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## DIFFERENT VIEWS ABOUT JOB OPPORTUNITIES AMONG BUSINESS AND ECONOMICS STUDENTS DEPENDING ON PERSONALITY TRAITS

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### Abstract

Many students attend business and economics studies in Norway. Several skilled students with engineering background choose specialization in economics and business administration. This education provides many opportunities. The aim of this paper is to learn more about what these students emphasize in choice of jobs and career opportunities. This article provides support for the assumption that gender and personality traits (the Big Five) are linked to salary and career opportunities for business and economics students. Personal characteristics matter in students' consideration of career possibilities, future wages, entrepreneurship, and contributions to society. Financial rewards are positively connected to the personality trait conscientiousness and negatively to agreeableness. Individuals with high score in the agreeableness want to help others. The trait openness is a good predictor for starting own business. There is still a gender gap. Women are not as concerned with high wages as men. Instead, the female students want to contribute more to society. The suggestions appear from a quasi-experiment involving 119 undergraduates from a university in Norway by asking them about their preferences and attitudes. The selected methods are factor analysis and linear regression modeling. The findings provide useful knowledge and information in the design and development of various study topics.

**Keywords:** Business Students, Economics Students, Career, Personality Traits, Academic Skills, Big Five, Quantitative Analysis

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### 1. Introduction

Students' preferences and career paths have influence on students' choice of academic fields (Siegall *et al.* 2007). The students specialize within different academic majors depending on career possibilities, abilities, and interests. Economics and business administration are popular fields of study. More and more students are choosing these directions of education. According to national statistics, business studies are quite popular in Norway, where more than 10 per cent of all students attend courses within this field. The chosen study field is an important factor for making career choices. Many elements have influence on students' selection of discipline. However, prior research studies have indicated that the choice depends heavily on potential career, job market, and opportunities (Tan and Laswad, 2009). This choice also depends on gender and personal characteristics. Personal traits may play a critical role in students' choice of study specialization. According to Easterlin (1995), individual preferences are a key factor in

explaining students' selection of business studies. There are few Norwegian investigations that have examined this topic in more detail.

The purpose of this study is to see how business and economics students' expected career prospect are related to personal traits. Undergraduates have different views on career opportunities, expected salaries, the possibility of starting one's own businesses, job security, and contributions to society depending on the selected major. Do these issues explain their choice of study discipline, for instance between business and economics subjects? How do personality traits and gender affect these considerations? The current study was undertaken with the aim of applying these issues in the Norwegian case to see if the results are in line with prior research. Cultural and national differences can give different results.

A key contribution of this article is to achieve more knowledge about students' attitudes. What do they emphasize when choosing a course of study and what expectations they have for their future career? This information is useful in the design of study programs and in the work of recruiting students to different majors.

The paper is categorized as follows: Section 2 introduces the personality traits Big Five. Section 3 provides an overview of previous literature. Section 4 presents the hypothesis whereas Section 5 discusses data and methodology followed by the presentation of the results in Section 6. Section 7 is important since results are discussed and analyzed in relation to the hypotheses. Section 8 concludes the paper with limitations.

## 2. Big five

The development of a personality taxonomy called the Big Five Model (Costa and McCrae, 1992, 1995) is well accepted among researchers and is particularly used in applied research (Mayfield *et al.* 2008). These five traits comprise the dimensions of extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (see Table 1). This is the most widespread perspective on studying human trait structure.

**Table 1. The Big Five Model**

Trait	Description
Neuroticism (N) (opposite of emotional stability)	anxiety, tenseness, moodiness, and insecurity
Extraversion (E)	sociability, talkativeness, optimism, assertiveness, and being upbeat and energetic
Openness (O)	intellectual curiosity, an active imagination, aesthetic sensitivity, a preference for variety, and a broad cultural interest
Agreeableness (A)	personal warmth, altruism, sympathy towards others, helpfulness, and cooperation
Conscientiousness (C)	purposefulness, being strong willed, determination, organization, reliability, and punctuality

Source: Mayfield *et al.* (2008)

Neuroticism means one experiences negative emotions such as depression. Extraversion is associated with high activity and searching for stimulation. People with a high score in the openness factor tend to be curious and creative. Agreeableness is characterized by modesty, trust, and helpfulness. Finally, conscientiousness describes persons with a tendency to act dutifully and show self-discipline.

