Job Attribute Preferences of Incoming University Students and Newly-Hired Employees in the Context of the Romanian Labour Market*

*Loredana Mihalca, Christoph Mengelkamp, Gabriela Brendea, Daniel Metz***

Abstract

The purpose of this study is to investigate which job and organisational attributes incoming first-year students prefer in a job, and whether their preferences differ from those of newly-hired employees. Factor analysis of the job attributes reveal four underlying factors: job itself, firm attributes, compensation and rewards, and supportive work environment. Results show that students' perceptions differ from those of employees only with regard to the importance of firm's attributes. This study also examines whether preferences for job attributes differ when students' growth need strength, academic achievement, and gender are taken into account. Results indicate that students with high growth needs place greater importance on job attributes centred on job itself, but lower importance on job attributes concerning supportive work environment. Furthermore, female students rate job attributes pertaining to supportive work environment significantly higher than male students.

Keywords: job attributes, growth need strength, gender, incoming university students, newly-hired employees.
JEL Codes: J24, M15, I23.

Introduction

The shortage of skilled workers in various labour markets has led to a "war of talent" in the competition for qualified candidates (Cable/Turban 2001; Chapman/Uggerslev/Carroll/Piasentin/Jones 2005). A recent study released by Manpower Group (2020) has reported that global talent shortages in 2019 were at the highest levels since 2009, with Romania being one of the top countries worldwide where employers have difficulty in filling positions. For example, in

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** *Loredana Mihalca* (Corresponding author), Ph.D., Researcher, Department of Economics and Business Administration in German, Babeș-Bolyai University, Email: loredana.mihalca@econ.ubbcluj.ro. Main research interests: computer-based learning, self-regulated learning, and motivation, psychological determinants of organisational performance, employee turnover and retention.
Christoph Mengelkamp, Ph.D., Lecturer, Human – Computer – Media Institute of the University of Wuerzburg, Germany. Main research interests: learning and instruction with an emphasis on metacognition and multimedia learning.
Gabriela Brendea, Ph.D., Associate Professor, Department of Economics and Business Administration in German, Babeș-Bolyai University, Romania. Main research interests: corporate finance and behavioral economics.
Daniel Metz, Ph.D., Associate Lecturer, Department of Economics and Business Administration in German, Babeș-Bolyai University, Romania. Main research interests: organisational culture, knowledge management in fluid virtual organisations, and agile business process management.

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Romania the number of employees with tertiary education (i.e., at least ISCED level 5) has only increased slightly from 1,629 thousand in 2015 to 1,730 thousand in 2019, which corresponds to a proportion of employees between 26 % and 27 %, respectively (Eurostat 2021). This small increase in the number of employees with tertiary education may indicate that organisations did not find the employees who fit their needed profiles. This explanation is also supported by data from the European Union (EU), where the proportion of employees having tertiary education has grown from 33.7 % in 2015 to 36.1 % in 2019. Thus, Romania has a lower proportion of highly educated employees than the EU, and the stagnant proportion of employees with tertiary education does not hold the promise of overcoming this labour shortage. In addition, from 2015 to 2019 the number of Romanian emigrants has increased from 194,718 to 233,736 (Eurostat 2021), suggesting some brain drain from Romania. It is also predicted that labour force deficit will escalate in the next years in such a way that Romania could lack 900,000 skilled workers by 2023 (see the KPMG & National Institute of Economic Research of the Romanian Academy report 2019). It is, however, unclear how the coronavirus crisis will alter these predictions.

Given these labour shortages, recruiting and retaining the right talent is of utmost importance to organisations (Uggerslev/Fassina/Kraichy 2012), especially for the Romanian ones. To be successful at attracting applicants, which is central to recruiting, organisations need to understand how job-choice decisions are made and what job attributes are important for desirable applicants (Acikgoz 2020). Many studies have indicated that organisational attraction and intentions to accept a job are influenced by applicants' perceptions of job and organisational attributes such as salary, benefits, type of work, company image, and location (e.g., Boswell/Roehling/LePine/Moynihan 2003; for meta-analyses, see Chapman et al. 2005; Chapman/Webster 2006; Uggerslev et al. 2012). Furthermore, job attributes have been found to influence how long individuals choose to stay with an employer (e.g., Posner/Powell 1990). Therefore, gaining an understanding of what are the most attractive job and organisational attributes for both prospective and current employees is critical for organisations that want to recruit and retain most qualified candidates (Harold/Ployhart 2008; Catanzaro/Moore/Marshall 2010).

