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DETERMINING FACTORS THAT INFLUENCE JOB EXPECTATIONS OF UNIVERSITY STUDENTS IN THE AGRI-FOOD AND BIOSYSTEMS AREA

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ABSTRACT. This paper analyzes the factors that affect the creation of job expectations of university students who pursue different degrees within the area of agri-food and biosystems in Spain. The objective is to establish a theoretical model that would allow for contrast analysis in future works. A review of previous literature on the topic, as well as a field study with a survey of 246 students, have been conducted to this end. The survey defined the different sociological, economic and motivational characteristics that could affect students' job expectations. A contrast of non-parametric statistics and Pearson's Chi-Square correlation test was applied to the analysis. The obtained results show that there are 5 main factors that affect the creation of job expectations of young university students: (1) economic stability, (2) characteristics of the job, (3) personal and formative maturity, (4) family influences, and (5) job satisfaction within the workplace.

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Introduction

As with many economic sectors, the agri-food industry has been negatively affected by the situation caused by Covid-19. Thus, even though the Spanish agri-food industry has managed to grow over the years, according to the last quarter data from the Active Population Survey (Encuesta de Población Activa) by the Institute of Statistics (INE), the pandemic has

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caused a decrease of 0.92% in 2020 compared to the previous year. As of 2020, the sector also employed 1,298,500 people, which represents 25,300 fewer jobs (fall of 1.91%) than in 2019. The overall unemployment rate in the country increased by 4.81%, standing at 239,900 (11,000 more unemployed than the previous year) (Migueláñez, 2021), while the agri-food sector accounted for 6.45% of unemployment in Spain.

Labor has a fundamental role in the creation of social welfare, positively impacting the development of the world economies. Indeed, the United Nations Sustainable Development Goals (SDGs) include Goal 8 – decent work and economic growth for all, since sustained and inclusive economic growth can drive progress, create decent jobs for all, and improve living standards (UN, 2022). Therefore, labor insertion is an issue that concerns public administrations, companies, and society, as reflected in many national and international reports, as well as constantly discussed in the media (Martínez-Clares and González-Lorente, 2021).

At the same line, universities' objectives have included, *inter alia*, the training and preparation of students for incorporation into professional field for some years (García Blanco and Cárdenas Sempertegui, 2018). In fact, scientific research on the employability of university graduates has experienced a significant upsurge in interest (Ruiz-Corbella et al., 2019; Abelha et al., 2020). In this context, this paper aims to identify the factors that influence the creation of professional expectations of undergraduate students of the agri-food and biosystems fields in Spain. A field study has been developed with a sample of 246 students to achieve this goal. Specifically, the study was developed in the Higher Technical School of Agronomic, Food and Biosystems Engineering (*Universidad Politécnica de Madrid*), which is the largest institution by size and number of students in Spain and offers excellent professional job opportunities in the sector.

This paper contributes to the research on the topic by presenting the main factors that defined the preferences and job expectations of young university students in the 2020-2021 academic year. This period was characterized by great general confusion and a global crisis caused by Covid-19. The twofold impact of pandemic on the labor sphere appears mostly in negative dynamics of employment and related risks (Mishchuk et al., 2023; Kulikowski et al., 2022; Vysochyna et al., 2023); however, the significant increase of digital skills and ICT development should be considered as well (Bilan et al., 2023; Kersan-Škabić and Vukašina, 2023). According to the report *Being Young in Times of Pandemic* (2021) by González-Anleo et al., Spanish youth believed that their future life would be better than that of their parents based on a survey during the months of confinement in Spain. However, 49% believed that they would have great difficulty in being able to work in the field they like; 41% thought that being economically self-sufficient would be highly or very highly difficult; and 52% believed that it was quite or very likely that they would have to leave Spain to be able to work in the future, especially to find better-paid jobs and be able to improve their living standards (González-Anleo et al., 2021). Moreover, Simionescu (2022) analyzed the impact of the COVID-19 pandemic on cybernetics students' decision to get a job in this period, finding that the pandemic stimulated more students to get a job.