### 3. Literature review

Many studies have analyzed the link between personal traits and career. There is a connection between personality and success within business model innovation (Anwar *et al.* 2019). Personality traits matter in starting a business (Sahin *et al.* 2019; Bazkiaei *et al.* 2020) and in its performance (Kaczmarek and Kaczmarek-Kurczak, 2016). Leonelli *et al.* (2016) and Sahinidis *et al.* (2020) suggested there is a positive link between extraversion and business innovativeness because extraverted persons are positive about new activity and striving for goals. Being talkative, sociable, and energetic helps in doing business. Individuals with a high score in openness to experiences are characterized by being intellectually curious about new ideas and are willing to try out new concepts (Ariani, 2013). These attributes are important for starting one's own business (Liang *et al.* 2013; Sahinidis *et al.* 2020). Conscientious persons are responsible, hardworking, and well organized. This is linked to entrepreneurship (Baum and Locke, 2004; Sahinidis *et al.* 2020). Such traits are important for the firms' strategies and to ensure growth and better performance (Ramdani *et al.* 2015). However, research has showed a mixed correlation between conscientiousness and entrepreneurship. Lack of creativity can lower the performance and increase the probability of failure. There is a danger that people with such characteristics have the wrong focus. Too much attention to task achievement does not need to always be fruitful. Therefore, there can be a negative link between conscientiousness and performance in innovative firms (Cantner *et al.* 2011). Research has also provided a diverse picture about the link between agreeableness and business innovation. Nga and Shamuganathan (2010) argued that agreeableness has a positive impact on social entrepreneurship, while Zhao *et al.* (2010) reported no link between agreeableness and entrepreneurial performance. Sometimes the entrepreneur must be self-centered and manipulative to handle tough situations and to survive with the business. This requires characteristics other than those that describe agreeableness. Therefore, there might be a negative correlation between being agreeable and entrepreneurship (Wooten *et al.* 1999). Managers with a neurotic personality can be emotionally unstable and can have problems in handling stressful situations. They prefer to stay in their comfort zone. Therefore, they are less likely to start their own business and tend to be less creative, and the result is poorer performance (Zhao *et al.* 2010) This means a negative correlation between neuroticism and entrepreneurship (Sahinidis *et al.* 2020). Other studies have found no link between neuroticism and innovation (Yesil and Sozbilir, 2013).

Cogliser *et al.* (2012) investigated the connections between personal traits and different dimensions of leadership. Not surprisingly, they found that agreeableness predicted the social aspect of leadership, while conscientiousness was linked to task-oriented leadership.

According to Ahmed *et al.* (1997, 2017), career possibilities are important factors for choosing a business major. Studies have demonstrated that job success is negatively related to neuroticism (Turban and Dougherty, 1994; Judge *et al.* 1999; Sui *et al.* 2021). There seems to be a negative link between neuroticism and job satisfaction (Furnham and Zacherl, 1986). Conscientiousness appears to be a good predictor of job performance (Salgado, 1997; Kranefeld and Blickle, 2021) and career advancement (Howard and Bray, 1990; Sui *et al.* 2021). Individuals with a high level of conscientiousness are hardworking and oriented to goal setting. Those factors have a positive impact on career and lead to high salaries (Barrick and Mount, 1991). Results have also showed a positive link between extraversion and job success like promotion, wages, and career satisfaction (Wilmot *et al.* 2019). It may be that extraverted individuals are most related to career success (Seibert and Kraimer, 2001). Prior studies have suggested that earning potential is a key factor for the chosen field for accounting students (Mauldin *et al.* 2000), and Lowe and Simons (1997) reported that expected future earning is an important factor for selecting a business major. The correlation between agreeableness and career success is more complex. Some authors have proposed that there is a negative connection (Seibert and Kraimer, 2001; Sui *et al.* 2021). Being trustful, non-manipulative, and a team player do not necessarily lead to career success, but it depends on what kind of job. Agreeableness is probably a good predictor for social jobs (Judge *et al.* 1999). The research has showed that the link between openness and career success is unclear, even though this is the most important personality trait for creativity and innovation (Connelly *et al.* 2014). This personality trait is associated with educational effect and

unconventional career motivations (Schwaba *et al.* 2018). Some studies have reported lower salaries (Seibert and Kraimer, 2001) and less promotion for individuals with a high level of openness (Ng *et al.* 2005). Judge *et al.* (1999) suggested a negative correlation between openness and conventional jobs.