The current study contributes to the literature in four ways. First, although a considerable amount of research has addressed applicants' job attribute preferences, most of this research has been focused on students, with limited or no workplace experience (Ehrhart/Ziegert 2005). The few studies that have examined job attribute preferences with a sample other than college students (e.g., Reed/Kratchman 1989; Highhouse/Stierwalt/Bachiochi/Elder/Fisher 1999) have generally revealed differences in the ratings of job attributes between student and non-student samples. This suggests that students' attribute preferences cannot be generalised to employees as students' lack of work experience

may lead to unrealistic expectations on the new job and its characteristics (cf. Petry/Treisch/Bullinger 2020). For example, Reed and Kratchman (1989) found that graduates experience unmet work expectations (i.e., job attribute dissonance), which are associated with decreased job satisfaction and greater turnover intentions (for a meta-analysis on newcomers' work expectations, see Wanous/Reichers/Hudy 1992). The current study aimed to shed insight into the preferences for various job and organisational attributes of incoming first-year students and newly-hired employees, and whether their preferred job attributes are significantly different. Insights into which job attributes incur the greatest discrepancies between students and employees is important, because these discrepancies are indicative of the most unrealistic work expectations students might have. As a result, the likelihood that students would be disappointed with these job attributes is high and they should be supported to acquire more realistic work expectations (cf. Scholarios/Lockyer/Johnson 2003).

Second, individual differences have been found to affect organisational attraction, however much of the reseach on organisational attractiveness does not take individual differences into account (for an overview, see Evertz/Süß 2017). Understanding whether or not certain individual characteristics influence job attribute preferences may be especially relevant to organisational decision-makers, particularly when attempting to enhance workforce diversity. Research on the interaction of applicant and job characteristics has focused on two categories of individual differences, that is, surface-level differences such as age and gender, and deep-level differences such as ability and personality (see Swider/Zimmerman/Charlier/Pierotti 2015, for a meta-analysis). Whereas many studies have examined surface-level individual differences in job attribute preferences, very little is known about the relationship between deep-level variables such as academic ability and job attribute preferences (Rynes 1991; Evertz/Süß 2017). In one of the few studies that have investigated how ability levels are associated with differential job attribute preferences, Trank, Rynes and Bretz (2002) found that students with high cognitive ability and high academic achievement (i.e., grade-point average or GPA) place greater importance on interesting and challenging work and are less concerned with high pay levels. In addition to academic ability, another deep-level variable that has been rarely investigated in recruiting literature is growth need strength. Growth need strength is a personality trait that indicates the degree to which individuals have needs for accomplishment, learning, and personal development (Hackman/Oldham 1980). Only a very few studies have examined the influence of growth needs on job attribute preferences (Feldman/Arnold 1978; Turban/Keon 1993). The current study aimed at answering the question of whether the aforementioned individual differences would influence job attribute preferences of prospective applicants. If deep-level variables such as academic ability and growth need strength would affect the perceived importance of certain job attributes, organisations should

focus their recruitment messages on these attributes to attract students who are high achievers and/or have higher desires for learning and personal development.

Third, little is known about the perceptions of various job attributes among information technology (IT) professionals, especially the newly-hired ones (Kuhn/Joshi 2009). The study of job attribute preferences of IT professionals is particularly important for at least three reasons. (a) IT is currently one of the fastest-growing sectors not only globally, but also in Romania (analysis by Eurostat 2021). With an annual growth rate of 14.3 %, the Romanian IT industry contributed 6 % to the country's GDP in 2020 (Eurostat 2021) and is expected to reach 10 % by 2025 (the Romanian Employers Association in the Software Industry 2020). (b) There is an increasing demand for IT workforce to fuel this expanding Romanian IT sector (cf. Trauth/Quesenberry/Huang 2009). The number of vacancies in the Romanian IT sector has increased from 1,668 in 2015 to 2,462 in 2019, however the number of students with bachelor's degrees in IT has remained relatively constant from 2014 to 2018 (the Romanian National Institute of Statistics – INS 2021). (c) The amount of turnover among IT professionals is very high, especially during the early years of their employment (see Joseph/Ng/Koh/Ang 2007, for a meta-analysis). For example, the turnover rate in the Romanian IT sector was 20 % in 2019, according to a survey by Korn Ferry (2019). In conclusion, investigating IT professionals' job attribute preferences is particularly important, because IT is a dynamic sector and organisations have to attract more applicants and keep a low turnover rate. Knowing the IT professionals' preferences may shed light on the degree of their fit with the job and the organisation (i.e., person-job and person-organisation fit; Kristof 1996), which is crucial for recruitment and retention (Catanzaro et al. 2010).

