

## **Preferences in areas of professional performance of young students of statistics close to graduating from the Central University of Venezuela**

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### **Abstracts**

Motivated to identify the causes of the unequal distribution of statisticians in areas of professional performance, we conducted a descriptive analysis of professional preferences and expectations of young students in statistics, who will graduate from the Central University of Venezuela (UCV) in 2013, supported by surveys. This analysis will help to identify the areas where young people prefer to perform as well as the reasons for their current or future work choices.

Keywords: labor market, expectations, survey

### **1. Introduction**

The unequal distribution of statisticians in areas of performance, causes two major problems: (1) The labor demand in certain areas exceeds the available supply (2) The labor supply in certain areas exceeds the available demand.

In the first case, the deficit of labor supply leads the institutions to employ professionals of related careers, who are not trained to perform tasks that correspond to a statistician. This fact generates other problems such as underdevelopment of statistical applications in certain sectors.

In the second case, the deficit of labor demand leads to a higher proportion of unemployed professionals and employed who are performing activities not related to their profession, causing discontent in this group.

The concentration of statisticians in certain areas of performance is mainly due to two causes: (1) preferences of the person, and (2) Lack of knowledge of some areas of statistical application. Preferences can be associated with economic, social, cultural, institutional, among others. Moreover, the lack of knowledge of some application fields by our students and graduates, can be remedied with the support of the professorate of the School of Statistics and Actuarial Sciences of this University.

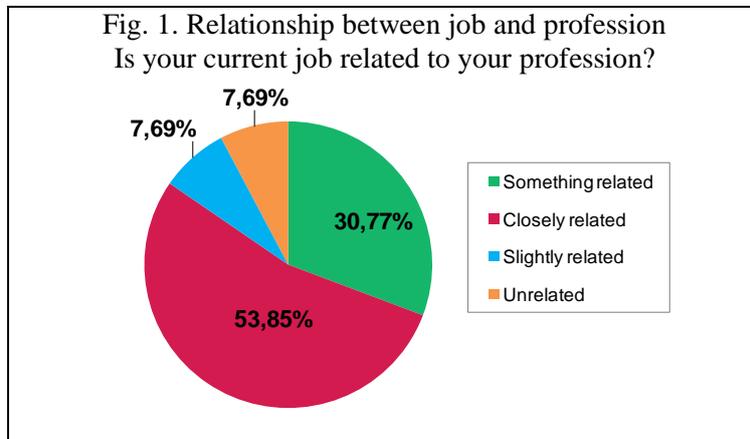
Motivated to identify the labor preferences of young statisticians close to graduating from the Central University of Venezuela (2013) and the fields that are of little knowledge in this population, we conducted a descriptive analysis, supported by surveys. The analysis determines what respondents think about different aspects of working in business and the reasons for their current or future work choices.

The results of this analysis will help to identify the areas in which young statisticians prefer to perform as well as their current employment status, serving as input to the Venezuelan Guild of Statisticians and Actuaries, in making decisions for the implementation of measures to break this pattern seen in recent years.