If it is always interesting for companies to predict what will motivate future workers in the search and management of their employment, even more so in the current context, since these last generations of students have experienced unusual situations. Similarly, awareness of the different aspects that influence the interests and perceptions of students about the labor market is important in terms of advancing the improvement and functionality of university education (González Lorente and Martínez Claes, 2016). Consequently, this paper aims to offer information about the variables that affect the professional prospects of higher education students from their own perspective on the future insertion into the labor market. These factors are likely to be also relevant in economic sectors beyond the agri-food industry. Likewise, they

can be included in mathematical models suitable for use by academics who want to deepen various aspects of research, as in the studies such as that of Krauss Delorme et al. (2018).

This paper starts with a literature review on topics related to work expectations and conditioning factors. The methodology used to develop the research is described next, as well as the results obtained. Finally, the main conclusions and implications, the limitations of the study and future research ideas are presented in the last section.

1. Literature review

The Theory of Planned Behavior (TPB) (Ajzen, 1991; 2011) serves as a frame of reference for research since intention is considered an indicator of the degree of individual or group effort and the willingness to execute a behavior when there is an opportunity and it is the right time. The three factors that explain the behavior are: 1) personal evaluation, 2) social pressure and 3) the perceived ease or difficulty in its development. The questionnaire on which the research was based used this theory. TPB is a very useful tool to explain individual behavior and to be able to predict future intentions, so in the previous literature it has been applied in research with university students (Presley et al., 2010; Su et al., 2021). In this research it is used to forecast the labor expectations of undergraduate students, because, as Pérez Carbonell and Ramos Santana (2015) point out, labor insertion depends, to a large extent, on the behavior towards the labor market.

Most young people who decide to get a university degree are motivated by the possibility of having a better and easier access to the labor market once they finish their studies. In most cases, they look for good working conditions and a job directly related to their major (Fernández Jiménez et al., 2019; Fényes et al., 2021). As highlighted by the International Labor Organization report, people with a university degree are better placed to face both the challenges and difficulties of future job demands, such as artificial intelligence and automation (ILO, 2020). Likewise, according to González-Anleo et al. (2021), most young Spanish students recognize the importance of training, and this high link with education and educational centers is motivated by the possibility of getting a good employment in the future.

However, as González Lorente and Martínez Clares (2016) and Ruiz-Corbella et al. (2019) point out, labor insertion is a complex process, which depends on various external factors – economic, social, demographic, etc. – and internal – training, skills, interests, etc., of each person. These authors show how the problems and difficulties in accessing employment are emphasized by constant economic, technological and social changes. Consequently, success in incorporation will depend not only on the higher education received, but also on the personal attitude, as well as the external context. Recently, Maquera-Luque et al. (2021) also show the socio-economic and cultural factors that influence the labor insertion of university graduates.

Although it is difficult to influence contextual factors, it is possible to do so on those intrinsic personal aspects. Regarding training, in recent years, companies have been modifying their offers to adapt the demands of a changing environment. Thus, when designing the profile of a certain job, they pay more interest at the map of required competencies than at the current characteristics of the person; this is, what the candidates are able to do and learn, rather than what they have done so far. Both, teachers and students, must be aware of this new reality and focus, not only on the academic knowledge, but also on the skills and competences that will be required (Riera-Prunera et al., 2018; Riu et al., 2020; Jackson and Konczos Szombathelyi, 2022; Potjanajaruwit, 2023).). The importance of an adjustment between the skills acquired during higher education and those demanded by companies is a topic widely discussed in the previous literature (Foncubierta et al., 2016; Mareque and De Prada, 2018; Pineda et al., 2018; Abelha

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et al., 2020; Riu et al., 2020). Our paper, however, focuses on the work expectations of students, a topic much less studied in the literature.

Furthermore, García Blanco and Cárdenas Sempertegui (2018) compile the most recognized definitions of labor insertion and conclude that the element that stands out and appears in all of them is the characteristic of "process", understanding that it does not refer only to the achievement of a job, but must include a situation of certain stability or permanence. Thus, our paper includes issues that refer both, to the expectations of students right at the end of their studies, as well as to a long-term time horizon (10 years).