Finally, much of the past research has examined job attribute preferences and their influence on applicant job choices, in the context of Western countries (e.g., U.S., Canada). Hence, the generalisability of the results to other countries remains questionable. For example, very little is known about the job attribute preferences of future and current workforce in emerging economies such as Romania, despite calls for more research on this topic (Ng/Burke 2006).

Conceptual Background and Hypotheses Development

Job and Organisational Attributes

Job and organisational attributes were defined as "descriptions of the duties, skills, abilities, experiences and/or outcomes associated with jobs or organisations" (Murphy/Collins 2015: 199). Examples of attributes that are specific to a job are salary, benefits, type of work, opportunities for advancement, whereas attributes that are more broadly reflective of the organisation include, for example,

company size, location, and work environment (Chapman et al. 2005; Acikgoz 2019). For the sake of simplicity, we use the term "job attributes" throughout the study.

According to Objective Factor Theory (Behling/Labovitz/Gainer 1968), applicants make job-choice decisions based on their evaluation of the advantages and disadvantages of objective job attributes such as salary, benefits, location, and opportunities for advancement. Behling et al. (1968:15) stated that each of these attributes "is weighted in terms of its relative importance to the individual, and the results are combined into some over-all index of desirability". Another theoretical approach that has been used to explain how job-choice decisions are made is Vroom's (1964) Expectancy Theory. According to this theory, individuals are attracted to organisations that are perceived to offer valuable attributes for them (Barber/Roehling 1993). Thus, individuals will choose an organisation if they perceive that the work environment is consistent with their desires, needs, and/or goals (Ehrhart/Ziegert 2005). Expectancy Theory suggests that applicants are attracted by job attributes such as challenging and meaningful work, training and promotion opportunities, friendly co-workers, and job security (see Carless/Imber 2007).

Research has found that individuals have preferences for certain job attributes over others, and that their perceptions of the desirability and availability of certain job attributes influence their job-choice decisions (e.g., Boswell et al. 2003; Chapman/Webster 2006). The early studies on job attribute preferences were focused on exploring which single attributes are important in job choices (e.g., Jurgensen 1978; Posner 1981) and on the relationship between perceptions of job attributes and different aspects of job choice such as recruiter behaviours (e.g., Harris/Fink 1987; Turban/Forret/Hendrickson 1998) and recruiting practices (e.g., Powell 1984, 1991). In the latter studies, underlying constructs of job attributes measures were used, but they varied considerably in number (from one to six constructs; Carless/Imber 2007) and also in content. For example, attributes such as salary and promotion opportunities loaded either on different factors (Powell 1984) or on the same factor (Turban et al. 1998). Overall, these early studies indicated that type of work, advancement opportunities, pay, and location were the most important attributes in job-choice decisions (see Boswell et al. 2003).

More recent studies have examined some other job attributes in addition to those commonly used in earlier studies such as organisational prestige/reputation (Harold/Ployhart 2008), flexible working schedules and work-life balance (Casper/Buffardi, 2004), freedom/autonomy (Slaughter/Greguras, 2009), corporate social responsibility (Zhang/Gowan 2012), as these attributes have become increasingly important in recent years for job applicants (Thompson/Sikora/Perrewé/Ferris 2015). These job attributes seem to be especially important for Mil-

lennials (born between 1982–2001; Strauss/Howe 1991), who are more attracted to jobs that involve a high level of work-life balance and higher flexibility than previous generations (Ng/Schweitzer/Lyons 2010; Brink/Zondag 2019). Work hours and work-life balance are also commonly cited as important factors in recruiting and retaining IT professionals, because they have been reported to work longer hours and have less work-life balance compared to their non-IT counterparts (Kuhn/Joshi 2009). In their meta-analysis, Chapman et al. (2005) found that among the organisational attributes, work environment and organisation image are the strongest predictors of applicant attraction, whereas pay and compensation and advancement opportunities matter less than type of work. Similary, Uggerslev et al.'s (2012) meta-analysis revealed that compensation matters less than job itself, and organisation image is a stronger predictor for applicant attraction than other organisational attributes such as size and location.

Despite the sizable number of studies on job attribute preferences and their importance for job choice and organisational attraction, the findings are still inconclusive, as most of these studies have considered only a few job attributes (Baum/Kabst 2013). There is a need for studies that include a wide range of job attributes to determine their relative importance in organisational attraction (Chapman et al. 2005) and their interdependence when evaluated in conjunction (Baum/Kabst 2013). In the current study, we used a comprehensive list of job attributes, including items about flexible working hours, work-life balance, autonomy, in addition to the items commonly used in early studies (e.g., Harris/Fink 1987; Turban et al. 1998).