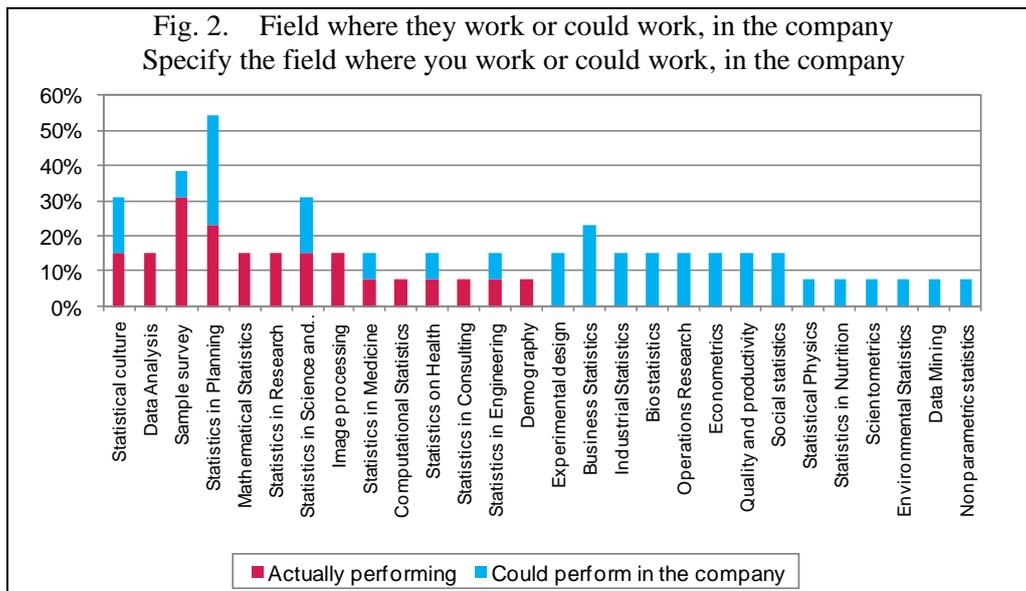
## 2. Results

This section shows some preliminary empirical findings, from a survey applied in a sample that represents approximately 51% of the population under study. The sample consists of young people aged between 22 and 30 years. The 61.53% of them rated the socioeconomic level of their home as "Medium".

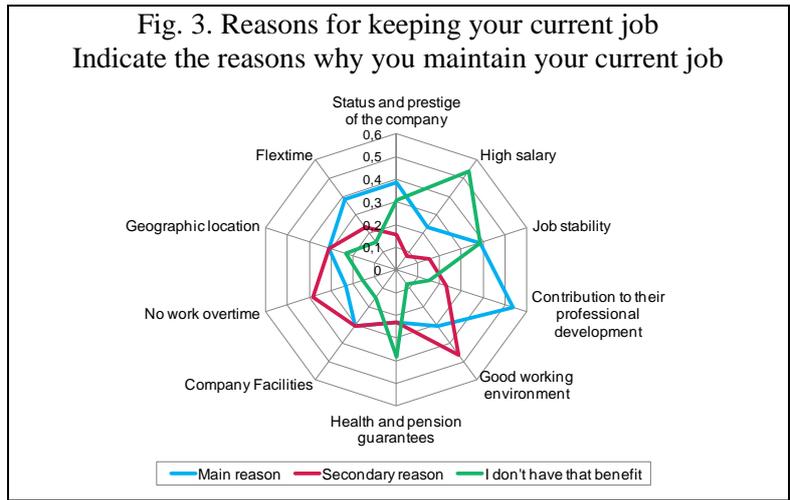
The first finding about the employment situation of the youths interviewed is that none of them is currently unemployed, and 53.85% are currently working in something related with the statistical area. (Figure 1)



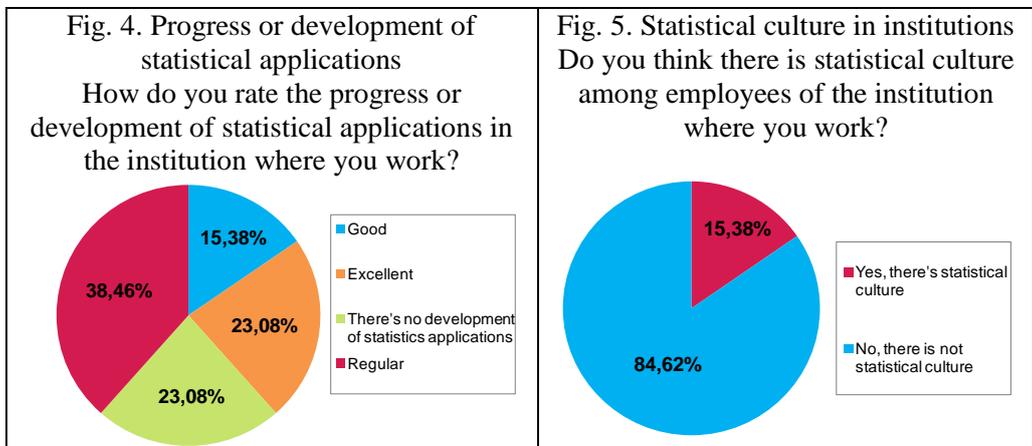
About the industry where they work, 85% work in the public sector, being the most common fields they perform: sample surveys (30.76%) and statistics in planning (23.07%). The potential fields they could perform, in the company where they currently work are: statistics in planning (30.76%) and statistics in business (23.07%). (Figure 2).