2. Methodology

2.1. Sample

The population under study from which the sample has been extracted is the number of students enrolled in some Degree programs offered by the Higher Technical School of Agronomic, Food and Biosystems Engineering (Polytechnic University of Madrid) during the 2020-2021 academic year. The choice of the sample seeks to identify the professional expectations of a homogeneous group in terms of training (university studies), thus eliminating possible inequalities caused by their preparation (Albert López-Ibor et al., 2010), although we are aware that as a social group, they present differences in terms of their economic, cultural condition, etc. (Pérez Carbonell and Ramos Santana, 2015). In *Tables 1* and *2* the detail of the population to be studied and the representativeness of the sample are shown.

Table 1. Population under study

Degree	Number of students	%
Degree in Biotechnology (BIO)	431	25.7
Degree in Engineering and Agronomic Science (ICA)	132	7.9
Degree in Food Engineering (AI)	463	27.6
Degree in Agro-Environmental Engineering (IAMB)	143	8.5
Degree in Agricultural Sciences and Bioeconomy (BIOECO)	128	7.6
Degree in Technology of the Agricultural and Food Industries (IND)	45	2.7
Degree in Agricultural Engineering (AG)	333	19.9
Total	1,675	100

Source: *own compilation*

Table 2. Representativeness of the sample

Degree	Frecuency	%
Degree in Biotechnology (BIO)	81	42
Degree in Engineering and Agronomic Science (ICA)	5	2.6
Degree in Food Engineering (AI)	36	18.7
Degree in Agro-Environmental Engineering (IAMB)	18	9.3
Degree in Agricultural Sciences and Bioeconomy (BIOECO)	14	7.3
Degree in Technology of the Agricultural and Food Industries (IND)	2	1
Degree in Agricultural Engineering (AG)	37	19.2
Total	193	100

Source: *own compilation*

2.2. The survey

The analysis technique used for the collection of information is the personal survey, in line with the previous literature (Presley et al., 2010; Pérez Carbonell and Ramos Santana, 2015; López-Cózar-Navarro et al., 2020; Martínez-Clares and González-Lorente, 2021). In this case, the survey was developed online (due to the situation created by Covid-19) in all the courses of the different degrees under study (Annex). To do this, an ad hoc questionnaire was designed, validated by external researchers and tested with five students to check their understanding before proceeding with the entire group. As a summary, the technical data of the survey is presented in *Table 3*.

Table 3. Technical data

Population	
Sampling units	Students
Total population	1,675
Type of population	Finite
Scope	ETSIAAB (UPM)
Dates	March-July 2021
Sample	
Sample size	245 valid.
Sampling method	Random
Analysis technique	Personal survey
Response rate of the population	14,62%

Source: *own compilation*

2.3. Technique

Typical techniques of descriptive statistics have been used, as well as a frequency analysis. Works such as those of Classen et al., 2014; Nieto et al., 2015; Diéguez-Soto et al., 2016; López-Cózar-Navarro et al., 2017; Mazzelli et al., 2018 and Benito Hernández et al., 2023, among many others, have used the coded qualitative variables as it allows a reading of how the sample is structured. Later, to analyze the independence or dependence between the selected variables, the Kolmogorov-Smirnov parametric test was used to know whether the data follows a normal distribution. This test has already been used in similar papers, such as that of Naghshinem (2022) and Salim et al., (2023). The Pearson Chi-square test has also been used, and it is suitable for qualitative variables. These Chi-square tests are applied to contrast the null hypothesis of independence among variables from the differences between the observed and theoretical frequencies. If the statistical significance (asymptotic significance) associated with this statistic is less than or equal to 0.05, the null hypothesis is rejected, with a 95 percent confidence level. Papers such as those of Tapia (2022) and Esteban Sanchez & Benito Hernández (2015) have also used this technique in other similar publications.

2.4. Definition of the variables under study

Table 4 shows the definition and explanation of the survey's set of variables, classified by their nature into 5 large groups:

Group 1: Economic stability.

Group 2. Nature of the job in the company.

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Group 3. Personal aspects and training.

Group 4. Familiar influences.

Group 5. Job satisfaction.