The choice of academic major is an investment for a future career. Therefore, development skills matter (Davies *et al.* 2016). This includes strategic thinking and planning, preparing for leadership roles, and being creative, all of which will improve business performance. Openness is a good predictor of creativity in business management (George and Zhou, 2001; Vartanian *et al.* 2018).

Job insecurity is related to the Big Five Traits (Wu *et al.* 2020). It is positively related with neuroticism and negatively with conscientiousness and agreeableness. These individuals are less motivationally stable, and this disturbs the focus and the goal settings. Hence, there is a negative correlation with conscientiousness. More uncertainty and threats affect the individual psychological behavior. There will be more stress. This is positively related to neuroticism. Job insecurity leads to more focus on personal matters and less engagement in common affairs and organizational matters. Therefore, job insecurity has a negative impact on agreeableness.

Cox *et al.* (2010) expected but did not find any positive correlation between social engagement and the two traits of agreeableness and conscientiousness. However, Celik and Oral (2016) reported a positive link between organizational commitment and those two personal characteristics. Other researchers have confirmed this result (Asif *et al.* 2015). According to Thiruvarasi and Kamaraj (2017), openness is also positively related to organizational commitment. Coglisier *et al.* (2012) reported that socially oriented emergent leadership among undergraduate business students, in addition to agreeableness, also was positively correlated with conscientiousness and openness.

Malgwi *et al.* (2005) suggested that key factors for undergraduates to select business as a major are job opportunities, career advancement, and salaries. Marketing students are oriented to extraversion while accounting students favor a predictable, safe life (Granitz *et al.* 2014). Business majors seem to score high for conscientiousness and extraversion, and low scores for neuroticism and openness compared to non-business majors (Lounsbury *et al.* 2009).

There is a gender difference in terms of entrepreneurial innovation (Lindberg *et al.* 2014; Guzman and Kacperczyk, 2019). This has been discussed in many papers. Entrepreneurship seems to be more a male activity due to preferences, culture, attitudes to risk etc.

Haski-Leventhal *et al.* (2017) reported that female business students showed more social responsibility and had higher ethical values than their male peers. Women did more in terms of preventing unethical business practices, and they were more willing to help people, while men were focused more on salary and advancement.

#### 4. Hypotheses

Based on the literature review and the purpose of this paper, we postulate the following hypotheses:

*Hypothesis 1 (H<sub>1</sub>): There is a link between personality traits and work preferences.*

*Hypothesis 2 (H<sub>2</sub>): There is a gender difference in preference of job and career.*

Personal characteristics might matter when young people choose career opportunities (*H<sub>1</sub>*). Alternatively, *H<sub>1</sub>* could have been split between different specifications of possible relationships. Since we are unsure which links we will find, we have chosen to let the hypothesis be more open. Despite the work on gender equality, there might still be gender differences in preferences and choices (*H<sub>2</sub>*). Figure 1 presents the model.

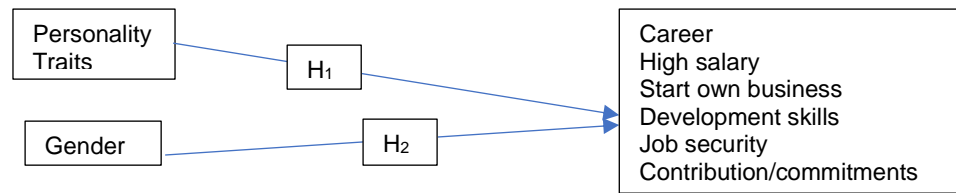


Figure 1. The model

## 5. Data and methodology

### 5.1. The sample

The data are from fall 2019 and were collected by asking the students from three departments at the Faculty of Economics and Management at the Norwegian University of Science and Technology (NTNU).