As already mentioned, with few exceptions, most studies on job attribute preferences have been based on college students (see Rynes 1991; Ehrhart/Ziegert 2005). Compared to the typical job seekers, college students have limited work experience that has been found to influence perceived importance of job attributes (Reed/Kratchman 1989; Highhouse et al. 1999). The extent to which work experience influences job attribute preferences has rarely been investigated, and has been mostly limited to longitudinal studies (e.g., Keenan/Newton 1986; Posner/Powell 1990). Overall, the findings of longitudinal studies indicated that there is some stability in job attribute preferences during the early years of employment, but there is enough instability to suggest that newly-hired employees' needs should not be ignored (see Posner/Powell 1990). For example, Posner and Powell (1990) studied the job attribute preferences of 61 respondents at graduation and after six years of work experience and found that although the overall ranking of job attributes remained stable, "freedom to do the job on my own" increased in importance after gaining work experience, whereas training programs, company size, and travel opportunities decreased (cf. the findings by Nordholm/Westbrook 1982).

One explanation that has been provided for the changes in the perceived importance of various job attributes as a result of work experience is that employees, being exposed to the realities of work (i.e., "reality shock"; Petry et al. 2020: 1478), possess more realistic information with regards to a job or an organisation, and thus they place a different emphasis on the desired job attributes compared to students (see Realistic Information Hypothesis; Rynes 1991). In addition, it has been found that employees, especially newly-hired ones, have work expectations that are not confirmed by the realities of the workplace (e.g., Keenan/Newton 1986; Reed/Kratchman 1989; Nicholson/Arnold 1991). For example, Keenan and Newton (1986) found discrepancies for two job factors, that is, autonomy and influence and development of abilities between engineering students' aspirations when at university and their experiences within the first few months of employment, suggesting that many have been disappointed with these job aspects. The development of abilities factor accounted for the largest amount of variance in overall job satisfaction. The discrepancy between graduates' expectations and the realities of employment has been linked to dissatisfaction, frustration, and turnover (Scholarios et al. 2003; see the Met Expectations Hypothesis; Wanous et al. 1992).

In one of the few cross-sectional studies that have investigated the impact of work experience on job attribute preferences, Highhouse et al. (1999) found that African-American student engineers prefer organisations that advertise team-based work over those that advertise individual-based work, whereas employed African-American engineers did not express clear preference for any of these work structure types. No other differences between the two samples in perceiving characteristics of a job advertisement (i.e., compensation system and staffing policy) were found. Reed and Kratchman (1989) also indicated that accounting students do not hold similar perceptions with accounting workers concerning the importance of various job attributes. For example, students reported a greater desire to satisfy their social needs at work, to have good relationship with supervisors, and gain prestige inside and outside their companies as compared to workers. For workers, limited travel was more important than it was for students.

The inconsistent findings regarding the effect of work experience on job attribute preferences seem to suggest that context (e.g., the type of industry and the population used) may influence which job attributes are rated as being more important by students compared to employees, and thus no specific hypothesis was stated. However, as individuals with work experience (i.e., employees) have a relatively good insight into the job attributes (Lievens/Highhouse 2003; Petry et al. 2020), they are expected to place a different emphasis on the desired job attributes as compared to students, who have limited or no workplace experience.

Hypothesis 1: *There will be a significant difference between the perceptions of students and newly-hired employees with regard to the importance of various job attributes.*

Individual Differences in Job Attribute Preferences

As discussed earlier, the importance that prospective and current employees attach to various job attributes may also depend on their individual differences such as age, gender, ability, and personality (Erhart/Ziegert 2005; Swider et al. 2015; Evertz/Süß 2017). One of the central tenets of Schneider's (1987) Attraction-Selection-Attrition model is that individuals are attracted to organisations that have attributes compatible with their own characteristics (i.e., attraction component). However, individuals who are initially attracted to, and selected by an organisation are more likely to leave the organisation if they perceive a weak fit with the organisation (i.e., attrition component; see Acikgoz 2019).