Table 4. Definition of variables

Group	Variables	Description	Definition	Values
3	Age	Age of the informant.	AGE	Continuous
3	Gender	Indicates whether the informant is defined as a man or a woman.	GENDER	0= Man. 1= Woman.
4	Coming from a large family	Indicates whether the informant comes from a family with more than four members.	FAMN	0= No. 1= Yes.
4	Academic level of your parents.	Indicates until what academic stage the father and mother of the informant have arrived.	NAP	1= Compulsory education. 2= Baccalaureate. 3= Vocational training. 4= University Degree. 5= Postgraduate.
1	High School education	Indicates the type of institution prior to university.	SECUND	1= Public institute. 2 = Concerted school. 3= Private school. 4= Vocational training. 5= Other.
1	Place of residence before entering Politecnico University.	Indicates whether the informant comes from Madrid or outside the Community.	RESID	0= Madrid. 1= Outside Madrid.
3	Degree.	Indicates the degree that the informant is studying.	DEGREE	1= Degree in Biotechnology. 2= Degree in Agricultural Sciences and Bioeconomy. 3= Degree in Agricultural Engineering. 4= Degree in Agro-Environmental Engineering. 5= Degree in Food Engineering.
2	Where would you like to work when you finish your studies?	Indicates the type of organization where the informant wishes to work after university.	ENTID	1= SME. 2= Large private company. 3= Start your own company. 4= The public sector. 5= NGO, foundation or similar. 6= Other.
2	What kind of job would you like to do?	Indicates aspirations or wishes of the informant once the academic training is finished.	TASK	1= Technical work related to the design and planning of production processes. 2= Innovation projects and new product development. 3= Directly related activities with natural resources. 4= Teaching and research. 5= Managerial, organizational and business management. 6= Consulting. 7= Other.
5	Of the following aspects, which one is most important to	Indicates the priorities or interests of the informant to stay in a job.	PRIORID	1=Related with the academic training received. 2= Security, stability. 3=Responsible behavior of the company (ethical values, sustainability). 4= Salary. 5= Possibility of family conciliation.

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	you in the workplace?			6= Opportunities for progress. 7= Good working environment. 8=Other.
1	Where would you like to work in the long term (10 years from now)?	Indicates where the respondent wishes to work within 10 years.	ENTID10	1= SME. 2= Large private company. 3= Start your own company. 4= The public sector. 5= An NGO, foundation or similar. 6= Other.
1	What hierarchical level would you like to reach in the organization?	Indicates which job position the informant would like to reach in the future professional life.	HIERAR	1= I don't want positions or responsibilities. 2= Project manager with a team of dependents. 3=Intermediate level in a department (Director of operations, director of human resources...). 4= Senior management of the company (Manager, CEO, President...).
5	What positive feeling or emotion would you like to describe your future professional life?	Indicate the sensations that the informant seeks and needs to be able to work.	SPOSIT	1= Happiness. 2= Integrity and honesty. 3= Freedom. 4= Pride and self-realization. 5= Prestige and social recognition. 6= Other.
5	What negative feeling/emotion would make you quit your job?	Indicates the negative sensations the informant doesn't want and which may lead to a quit.	SNEGAT	1= Boredom and demotivation. 2= Disappointment and frustration. 3= Stress. 4= Overwork. 5= Solitude. 6= Other.
1	What is the monthly salary you would be happy with when you finish your studies (first job)?	It indicates the money that the informant is willing to receive once the studies are finished.	SALAR	1= Minimum interprofessional salary. 2= From 965€ to 1.500€. 3= From 1.500€ to 2.500€. 4= From 2.500€ to 4.000€. 5= More than 4.000€.
1	What is the monthly salary level that you consider satisfactory after a working life of 10 years?	Indicates the money that the informant is willing to receive within 10 years.	SALAR10	1= Minimum interprofessional salary. 2= From 1.500€ to 2.500€. 3= From 2.500€ to 4.000€. 4= From 4.000€ to 6.000€. 5= More than 6.000€.
5	What type of obstacle you think you will find, so you don't develop your professional career as you wish?	Indicates the difficulties or obstacles the informant may find in the job career.	OBSTAC	1= Language level. 2= Poor technical training. 3= Negative economic situation. 4= Discrimination of some kind. 5= Family responsibilities. 6= Other.

Source: *own compilation*

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3. Results and discussion

Table 5 shows the descriptive and frequency analysis of the sample (most important variables). The average age of the respondents is 23 years old, just over half are women, coming from 70% of the Community of Madrid and 27% come from a large family.