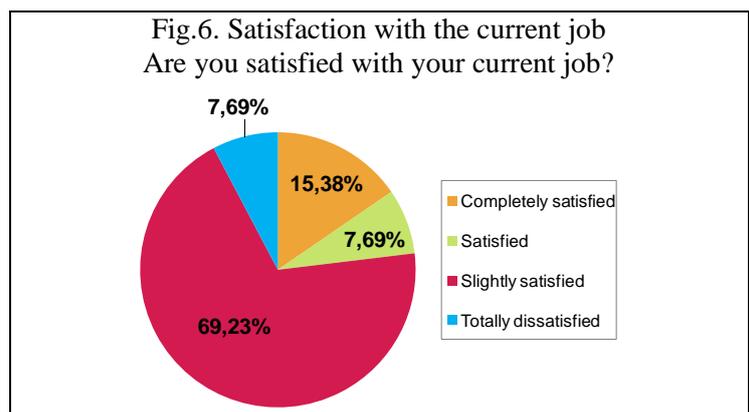
When asked about the reasons why the young people interviewed maintain their current employment, it was found that the main reason is because it contributes to their professional development. One aspect that has drawn more attention is that approximately 54% said they do not perceive high wages and nearly 39% reported not having health and pension guarantees and job stability. (Figure 3).



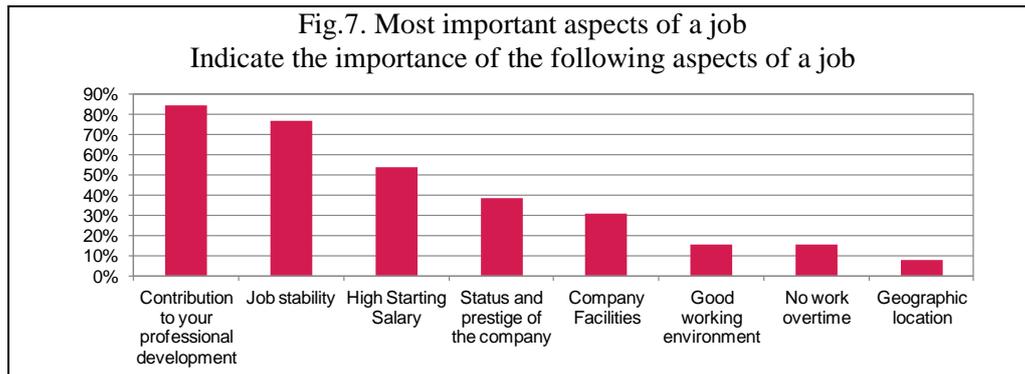
Approximately 39% of young people interviewed, stated that the company where they work have a good or excellent development of statistical applications (Figure 4). However, about 85% said that there is not statistical culture among employees of the institution, it must be treated so the company employees could develop critical judgment regarding numerical and statistical information (Figure 5).



The 23.07% of young people are satisfied or completely satisfied with their current job. This group declared to perceive high-income, job stability, health and pension guarantees, and contribute to their professional development because their employment is closely related to their profession.

