identity_e~p | 3820801   | .6296148  | -0.61 | 0.544 | -1.616103  | .8519423 |
| _cons        | -2.202957 | 6.897406  | -0.32 | 0.749 | -15.72162  | 11.31571 |

(intention==1 is the base outcome)

hausman-Mc Faadden / Cook-Weisberg
Ho: independante alternative
chi2(58) = 28.93
Prob > chi2 = 0.4108

SmallHasio test using powers of the fitted values of intention Ho: model has no omitted alternative

chi2(58) = 2.34

9.21 Prob > chi2 =

Multinomial logistic regression Number of obs Replications 50 1.72 Wald chi2(16) Prob > chi2 =

1.0000 Log likelihood = -54.084894 Pseudo R2 0.1419

| intention    | Coef.        | Bstrap *<br>Std. Err. | z     | P>   z | [95% Conf. | Interval] |
|--------------|--------------|-----------------------|-------|--------|------------|-----------|
| 1            | +<br>        |                       |       |        |            |           |
| desir d a~10 | <br> 4541315 | 1.407541              | -0.32 | 0.747  | -3.212862  | 2.304599  |
| desir_d_a~20 | .1982997     | .6433862              | 0.31  | 0.758  | -1.062714  | 1.459314  |
| feasabilité1 | .6352032     | 3.120715              | 0.20  | 0.839  | -5.481287  | 6.751693  |
| feasabilité2 | 3472028      | 2.777503              | -0.13 | 0.901  | -5.79101   | 5.096604  |
| role_pol1    | 4659695      | 1.005558              | -0.46 | 0.643  | -2.436826  | 1.504887  |
| role_pol2    | .2085524     | .7651826              | 0.27  | 0.785  | -1.291178  | 1.708283  |
| stand_social | 7835463      | 4.003741              | -0.20 | 0.845  | -8.630734  | 7.063641  |
| identity_e~p | .5940692     | .8334874              | 0.71  | 0.476  | -1.039536  | 2.227675  |
| _cons        | 1.675597     | 30.1517               | 0.06  | 0.956  | -57.42065  | 60.77184  |
| 3            | +<br>        |                       |       |        |            |           |
| desir_d_a~10 | 146355       | 1.047029              | -0.14 | 0.889  | -2.198494  | 1.905784  |
| desir_d_a~20 | .312217      | .6574152              | 0.47  | 0.635  | 9762932    | 1.600727  |
| feasabilité1 | 1.309018     | 2.729566              | 0.48  | 0.632  | -4.040833  | 6.658869  |
| feasabilité2 | 7527167      | 2.617116              | -0.29 | 0.774  | -5.88217   | 4.376737  |
| role_pol1    | 051649       | .6437037              | -0.08 | 0.936  | -1.313285  | 1.209987  |
| role_pol2    | .0795084     | .6496349              | 0.12  | 0.903  | -1.193753  | 1.352769  |
| stand_social | 8139727      | 4.018943              | -0.20 | 0.839  | -8.690957  | 7.063011  |
| identity_e~p | .211989      | .4739721              | 0.45  | 0.655  | 7169792    | 1.140957  |
| _cons        | 5273597      | 31.46451              | -0.02 | 0.987  | -62.19667  | 61.14196  |
|              |              |                       |       |        |            |           |

(intention==2 is the base outcome)

hausman-Mc Faadden / Cook-Weisberg Ho: independante alternative

chi2(58) 23.64 Prob > chi2 = 0.342

SmallHasio test using powers of the fitted values of intention

Ho: model has no omitted alternative

chi2(58) =4.89 Prob > chi2 = 0.456

| Multinomial logistic regression | Number of obs | = | 60     |
|---------------------------------|---------------|---|--------|
|                                 | Replications  | = | 50     |
|                                 | Wald chi2(16) | = | 1.16   |
|                                 | Prob > chi2   | = | 1.0000 |

Log likelihood = -54.084894Pseudo R2 0.1419

| intention    | Coef.     | Bstrap *<br>Std. Err. | z     | P>   z | [95% Conf.  | Intorrall |
|--------------|-----------|-----------------------|-------|--------|-------------|-----------|
| Incention    | COEI.     | stu. EII.             | 2     | P>   Z | [95% COIII. | Incervar  |
| 1            |           |                       |       |        |             |           |
| desir_d_a~10 | 3077765   | .9539438              | -0.32 | 0.747  | -2.177472   | 1.561919  |
| desir_d_a~20 | 1139173   | .8432707              | -0.14 | 0.893  | -1.766697   | 1.538863  |
| feasabilité1 | 673815    | 2.090764              | -0.32 | 0.747  | -4.771636   | 3.424006  |
| feasabilité2 | .4055138  | 3.784693              | 0.11  | 0.915  | -7.012348   | 7.823376  |
| role_pol1    | 4143205   | .8676924              | -0.48 | 0.633  | -2.114966   | 1.286325  |
| role_pol2    | .129044   | .655508               | 0.20  | 0.844  | -1.155728   | 1.413816  |
| stand_social | .0304264  | 1.834125              | 0.02  | 0.987  | -3.564393   | 3.625246  |
| identity_e~p | .3820801  | 1.178538              | 0.32  | 0.746  | -1.927811   | 2.691971  |
| _cons        | 2.202957  | 11.43374              | 0.19  | 0.847  | -20.20677   | 24.61268  |
|              | ·         |                       |       |        |             |           |
| 2            |           |                       |       |        |             |           |
| desir_d_a~10 | .146355   | 1.723027              | 0.08  | 0.932  | -3.230715   | 3.523425  |
| desir_d_a~20 | 312217    | 1.579038              | -0.20 | 0.843  | -3.407075   | 2.782641  |
| feasabilitél | -1.309018 | 4.139221              | -0.32 | 0.752  | -9.421742   | 6.803706  |

```
0.27
                           2.786621
                                                 0.787
faisabilité2 | .7527167
                                                          -4.70896
                                                                       6.214393
                           2.262646 0.02
.6925506 -0.11
2.502659 0.33
.9534531 -0.22
  role_pol1
                 .051649
                                                 0.982
                                                          -4.383056
                                                                       4.486354
              -.0795084
                                                                     1.277866
   role_pol2
                                                0.909
                                                         -1.436883
               .8139727
-.211989
stand_social
                                                0.745
                                                          -4.091149
                                                                       5.719094
identity_e~p
                                                0.824
                                                         -2.080723
                                                                       1.656745
     _cons | .5273597 9.259309 0.06 0.955 -17.62055
                                                                     18.67527
```

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SmallHasio test using powers of the fitted values of intention

Ho: model has no omitted alternative chi2(58) = 8.34

Prob > chi2 = 0.1178