Several studies have supported the assumptions of this model, by demonstrating that individuals are attracted to organisations that fit their own personalities, needs, and preferences (e.g., Bretz/Ash/Dreher 1989; Turban/Keon 1993; Cable/Judge 1994; Lievens/Decaesteker/Coetsier/Geirnaert 2001). Examples of personality variables included in these studies are need for achievement (Bretz et al. 1989; Turban/Keon 1993), individualism/collectivism, locus of control, and self-efficacy (Cable/Judge 1994), and the Big Five personality factors (e.g., extroversion, conscientiousness; Lievens et al. 2001). Studies by Bretz et al. (1989) and Turban and Keon (1993) found that need for achievement influences individuals' preferences for reward systems, that is, individuals high on need for achievement were more attracted to organisations with pay systems that reward performance rather than seniority (e.g., merit-based rewards). Individuals high in need for achievement have been described as preferring challenging tasks and situations in which they can take personal responsibility, and having a strong need for performance feedback (Turban/Keon 1993). This may explain why these individuals were more attracted to large organisations (which are more likely to provide challenging tasks) and small organisations (which are more likely to provide performance feedback). In Turban and Keon's (1993) study, need for achievement has been used as an indicator of growth need strength. However, need for achievement represents one of the many components in the Growth Need Strength Model, and thus it is more specific than the growth need strength construct (Steers/Spencer 1977). Need for achievement was defined as "the need to accomplish something important or to compete with a standard of excellence" (Steers/Spencer 1977: 3), whereas growth need strength represents the desire to obtain growth from one's work (Hackman/Oldham 1974). According to Hackman and Oldhman (1980), individuals differ in their needs for growth and personal accomplishment in such a way that those with strong

growth needs respond more positively to complex and challenging jobs compared to individuals with weak growth needs. In addition, individuals with high growth needs have been found to be open to experience, to complete their jobs creatively, to have more positive work attitudes (e.g., affective commitment to organisation), and higher job performance (see Lin et al. 2016). These findings suggest that growth need strength is an important driving force for employees in attaining desired work outcomes.

Despite the important role of growth need strength in the work context, very little is known about the influence of this individual variable on job attribute preferences. To the best of our knowledge, the only study that has investigated growth need strength as a variable influencing job attribute preferences was conducted by Feldman and Arnold (1978), but it used a limited set of job attributes. The results of this study indicated that students high in growth needs place greater importance on attributes such as "use of skills and abilities" and "autonomy and independence" as compared to students low in growth needs who placed more importance on pay and fringe benefits. As by definition, individuals with high growth needs tend to value personal development and learning, as well as work autonomy and independence, whereas those lower in growth needs are less interested in opportunities for learning and development (Hackman/Oldhman 1980), one may expect the most important job attributes for individuals with high growth needs to be centred on the job content (e.g., opportunity to use abilities) rather than on compensation and rewards (e.g., good salary). Thus, individuals with high growth needs are expected to place greater importance on job attributes such as opportunities to use abilities, opportunities to learn new skills as compared to individuals with lower growth needs. Because there is very little evidence on the effect of growth needs strength on job attribute preferences, no specific directional hypothesis is stated.

Hypothesis 2: *Individuals with high growth need strength will value job attributes differently than individuals lower in growth need strength.*

Another deep-level individual difference variable identified by past research as affecting job attribute preferences is academic ability (e.g., Cable/Judge 1994; Trank et al. 2002; see also Evertz/Süß 2017). Academic ability was operationalised in previous studies using grade-point average (GPA) and/or cognitive ability scores, as these measures are strongly correlated to ability and motivation to do quality work (Swider et al. 2015). As our student sample consisted of incoming first-year students, academic ability was measured using high school GPA and final grade average at the baccalaureate exam[1]. Both of these measures

1 Only Romanian high school graduates who pass the baccalaureate exam have access to higher education. The final average grade for all written exams (i.e., three exams including two compulsory subjects and one chosen subject based on student's academic profile)

are commonly used for college admission criteria in Romania, and thus are likely to represent a predictor of students' ability to perform well in college (cf. Ng/Burke 2005).

Although high ability applicants are likely to be high performers once hired and, consequently, are more desirable candidates for organisations (Schmidt/Hunter 1998), research has been shown that they are more discerning when deciding among suitable job alternatives (e.g., Cable/Judge 1996) and have lower levels of organisational attraction than low ability applicants (Swider et al. 2015). Moreover, applicants with high academic ability have been shown to value different job attributes than those with low ability (Trank et al. 2002; Ng/Burke 2006; Ng et al. 2010). For example, Trank et al. (2002) found that students with high levels of academic ability place greater importance on job attributes such as interesting and challenging work, selective hiring practices, individualistic pay, and fast-track promotion systems as compared to those with lower levels of ability. In Ng et al.'s (2010) study, students with higher academic ability placed greater emphasis on job attributes such as work variety and challenging work and were less concerned with job attributes such as job security, good health and benefits as compared to students with lower academic ability. Thus, we expect that individuals with high academic ability will place greater emphasis on job attributes such as opportunities to use abilities, support for initiative taking and responsibility, and less emphasis on attributes such as good salary and fringe benefits as compared to individuals with lower academic ability. However, due to the inconclusive evidence on this topic, we do not state a directional hypothesis.