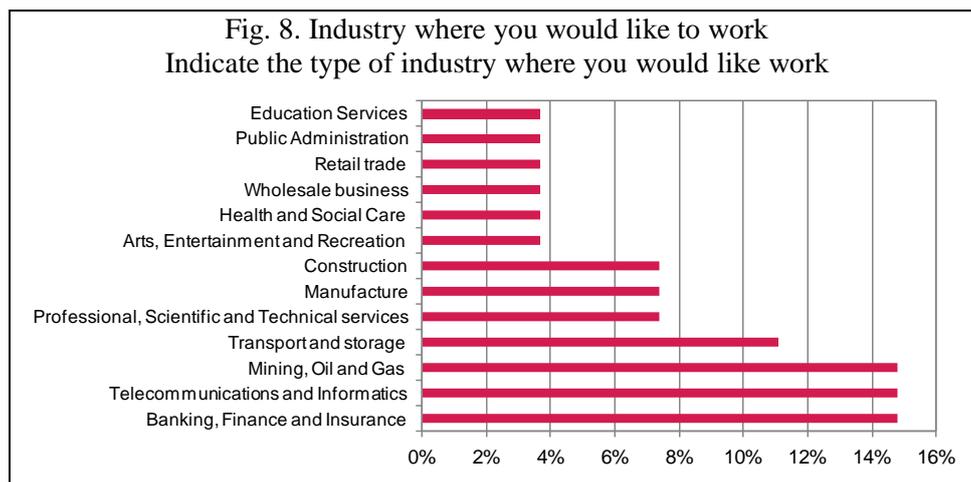


Once characterized the current employment status of the respondents, were asked about their job preferences.

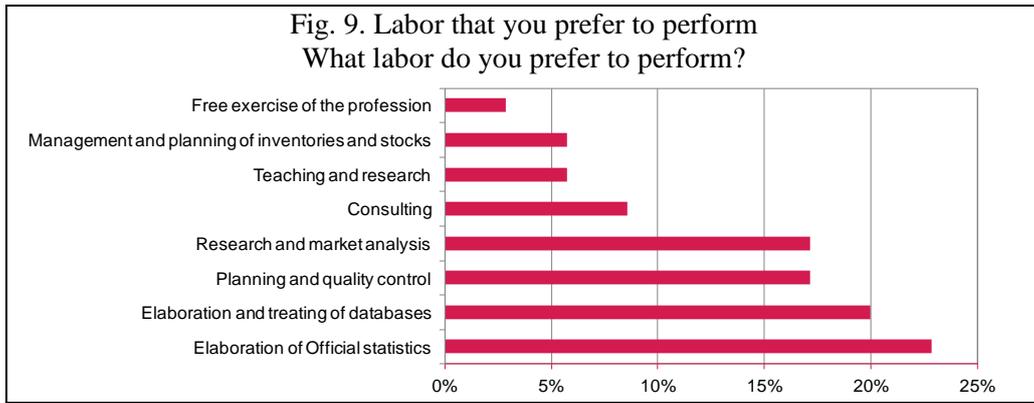


The most important aspects of a job for most of the young people interviewed, are contributing to their professional development, job stability and high starting salary. Other aspects of secondary importance are the company's facilities, status and prestige. An important finding is to know that young graduates prefer to acquire more learning and experience before getting high salary benefits, when job stability is guaranteed. (Fig. 7).

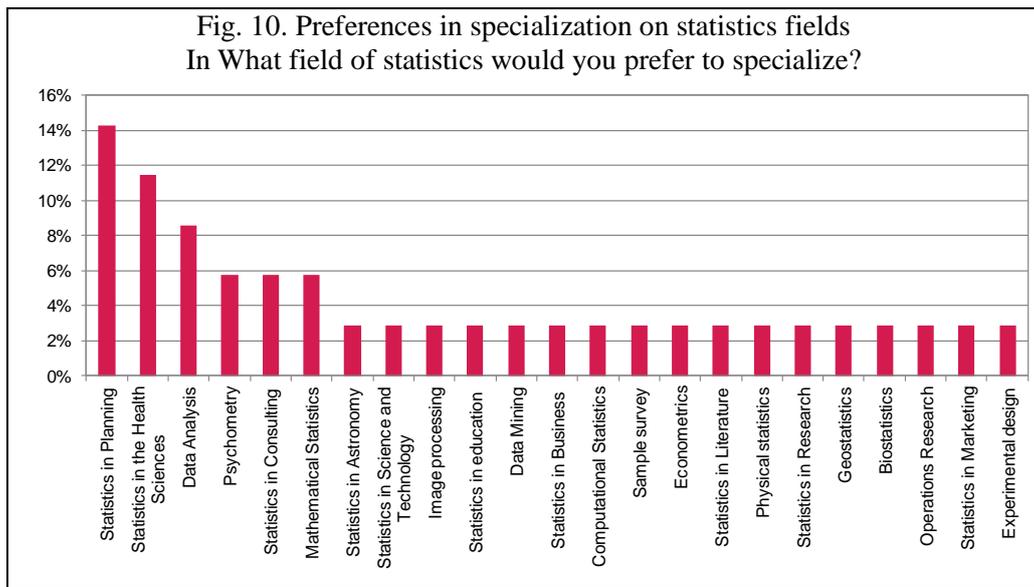
The types of industry with greater preference are Banking and Finance, Telecommunications and Information Technology, Mining, oil and gas, Transportation and storage (Figure 8). In this respect, the results were as expected considering the main industries in the country.