Table 2. The sample

Department	Males	Females	Total in the survey
Industrial Economics and Technology Management	23	9	32
Business School	24	36	60
Economics	14	12	32
All	61	57	119

The department of Industrial Economics and Technology Management combines technology with economics and administrative issues; the second department includes business students and the third department includes economics students (see Table 2).

The students responded to the questions during an obligatory course. The response rate was around 30% for all students taking the exam in those subjects. The representativeness of the non-random sample has not been evaluated. A similar previous study suggests the sample includes students with slightly higher qualifications than the average student (Bonesronning and Opstad, 2015).

The students responded to questions about their career plans. This study examined students' expectations and not their actual career development. Although there were different compositions of students at the various institutes, the purpose of this study was to research what gender and personal characteristics affect expected employment opportunities.

### 5.2. Methodology

Several previous studies inspired and influenced the design of our questions to capture different dimensions (Malgwi *et al.* 2005; Siegall *et al.* 2007; Easterling and Smith, 2008; Granitz *et al.* 2014; Davies and Tikoo, 2019). Some dimensions had several questions. In order to select the questions that fit together in this survey, factor analysis was used, which led to the removal of two items connected to career and one linked to development. The chosen items are presented in Table 3.

**Table 3. Factor Analysis**

Dimension	Items	Loading
Career <sup>1</sup>	Excellent job opportunities	0.648
	High probability of getting relevant work	0.629
	Great career opportunities	0.487
Development skills <sup>2</sup>	Strategic thinking and planning	0.799
	Develop creativity and new ideas	0.591
	Preparation for leadership roles	0.492
Job security	It offers long-term job security	0.999
	Regardless of the economic climate, I will be guaranteed work	0.571
Contribution/commitment	The work gives opportunities to help others	0.684
	The work gives opportunities to contribute to society	0.489

**Note:** 1. Two items excluded, 2. One item excluded

The values of skewness, kurtosis, and reliability (Cronbach's alpha) were all within the accepted range (see Table 4).

**Table 4. Descriptive statistics (7-point Likert scale where 1 is strongly disagree and 7 strongly agree)**

	N	Min	Max	Mean	St. dev	Skewness Std. Error	Kurtosis Std. Error	Relia- bility <sup>2</sup>
Career	121	2.00	7.00	5.14	1.09	-0.45 0.22	0.13 0.43	0.81
Development	121	1.67	7.00	5.05	1.10	-0.27 0.22	0.05 0.43	0.82
Job security	121	2.00	7.00	5.05	1.26	-0.46 0.22	-0.17 0.43	0.88
Contribution/ commitments	121	1.00	7.00	4.81	1.32	-0.29 0.22	-0.18 0.43	0.85
Opportunities to start own business	119	1.00	7.00	3.69	1.80	0.25 0.22	-0.95 0.44	
High salary	120	1.00	7.00	4.43	1.39	-0.19 0.22	-0.36 0.43	
Extraversion	121	2.50	5.33	3.61	0.55	-0.04 0.22	-0.19 0.43	0.80
Agreeableness	121	2.50	6.00	4.44	0.75	-0.30 0.22	-0.41 0.43	0.61
Neuroticism	121	1.00	6.50	3.22	1.06	0.41 0.22	-0.08 0.43	0.63
Conscientiousness	121	2.75	6.33	4.42	0.76	-0.03 0.22	-0.54 0.43	0.62
Openness <sup>1</sup>	121	2.00	7.00	4.53	1.10	0.44 0.22	0.33 0.43	
Valid N (listwise)	119							

**Note:** 1. Due to low reliability, one item was removed 2. Cronbach's alpha

The 20-item version of the Big Five Inventory (BFI-20) is the same version as used by Engvik and Clausen (2011), but due to low reliability, there were only three items included in openness.

