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Estimating the Effect of the Personality vs. Career Match on the Academic Performance with Comparison of Admission Scores and Grade Averages: an Evidence from the Hungarian Business Higher Education

Abstract: This study is about the role of personality in professional (business) higher education. According to literature of personality vs. education and personality vs. career, some people have better academic performance, while others' performance is better at work. Present study observes this dichotomy at the University of Debrecen, Faculty of Business Administration among the students from BA in Business Administration and Management and BA in International Business Economics majors comparing the efficiency of the Myers–Briggs personality typology with averages of standardized admission scores and standardized academic grade averages. The prior shows the general aptness to learn, while the latter indicates the career match. We analyzed our data with one sample t-test (our test value was 0 which is the average of the total sample). We found significant difference from the average for the personalities ESFJ and ENTJ (the prior had better, and the latter worse; both of them matching the profession) in case of admission sores, and for ENFP (worse), ESFJ (better) and ESTJ (better) personality types in case of academic performance (ENFP doesn't match while ESFJ and ESTJ match the profession). Our results suggest (even the non-significant results as well) that the match of personality and profession is less able to explain the difference of the admission scores from the average than the difference of the academic performance in case of certain personality types. Consequently, the match of personality and profession increases the academic performance without reference to the candidates' general suitability to education.

Keywords: personality, higher education, Myers–Briggs typology, labour market

Introduction

This study is about the role of personality in professional (business) higher education, where many empirical studies have already confirmed that personality contributes at least some degree to academic performance (e.g. BORG–SHAPIRO 1996, BORG–STRANAHAN 2002a, 2002b, ZIEGERT 2000, DITIBERIO–HAMMER 1993). According to the literature of personality vs. education and personality vs. career, some people have better academic performance, while others' performance is better at work. Present study observes this dichotomy at the University of Debrecen, Faculty of Business Administration (UD FEBA) among the students from BA in Business Administration and Management (BAM) and BA in International Business Economics (IBE) majors comparing the efficiency of the Myers–Briggs personality typology with averages of standardized admission scores and standardized academic grade averages. The prior shows the general aptness to learn, while the latter indicates the career match.

Our hypothesis is that if personality types matched differently to a profession, and also differently to formal education, then they have to contribute differently to those student assessments where professional content is present and to those where there is no such content. Consequently the impact of the 16 types on university admission scores and on university grade averages should be different: profession related personalities will increase significantly the university grade average which consists mainly of subjects related to professional career, whereas it does not increase admission scores unrelated to professional career at all or only to a limited extent. .

In the following chapter we review the literature of the personality-career connections, then – after the section describing the sample and the methods – we examine our hypothesis using one of the most common personality typology in the literature (Myers–Briggs typology), on a sample consisting of BAM and IBE students at UD FEBA. The study is closing with concluding remarks.

Literature Review

There are different personality models used in the literature to estimate one's match to a career or job. The *Myers-Briggs typology* that we are using in this paper is widely known, easy to use and well researched (e.g. AYOUBI–USTWANI 2014; CHENG ET AL. 2010; COHEN ET AL. 2013; MONTEQUÍN ET AL 2012; DIRIENZO ET AL. 2010; YU 2011; NICODEMUS 2012; SACH ET AL. 2010; PINKNEY 1983).

Here we introduce only the Myers–Briggs personality typology in brief; more detailed descriptions are available in several textbooks and studies (e.g. QUENK 2009, BRIGGS-MYERS ET AL. 1998, KEIRSEY–BATES 1984, BAYNE 1997). The 16 personality types of this categorisation are defined along 4 preference dichotomies: extraversion (E) and introversion (I), sensing (S) and intuition (N), thinking (T) and feeling (F), judging (J) and perceiving (P). The names of the personality types are traditionally formed by the letter combinations of the preferred 'poles' of each pairs, in the above order (i.e. ESTJ, ISTJ etc.). All the eight preference-poles are used at least some of the time by all individuals, although the preferred ones tend to be used more frequently. This typology was developed by K. C. BRIGGS and I. BRIGGS-MYERS and it was an extension of the three dimensions in the personality theory of C. G. JUNG with one additional dimension (QUENK 2009, 1–3).

While there are no generally better or worse types of personalities, there are – according to the literature – given types that can perform better in some particular activities or situations. We were curious if there are specific types that are better in learning and/or doing business or economics. We found types that are 'natural born economists': ESTJ (BEALING ET AL. 2006; DIRIENZO ET AL. 2010), ESTP (DIRIENZO ET AL. 2010) and ISTJ (BORG–SAPHIRO 1996). However the findings of all typology researches were questioned by JACOBSON (1997) who thought that these typologies easily create stereotypes and thus provide base for discrimination.

Material and Methods

Our data on personality and academic achievement is based on a primary questionnaire survey at the UD FEBA. The survey was implemented in October and November 2011, in classes where attendance was obligatory. Although, students from various programs answered our questionnaire, for this study only BAM and IBE students in their first, second and third year are included in our sample. The total number of the respondents was 419 from which 161 students were in their 1st year (104 BAM and 57 IBE), 133 were in their 2nd (106 BAM and 27 IBE) and 125 in their 3rd year (BAM only). BAM and IBE majors share more than 58% of their obligatory courses that indicates an appreciable similarity of these majors.

We did not use the 'official instrument' – the Myers–Briggs Type Indicator® (QUENK 2009, 1–3) – to measure the dichotomies but a free test based on the same theoretical model. This instrument

(http://lelektanitipusok.net/tesztek/teszt_72) is a questionnaire available in Hungarian on the Internet and is containing 72 forced choice questions. Table 1 includes the explanation of the dependent variables used in the study.