The labors with greater preference of the respondents are: Development of official statistics, elaboration and treating of databases, planning and quality control, research and market analysis. (Figure 9). It is important to contrast that planning was one of the areas that respondents considered most promising in the institution (Figure 2).



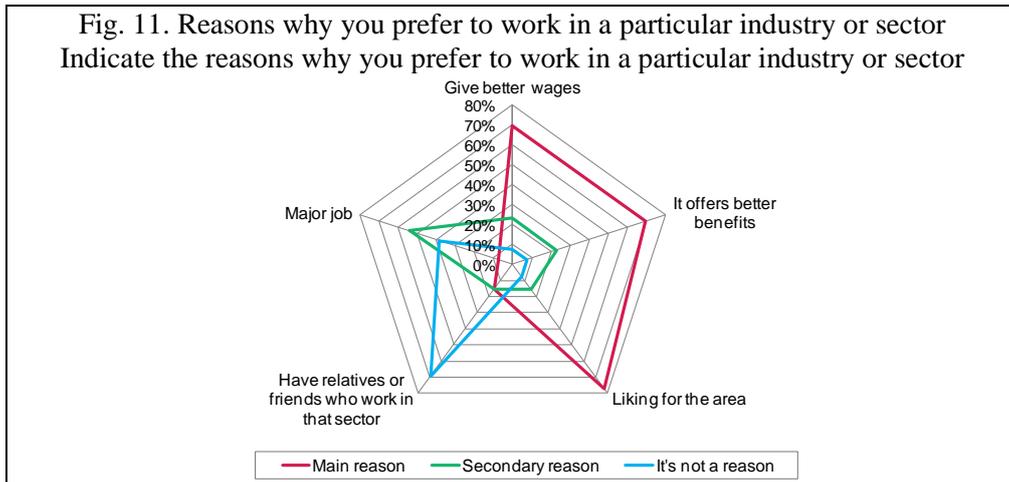
These results are consistent with specialization preferences in young statisticians (Figure 10), since the results indicate that planning is most preferred, followed by statistics in health sciences and data analysis.



The main reasons why young people prefer to work in a particular industry or sector are the liking for the area, and because it offers better wages and benefits (Figure 11). Remember that an important part of respondents declared not to perceive high income, being this one of the main reasons why they are not fully satisfied with their work. Certainly, preferences play an important role in the choice of young people, but it was determined that there is a strong link with the benefits they give.

The secondary reason observed most frequently is the largest job offer. This aspect also influences the choice of young people, because in some cases the benefits of working in a particular field are very good, however the labor supply is reduced.

The aspect that less influences the choice of a particular workplace is that they have family or friends who work in that sector.



### 3. Conclusions

The young people interviewed work mainly in public companies indicating a deficit of statisticians in the private sector. This is due to the organizational structure of companies, usually in the public sector there is a department of statistics, which is not covered in the organizational structure of most private companies.

The preferences of specialization and job performance were focused primarily on the planning area, which has great potential in institutions. Another area that has potential to be performed in institutions is statistics in business; however, none of the young people interviewed is working in this field currently.

Mostly of the young people interviewed are not satisfied with their current job, however, have said that they have kept it for the contribution to their professional development.

The main reasons why young people prefer to work in a particular industry or sector are the liking for the area, wages and benefits. The job offer also influences the choice of young people because some prefer to receive fewer benefits but to enjoy a larger labor supply.

Finally, we indicate areas that have a greater lack of knowledge by young graduates, with the purpose of taking action on this issue. These are: statistics in literature, statistics in law, statistics in restoration, chemometrics and scientometrics.

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