Hypothesis 3: *Individuals with high academic ability (i.e., high school GPA and final grade average at the baccalaureate exam) will rate job attributes differently than individuals with lower academic ability.*

Another set of individual differences, which has been identified as important to recruiting is represented by surface-level individual differences (e.g., age, gender; Swider et al. 2015). Extensive research has focused on gender differences in job attribute preferences (e.g., Konrad/Ritchie/Lieb/Corrigall 2000; Frear/Donsbach/Theilgard/Shanock 2018; Sheppard 2018), as it has been argued that gender is a stronger predictor of job attribute preferences than other demographic characteristics (see Kaufman/White 2015). The examination of gender differences in job attribute preferences is relevant in the context of existing gender discrimination. Women earn less and are less likely to work in male-dominated jobs (e.g., IT professionals; business executives) than men (Trauth et

should be minimum 6 (six) for a student to be considered as having passed the baccalaureate examination.

al. 2009; Frear et al. 2018). For example, in 2019 the employment rate of the active population was 70.9 % in Romania, with a higher rate for men (80.3 % compared to 61.3 % for women; INS 2021). In addition, women represented nearly 41 % of the IT professional positions in 2019, but they earned, on average, approximately 1,725 RON (i.e., 354 EURO) less than men (INS 2021).

Research has revelead that men prefer salary, advancement opportunities, and status more than women did, whereas women were more likely than men to value job attributes such as good quality relationships with colleagues, challenging/interesting work, and good work hours (e.g., Konrad/Ritchie et al. 2000; Kaufman/White 2015; Sheppard 2018). For example, in their meta-analysis of 242 samples from a broad range of ages and settings, Konrad, Ritchie et al. (2000) found significant gender differences on 33 out of 40 job attributes examined, although the effect sizes were small in magnitude (see also the meta-analysis by Konrad/Corrigall/Lieb/Ritchie 2000). Consistent with gender roles (i.e., shared beliefs about what behaviours and activities are appropriate for each sex), men were found to value earnings more than women, whereas women valued convenient working hours and commuting more than men did. Consistent with gender stereotypes (i.e., shared beliefs about what psychological traits are characteristic of women and men), job attributes such as promotions, challenge, and power were more important to men, while interpersonal relationships (e.g., good co-workers), and intrinsic job attributes such as growth opportunities and use of abilities were more important to women.

Some researchers have argued that gender roles assumed by men and women prior to actual job experience are likely to be less important than work roles in explaining differential job attribute preferences (e.g., Lacy/Bokemeier/Shepard 1983; Wiersma 1990; Heckert et al. 2002). More specifically, gender differences in job attribute preferences were reduced when occupational prestige, income, work commitment (Lacy et al. 1983) or job level (Wiersma 1990) were taken into account. Heckert et al. (2002) found that although women place higher importance than men on job accommodations to family life (e.g., availability of child care) and pleasant working conditions (e.g., flexible work hours, easy commute), there were no significant gender differences in the importance of pay, intrinsic job qualities (e.g., challenge, use of abilities) or attributes referring to promotion opportunities, when differences in average salaries, job characteristics importance, and career path were controlled. These inconsistent findings regarding gender differences in job attribute preferences can be explained by the variety in the phrasing of job attributes (Heckert et al. 2002), and the examination of these attributes either separately (e.g., Lacy et al. 1983) or as composite indices (i.e., grouping items into different dimensions; e.g., Heckert et al. 2002). Based on prior research, we expect that females will place greater importance on job attributes such as work-life balance, flexible working hours,

friendly co-workers compared to males, although no directional hypothesis is stated.

Hypothesis 4: Females will rate job attributes differently than males.

Method

Participants

The study was conducted using two samples, one of incoming first-year students and one of newly-hired employees (i.e., IT professionals).