### 5.3. The Model

Choosing a linear regression model makes it possible to investigate the different impacts by controlling for other factors. We used the following model:

$$Y_i = a_0 + a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4 + a_5X_5 + a_6X_6 + \varepsilon$$

where;

Y<sub>i</sub> = Endogenous variable

i = (1) Career, (2) High Salary, (3) Start own business, (4) Development skills, (5) Job security, (6) Contribution/commitments (1: strongly disagree, 7: strongly agree)

$\alpha_0$  = Constant

X<sub>1</sub> = Gender (1: F, 0: M)

X<sub>2</sub> = Extraversion (1–7 Likert scale, 1: strongly disagree, 7: strongly agree)

X<sub>3</sub> = Agreeableness (1–7 Likert scale, 1: strongly disagree, 7: strongly agree)

X<sub>4</sub> = Neuroticism (1–7 Likert scale, 1: strongly disagree, 7: strongly agree)

X<sub>5</sub> = Conscientiousness (1–7 Likert scale, 1: strongly disagree, 7: strongly agree)

X<sub>6</sub> = Openness (1–7 Likert scale, 1: strongly disagree, 7: strongly agree)

$\epsilon$  = stochastic error

Unfortunately, there is no access to experimental data. Therefore, one must be careful to claim a causal relationship even though there is a correlation between the independent variables and the dependent variable.

## 6. Findings

Table 4 and 5 show the results of the regression analysis. Some of the effects are rather weak and are only significant at the 10 percent level. Only the trait conscientiousness is significantly related with career (at the 10% level, Table 5). Many factors are correlated with high salary. Expectation about future income is negatively linked to agreeableness (B = -0.327 and significantly positively linked to extraversion (at the 10% level, B = 0.414) and conscientiousness (B = 0.377). Starting one's own business is statistically negatively related with conscientiousness (B = -0.424) and positively with openness (B = 0.357).

**Table 5. Results from the regression model: dependent variables career, high salary, and start own business (unstandardized coefficient B)**

	Career	High salary	Start own business
Gender	-0.464* (0.23)	-0.855*** (0.29)	-0.713 (0.37)
Neuroticism	-0.050 (0.10)	0.010 (0.12)	0.002 (0.16)
Conscientiousness	0.238 (0.14)	0.377** (0.17)	-0.424* (0.21)
Openness	-0.02 (0.10)	-0.138 (0.12)	0.357** (0.16)
Extraversion	0.193 (0.19)	0.414 (0.23)	0.146 (0.30)
Agreeableness	-0.047 (0.14)	-0.327** (0.16)	0.264 (0.21)
N	117	116	117
Adj. R2	0.034	0.137	0.124

**Note:** Standard errors are in parentheses, standardized beta-coefficients, all VIF (variance inflation factor) values between 1 and 2. Significance level (two-tailed), \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

Development skills are significantly positively associated with openness (B = 0.268, Table 6) and agreeableness (B = 0.265). Agreeableness is also connected to job security, but with no significant value. Job security is positively associated with conscientiousness (at the 10 % level, B = 0.294) and negatively with neuroticism (at the 10 % level, B = -0.193) Contribution/commitments has a strong positive correlation with openness (B = 0.371) and agreeableness (B = 0.467). The findings confirm hypothesis 1 ( $H_1$ ).

**Table 6. Results from the regression model: dependent variables career, high salary, and start own business (unstandardized coefficient B)**

	Development skills	Job security	Contribution/commitments
Constant	0.961 (1.10)	4.361 (1.31)	0.722 (1.32)
Gender	-0.098 (0.23)	0.035 (0.27)	0.581** (0.27)
Neuroticism	-0.003 (0.10)	-0.193 (0.12)	-0.172 (0.13)
Conscientiousness	0.77 (0.13)	0.294 (0.16)	0.145 (0.16)
Openness	0.268*** (0.10)	-0.085 (0.12)	0.371*** (0.12)
Extraversion	0.275 (0.19)	-0.212 (0.22)	-0.010 (0.22)
Agreeableness	0.265* (0.13)	0.257 (0.16)	0.467*** (0.16)
N	117	117	117
Adj. R <sup>2</sup>	0.091	0.040	0.120

**Note:** Standard errors are in parentheses, standardized beta-coefficients, all VIF (variance inflation factor) values between 1 and 2. Significance level (two-tailed), \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

There is a substantial gender relation connected to career ( $B = -0.464$ ), high salary ( $B = -0.855$ ), and starting one's own business (at the 10 % level,  $B = -0.713$ ) in favor of men), while there is a positively significant relation between women and contribution/commitments (see Table 4 and 5. This confirms hypothesis 2 ( $H_2$ ).