Table 5. Descriptive statistics

Variable	Min.	Máx.	Mean	Tip Dev.
AGE	17	55	23,27	5,24
GENDER	0	1	0,64	0,47
FAMN	0	1	0,27	0,44
NAP	1	5	3,42	1,16
SECUND	1	3	1,75	0,75
RESID	0	1	0,30	0,46
DEGREE	1	6	3,64	2,06
ENTID	1	6	2,97	1,45
TAREA	1	7	3,26	1,75
PRIORID	1	8	4,10	2,05
ENTID10	1	6	3,16	1,19
HIERAR	1	4	2,65	1,04
SPOSIT	1	6	2,85	1,43
SNEGAT	1	6	2,04	1,24
SALAR	1	5	2,44	0,79
SALAR10	2	5	3,21	0,82
OBSTAC	1	6	3,02	1,46
N valid (according to list)			245	

Source: *own compilation*

Tables 6 and 7 below show frequency tables of the most important qualitative variables.

Table 6. Frequencies

Entid	%	Task	%	Priorid	%
1= Small or medium-sized private enterprise (SME)).	15,5	1= Technical work related to the design and planning of production processes.	14,3	1=Fit with the academic training received.	8,1
2= Large private company.	33,5	2= Innovation projects and new product development.	29,2	2= Security, stability.	20,5
3= Start your own company.	8,7	3= Directly related activities with natural resources.	15,5	3=Responsible behavior of the company (ethical values, sustainability).	19,3
4= In the public sector	21,7	4= Teaching and research.	14,9	4= Salary.	11,2
5= NGO, foundation or similar.	15,5	5= Policy, organizational, and business management roles.	11,2	5= Possibility of family conciliation.	1,9
6= Other.	3,1	6= Consulting.	8,1	6= Opportunities for progress.	25,5
Total.	98,1	7= Other.	5,6	7= Good working environment.	9,9
Lost.	1,9	Total.	98,8	8=Other.	3,1
	100,0	Lost.	1,2	Total.	99,4
			100,0	Losses.	0,6
					100,0

Source: *own compilation*

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Table 7. Frequencies II

Entid10	%	Hierad	%	Salary	%	Salar10	%
1= Small or medium-sized private enterprise (SME)).	6,2	1= I don't want positions; I prefer to work without responsibility over other people.	14,3	1= Interprofessional minimum wage (965 €).	8,7	2= From 1.500€ to 2.500€.	19,3
2= Large private company.	28,6	2= Project manager with a team.	34,8	2= From 965€ to 1.500€.	47,2	3= From 2.500€ to 4.000€.	46,0
3= Start your own company.	21,7	3= Intermediate level in a department (director of operations, director of human resources...).	21,7	3= From 1.500€ to 2.500€.	37,3	4= From 4.000€ to 6.000€.	28,0
4= In the public sector	28,6	4= Senior management of the company (Manager, CEO, President...).	28,6	4= From 2.500€ to 4.000€.	5,0	5= More than 6.000€.	6,2
5= NGO, foundation or similar.	12,4	Total.	99,4	5= More than 4.000€.	1,9	Total.	99,4
6= Other.	1,2	Lost..	0,6	Total.	100,0	Lost..	0,6
Total.	98,8		100,0				100,0
Lost.	1,2						
	100,0						

Source: *own compilation.*

Table 7 shows the variation of students' 10-year working expectations increasing self-employment or working for a public company, but less for the large private companies. Regarding the hierarchical level, 28% intend to be part of the company's top management, while more than a third prefer to have responsibilities in project work teams. It is interesting to contrast the expected salary at the time of finishing the degree with the one they expect to obtain after 10 years working, since half of the respondents expect to earn between 2,500 and 4000 euros per month after this time. While only 6% expect to earn more than 6,000 euros.

3.1. Kolmogorov-Smirnov Test

The Kolmogorov-Smirnov test has been performed to contrast the hypothesis of normality of the data with reality. Thus, it is defined:

- H_0 : Data is distributed as a normal distribution.
- H_1 : Data is not distributed as a normal distribution.

According to the results obtained with a level of significance of less than 0.01, the hypothesis of normality is rejected. Finally, the correlations among the variables with Pearson's Chi Square test have been studied. Table 8 shows the results: Application of multiple linear regression analysis.