Student Sample

The first sample consisted of 199 incoming first-year students at the largest university in Romania, the majority of which had just completed high school. Their mean age was 18.77 years (*SD* = .95). Of the 199 students, 63 % were females and 36 % were males, with 1 % not reporting their gender. They represented a variety of majors, including business administration in German (24 %), the economics of commerce, tourism and services (20 %), business computer science (16 %), management (12 %), accounting and management information systems (11 %), finance and banking (6 %), marketing (4 %), and others (7 %). Students had a mean high school GPA of 8.78 on a 10-point scale (*SD* = .71), and a mean final grade average at the baccalaureate exam of 8.34 (*SD* = .92). These grades were collected from the university records, with student permission.

Employee Sample

The second sample was comprised of 23 IT professionals who worked an average of 15.83 months (*SD* = 20.77) for a Romanian IT company. Note that it was difficult to recruit more employees because they were interviewed individually during their working hours following the completion of the job attributes questionnaire (the average duration of the interview was about 60 min). Thirteen of the respondents (57 %) were males, and ten (43 %) of them were females. The mean age of respondents was 26.30 years (*SD* = 4.02). These employees had various job types: five respondents (22 %) were developers, five (22 %) worked in the human resources department, five (22 %) were middle managers, four (17 %) were testers, three (13 %) were quality assurance specialists, and one respondent was an intern. Participants were also asked for demographic information such as their level of education, major, marital status, and type of contract (see Table A1).

Measures

Student Sample

Job Attributes. Students' perceptions of job attributes were assessed by a 31-item questionnaire, which was developed with items commonly used in previous studies (e.g., Harris/Fink 1987; see also Uggerslev et al. 2012). The items were translated from English into Romanian, followed by a back-translation to check for equivalence of meaning in both languages. Participants were asked to rate the importance of the job attributes in their job-choice decisions from *not at all important* (1) to *extremely important* (7). The full list of items can be found in Table A2.

Growth Need Strength. Students' growth need strength was assessed using the forced choice format of the Job Diagnostic Survey (Hackman/Oldham 1974). Research has suggested that forced choice format provides a sounder and more relevant measure of growth need strength than the Likert format (e.g., Phillips/Bedeian 1994). Participants were asked to indicate their preference for 12 pairs of hypothetical jobs (e.g., "A job which offers little or no challenge" vs. "A job which requires you to be completely isolated from co-workers"). Each pair contains a job that indicates growth needs and a job that indicates alternative needs (e.g., affiliation needs). Participants recorded their preferences on a five-point scale, with choices ranging from "strongly prefer A" to "strongly prefer B". We computed the overall score by summing the 12 individual scores, with high scores indicating high growth need strength. Due to the ipsative nature of this measure, we do not report internal consistency coefficients, as they are considered inappropriate (Phillips/Bedeian 1994).

Employee Sample

Job Attributes. Employees' perceptions of job attributes were assessed with the same questionnaire used for the student sample.

Job Satisfaction. As job satisfaction is one of the strongest predictors in employee retention (e.g., Uggerslev et al. 2012), we examined the relationship between employees' perceptions of job attributes and their job satisfaction. Employees' job satisfaction was measured using a single-item overall satisfaction ("How satisfied would you say you are with your job?"), with four possible levels of response. The anchors ranged from *not at all satisfied* to *very satisfied*. Single-item measure of overall job satisfaction has been shown to be reliable and "more robust than the scale measures of overall job satisfaction" (Wanous et al. 1997: 250).

Procedure

Incoming students waiting in the university lobby for their final admission step (i.e., the confirmation of place on which they were admitted at the faculty) were asked if they were interested in voluntarily participating in a study regarding job attribute preferences. The students who accepted to participate completed a survey containing questions about preferred job attributes and relevant demographic factors (e.g., age, gender), as well as a measure of growth need strength. Note that the survey contained other items addressing, for example, ideal employer, perception of career prospects, and preferred sector of future employment, but as this data does not contribute to answering our research questions, it is not analysed any further in this study. Respondents took 20 minutes on average to complete the survey, and were not compensated for participation.

A slightly different procedure was used with the employee sample. An e-mail describing the purpose of the study was sent to the human resources representative of the IT company, who then forwarded it to employees who were newly-hired. Participants were promised confidentiality regarding their responses. Employees who agreed to participate were interviewed during working time into a private room of the IT company, after completing a survey containing questions about preferred job attributes, job satisfaction, and demographic factors (e.g., age, gender, work experience). All interviews were audiotaped, transcribed, and analysed using a qualitative approach, but these results are not reported here.