## 7. Discussion

The link between the Big Five personality traits and the dependent variables confirms previous conclusions. This study confirms that openness to experiment is a key factor for starting one's own business. People with such characteristics want to a higher degree to be self-employed (Shane *et al.* 2010). Most of the past research has found a positive connection between conscientiousness and entrepreneurship, but the results have been mixed. Leutner *et al.* (2014) reported no connection. The current study suggests a negative relationship. This is in line with the findings of Obschonka and Stuetzer (2017). Goal-oriented, hardworking, and conscientious undergraduates at the Faculty of Economics and Management do not seem to have the intention of starting a new business. Perhaps wages and career opportunities are so good for those students that they do not see starting their own business as an option.

This study found a considerable positive correlation between salaries and the two traits of extraversion and conscientiousness. Extraverted hardworking individuals achieve higher salaries (Spurk and Abele, 2011). However, agreeableness is negatively correlated with high salary. Other researchers have registered the same result (Seibert and Kraimer, 2001). Maybe those individuals have other priorities than high wages.

In this study, there was a positive significant connection between openness and development. Individuals with such characteristics are open to new ideas, and they are good at strategic thinking and are creative. Therefore, this result makes sense. However, it is not so obvious why there is a substantial positive link between agreeableness and development. Prior research has been divided about the relationship between agreeableness and creativity (Abdullah *et al.* 2016). Some studies have reported a negative connection (Batey *et al.* 2010), and others have found a positive association (Hoseinifar *et al.* 2011) or no link (Furnham *et al.* 2008; Amin *et al.* 2020). According to Hoseinifar *et al.* (2011), those individuals exude a significant positive feeling as well as trust, warmth, and intimacy. Such environments make a good atmosphere and form the basis for creativity and development. This effect might explain why this survey showed a strong positive association between this personality trait and contribution/commitments to society. We found a positive connection between openness and contribution/commitments, which is in line with the finding of Cogliser *et al.* (2012).



There was a positive correlation between agreeableness and job security, but the effect was not significant. Just like the findings of Wu *et al.* (2020), we found a negative relationship between job security and neuroticism and a positive relationship with conscientiousness. Secure jobs cause nervous people to become less tense and lead target-oriented people to concentrate better on their goals. These are interesting results because many jobs today tend to be less secure than before. This can have a negative impact on business effort and efficiency.

This study confirmed the gender impact, in line with the prior literature. Male students have higher entrepreneurial intentions than do female students. Female students want to contribute more to society, and do not focus so much on expected career and salaries. Furthermore, they have fewer intentions to be self-employed than their male peers.

## 8. Conclusion

In line with prior research, this study found considerable gender differences in relation to career, innovation, and salaries. The trait openness was strongly positively correlated to factors like development skills, entrepreneurship, and contribution/commitments, while conscientiousness was specially linked to expectation of high salaries. Agreeableness was associated with development skills and contribution/commitments. The impacts of the traits neuroticism and extraversion were weaker, but neuroticism seemed to be negatively related with job security and extraversion positively with high income. Female students wanted to provide more support to society, but wages did not count so much for them, and they were less eager to start their own business compared with their male peers.

This study confirmed that students' choices and priorities in the future labor market depend heavily on students' personality traits (the Big Five). These are relevant factors in the planning of future studies in economics and business.

Because the sample was from only one university in Norway, one must be careful to say how valid the finding is in a national or international context. Nevertheless, it can give a picture of how the situation is. The analysis is based on a questionnaire that was not randomly selected and from the students' response. There may be different ways to design the questions for capturing the different dimensions.

In this analysis, there was a focus on the students' expected professional career. This can differ significantly from a person's actual career. Finally, the regression model has low values in R square. Probably many other variables that are not included in this analysis will have an impact on the selected endogenous variables.

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