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Table 8. Pearson's Chi Square test

	AGE	GENDER	FAMN	NAP	SECUND	RESID	DEGREE	ENTID	TASK	PRIORID	ENTID10	HIERAR	SPOSIT	SNEGAT	SALAR	OBSTAC
AGE	1															
GENDER	0.016*	1														
FAMN	0.171**	-0.031	1													
NAP	0.178**	-0.039	0.208**	1												
SECUND	0.003	-0.058	0.208**	0.157*	1											
RESID	-0.055	0.087	0.184**	-0.063	0.157*	1										
DEGREE	0.418**	0.123	0.012	-0.187**	-0.019	0.135*	1									
ENTID	0.066	0.153*	0.016	-0.026	0.029	0.258**	0.102	1								
TASK	0.045	0.050	0.071	-0.036	-0.004	0.160*	0.134*	0.340**	1							
PRIORID	-0.053	-0.019	0.153*	-0.017	0.162*	0.209**	-0.072	0.002	-0.012	1						
ENTID10	-0.019	0.142*	0.073	0.019	0.097	0.314**	0.139*	0.565**	0.278**	-0.033	1					
HIERAR	-0.133*	-0.023	0.192**	0.133*	0.177**	0.340**	0.151*	-0.015	0.074	0.142*	0.117	1				
SPOSIT	-0.101	0.137*	0.114	-0.082	0.131*	0.289**	0.114	0.097	0.116	0.178**	0.109	0.297**	1			
SNEGAT	0.240**	0.104	0.144*	0.073	0.130*	0.399**	-0.037	0.106	0.150*	0.021	0.215**	0.205**	0.135*	1		
SALAR	-0.065	0.099	0.239**	0.022	0.239**	0.473**	0.177**	0.200**	0.119	0.189**	0.299**	0.493**	0.370**	0.336**	1	
SALAR10	0.180**	-0.107	0.327**	0.130*	0.325**	0.440**	0.112	0.081	0.183**	0.263**	0.189**	0.545**	0.409**	0.265**	0.751**	1
OBSTAC	0.182**	0.078	0.219**	0.108	0.247**	0.311**	-0.081	0.242**	0.164*	0.147*	0.301**	0.224**	0.189**	0.334**	0.383**	0.366**

Source: *own compilation.*

Based on the results obtained and the theoretical previous classification described in the definition of the variables, It is verified that the variables are correlated in the different groups proposed and that, therefore, they help to understand the relationship of the factors that affect the expectations of university students:

Factor 1. Economic stability. This factor includes aspects related to the expected salary, residence, long-term salary and the hierarchical level, expected to reach in the workplace.

Factor 2. Nature of the job in the company. This factor takes into account aspects related to preferences about the type of work and the activity to be developed by the candidate in the company, characteristics such as: the size of the company, whether the company is private or public, start-up the business creation of the own company, the activity to be developed within the company (research, management, engineering development, etc.).

Factor 3. Personal maturity and training. This factor includes aspects related to the age and gender of the candidate and the type of the current degree.

Factor 4. Familiar influences. This factor includes the parent's training and the expectations they have placed on their descendants.

Factor 5. Job satisfaction. This factor meets the expectations of candidates related to aspects such as job security, work-life balance, progress, good environment, etc.

Based on the factors extracted, Figure 1 proposes the following theoretical research model that can be used for future investigation proposals:

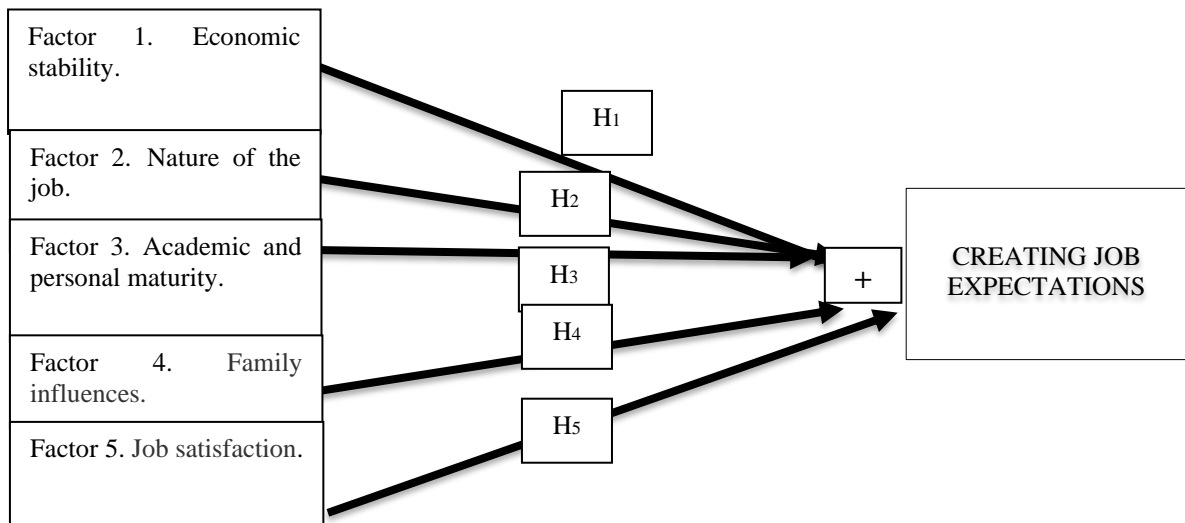


Figure 1. Theoretical model for contrast.

Source: own compilation.

Where:

H₁: Economic stability, salary, hierarchical level and residence have a positive effect on students' job expectations.

H₂: Job nature in the company has a positive effect on the job expectations of students.

H₃: The student's academic and personal maturity has a positive effect on their job expectations.

H₄: Family influences have a positive effect on students' job expectations.

H₅: Job satisfaction has a positive effect on students' job expectations.

Conclusions

As the literature shows (González Lorente & Martínez Clares, 2016; Ruiz-Corbella et al., 2019), labor insertion is a complex process that depends on different factors, both external and internal. The present paper has focused on the latter, the expectations and interests of the students.

To obtain a simple, clear and easily interpretable scheme, Pearson's Chi Square test has been developed, through which an attempt has been made to summarize in 5 generic factors, several items that explain the creation or not of expectations of university students in the agri-food and biosystems area. From the results obtained, and in line with the previous literature (Pérez Carbonell & Ramos Santana, 2015), we can conclude that economic stability remains a key aspect in the job expectations of young university students. The salary -both in the short and long term- related to the expected hierarchical level and the residence are the main items that make up this highly valued factor, which represents security and tranquility. The second factor that is considered is the nature of the job. Special importance is given to aspects related to the type of work and the activity to be developed by the candidate in the company (research, management, engineering development, etc.), the type of company in terms of size and the type of ownership.

The third factor to consider is the student's personal and academic maturity, including aspects related to the age, the type of the current degree and the candidate's current year. The last factors, fourth and fifth, less important but also significant, are the influences of parents and job satisfaction. As for the latter, it refers not so much to economic satisfaction, included

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in the first factor, but to the informal relationships that arise in the work environment, as well as the conciliation possibility with flexible schedules or teleworking, and the progress possibilities in the company such as promotion and recognition.

As can be seen, following Maslow's Hierarchy of Needs it seems that the creation of students' expectations is related to this hierarchy: at the base of the pyramid would be stability and security, later the relations with the type of work and type of company, thirdly, we find the personal conditioning of maturity, and finally, with personal fulfilment through conciliation and working promotion (Maslow, 1991).

These factors should be more deeply investigated through a modelled econometric study to analyze what kind of relationship (positive or negative), as well as what degree of significance they have on the creation of expectations of young people in the agri-food sector and biosystems, which we observe as a limitation and possible future research, We have focused mainly in this sector because it is a priority and a strategic industry which although it was discredited in the workplace in recent decades, after the Covid-19 pandemic it has been reinforced and revitalized. Indeed, society has been able to assess the importance of the sector for its survival. Nevertheless, expanding the analysis to other sectors and degrees and showing comparison results among them would be of great interest as a future research line.

As these promotions of agri-food and biosystems students are going to be incorporated into the labor market very soon, it is timely and interesting to study their job expectations now to allow companies, governments and educational institutions to have better knowledge about their motivations and expectations regarding their professional future. In the dialogue on what the working environment should be like in the coming decades, the opinions of young people should undoubtedly be included. After all they will be affected and they are the main characters of the future labor force in the agri-food and biosystems sectors.

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