Table 1. Explanation of the dependent variables

Variable name	Explanation
STDINDEX	Average of a special form of grade index officially termed 'stipend index' of the previous two academic semesters (0.00 is the minimum, 5.00 is the maximum). The stipend index is calculated as the product of the credit values of subjects graded as 'pass' or higher multiplied by their grades divided by the total number of credits undertaken.
STDADSCORE	University admission score standardised by major and university year. Admission score is calculated from the secondary school grades with some extra points and it is mostly independent of the profession related academic performance.*

* For the details of admission score calculation see EDUCATIO (2010).

Results

To analyse the connection between personality types and academic performance, we have to take a look at the frequency distribution of the types in the sample. This is shown in Table 2. Although there are slight differences between the first and the upper year groups they are convincingly similar in the most (ENTJ), and the least (INTP, ISTP, INFP, ISFP) frequent performance types.

Table 2. Personality type frequencies (capita)

Type	1st year	2nd & 3rd year	Type	1st year	2nd & 3rd year
ESFJ	30	53	INFJ	6	14
ENFJ	39	37	ESFP	5	7
ESTJ	24	28	ENTP	3	6
ENTJ	14	27	ESTP	4	5
ISTJ	8	27	INTP	1	2
ENFP	9	16	ISTP	1	2
ISFJ	5	20	INFP	1	1
INTJ	10	13	ISFP	1	0

To analyse the impact of individual types on the performance independently of the different contexts of the subsamples we have standardised the stipend index values per year and per major, and then a one-sample *t*-test was implemented for each personality type. The test variable was the standardised stipend index (STDINDEX), the test value was zero. The results of the tests are shown in Table 3 (descriptive statistics and *t*-values were calculated only when there were at least 5 students sharing a given type).

Table 3. Descriptive and t-tests statistics

Myers–Briggs Type	1st year students Dependent: STDADSCORE			2nd & 3rd year students Dependent: STDINDEX		
	mean	std. dev.	*t*	mean	std. dev.	*t*
INTP	–	–	–	–	–	–
ENTP	–	–	–	-0.0868	0.2784	-0.7637
INTJ	0.2288	0.8362	0.8652	-0.2192	1.0010	-0.7897
ENTJ	0.4911	1.0331	1.7789*	0.0490	1.0527	0.2420
INFP	–	–	–	–	–	–
ENFP	-0.1750	0.6484	-0.8097	-0.6119	0.8750	-2.7974**
INFJ	-0.2661	1.0656	-0.6116	0.3735	1.4346	0.9742
ENFJ	0.0528	0.9278	0.3551	-0.2041	0.9453	-1.3134
ISFP	–	–	–	–	–	–
ESFP	-0.1404	1.2147	-0.2584	-0.1358	0.9516	-0.3777
ISTP	–	–	–	–	–	–
ESTP	–	–	–	-0.1684	1.0014	-0.3759
ISTJ	0.4189	0.8966	1.3215	0.0732	1.1783	0.3229
ESTJ	0.2054	0.5993	1.3791	0.3665	0.9270	2.0921**
ISFJ	-0.0131	1.0632	-0.0276	-0.2496	0.8204	-1.3605
ESFJ	-0.5515	1.3296	-2.2721**	0.2340	0.7901	2.1565**
Total	0.0000	0.9969	–	0.0000	0.9961	–

* Significant at the level 0.10, ** significant at the level 0.05.

To test our hypothesis we separated personality types matching economic/business career (and therefore economic/business studies) and the ones that do not match to this career trait. There were a third group, too, of personality types which cannot be categorised definitely as matching or non-matching to the economic/business career. These categories are based on the career recommendations for the different personality types provided by the free access www.similarminds.com Internet source (FLYNN 2013) and the career paths recommended by the UD FEBA's curriculums (DE-KTK 2011, 6–10, 40–44). The three

categories of matching, non-matching and undefined personality types are indicated in Table 4.

Table 4. Matching and non-matching personality types

Matching	ENTJ, ESFP, ESTP, ISTJ, ESTJ, ESFJ
Non-matching	INTP, INFP, ENFP, INFJ, ENFJ, ISFP
Undefined	ENTP, INTJ, ISTP, ISFJ

Sources: FLYNN (2013), DE-KTK (2011, 6–10, 40–44)

As Table3 shows in the case of the freshmen there are 2 types significant at least at the 10% level. The ENTJ (this is a career fitting type) students performed significantly better, but ESFJ (this is also a career fitting type) students significantly worse. Along with the non-significant cases there are 3 matching personalities (ENTJ, ISTJ, ESTJ) that outperform, and 2 (ESFP, ESFJ) that underperform the total mean. Among the non-matching types 1 personality was outperformer (ENFJ), and 2 (ENFP, INFJ) were underperformers.

Among the 2nd and 3rd year students there are 3 significant differences at the 10% significance level, and all of these are fulfilling the expectations based on the personality-career matching. A non-matching type (ENFP) has worse, two matching types (ESTJ, ESFP) have better average results than the total mean. Completed with the not significantly differing types, there are 4 cases (ENTJ, ISTJ, ESTJ, ESFJ) when the matching types are better than the total mean and 2 (ESFP, ESTP) when worse; again we have found the non-matching INFJ to be better, and the ENFP, ENFJ to be less good than the total mean.

Concluding Remarks

The result of our analyses suggests (even the non-significant results as well) that the match of personality and profession is less able to explain the difference of the admission scores from the average than the difference of the academic performance in case of certain personality types. Consequently, the match of personality and profession increases the academic performance even without reference to the candidates' general suitability to education. Thus the hypothesis of this study is supported.

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