Results

Principal Component Analysis of Job Attributes

A principal component analysis (PCA) with varimax rotation was conducted to reduce the 31 job attributes down to "more substantive" underlying factors (Field 2009: 641). Given the small size of employee sample, PCA was conducted only for the student sample. Prior to conducting PCA, intercorrelations between items were examined and three items were excluded from the original scale as they had correlations below .30 with all the other items (Field 2009). The Kaiser-Meyer-Olkin (KMO) analysis of sampling adequacy (KMO = .77) and Bartlett's test of sphericity, $\chi^2(378) = 1667.52$, $p < .001$ showed that the data was appropriate for PCA. The scree plot suggested that a four-factor solution best represented the data. These four factors accounted for 43.12 % of the total variance in the job attribute items. Note that items with factor loadings less than .50 were eliminated, with the exception of "flexible working hours" item, which had a factor loading of .49. In addition, other two items were dropped from the original scale, despite having factor loadings greater than .50 due to their wording, which was different from the meaning of the other items loading on the same factor. The maintained items and factor loadings after rotation are provided in Table A3. The four final factors identified were (a) job itself (4 items; α =

.69), (b) firm attributes (4 items; α = .70), (c) compensation and rewards (5 items; α = .72), and (d) supportive work environment (5 items; α = .65).

Descriptive Statistics and Correlations

Means and standard deviations were computed for the 18 job attribute items that remained after carrying out PCA for both students and newly-hired employees. These results are presented in Table 1. As can be seen in Table 1, the top-rated job attributes for students were job security and work-life balance, followed by good fringe benefits, and relaxed work atmosphere and friendly co-workers. For employees, the most important job attributes were work-life balance and job security, followed by opportunities to use individual abilities, and good salary. The least important job attributes for both samples were all related to firm attributes factor, and were quite consistent. More specifically, company reputation, size, and location were the least important job attributes for students, whereas for employees the least important ones were corporate social responsibility, location, and size of company. The largest differences between the two samples occurred in the ratings of job attributes such as opportunity to travel and relatively stress-free working environment, which students rated over 1.00 point higher than employees (5.82 vs. 4.65, and 5.92 vs. 4.91, respectively).

Table 2 presents the intercorrelations among job attributes and sociodemographic variables for both samples, except for the demographic variables that are different in the two samples (see Method section). As shown in Table 2, in both samples all four-job attribute factors were positively correlated with each other. Except for the correlations between age and provision of performance feedback (r = .15, p = .035), and between gender and job security (r = -.21, p = .003) in the student sample, none of the other correlations for age and gender were significant. In addition, for the student sample both high school GPA and final grade average at the baccalaureate exam were negatively related to flexible working hours (r = -.17, p = .021, and r = -.15, p = .038, respectively), and growth need strength was positively related to job itself (r = .14, p = .045) and company reputation (r = .16, p = .022), but negatively related to supportive work environment (r = -.19, p = .006), and relatively stress-free working environment (r = -.24, p = .001). For employees, none of the demographic variables were significantly correlated to the job attribute items or factors, but their self-reported job satisfaction was positively related to all job attribute factors, that is, job itself (r = .60, p = .002), firm attributes (r = .59, p = .003), compensation and rewards (r = .42, p = .046), and supportive work environment (r = .68, p < .001).

Table 1: Ratings of Importance of Job Attributes: Means and Standard Deviations

Job Attribute Items	Students (N = 199)		Employees (N = 23)	
	M	*SD*	*M*	*SD*
Job security	6.56	0.95	6.00	1.28
Work-life balance	6.54	0.84	6.57	0.66
Good fringe benefits	6.43	0.97	6.09	1.08
Relaxed work atmosphere and friendly co-workers	6.32	1.25	6.26	0.86
Rewards and promotions based on performance	6.26	1.15	6.30	0.93
Opportunities to learn new skills	6.13	1.13	6.30	0.93
Opportunities to use individual abilities	6.10	1.13	6.35	0.89
Good salary	6.04	1.25	6.35	0.78
Relatively stress-free working environment	5.92	1.41	4.91	1.83
Frequent salary increases	5.88	1.30	6.00	1.13
Support for initiative-taking and responsibility	5.87	1.23	6.00	1.00
Opportunity to travel	5.82	1.47	4.65	1.30
Provision of performance feedback	5.79	1.25	6.22	0.95
Flexible working hours	5.78	1.22	6.17	0.98
Corporate social responsibility	5.78	1.47	4.57	1.73
Reputation of company	5.73	1.33	4.83	1.30
Size of company	4.58	1.68	3.96	1.49
Location of company	4.37	1.76	4.22	1.73

Note. 7-point rating scale: 1 = not at all important; 7 = extremely important.

Table 2: Pearson Correlations Among Job Attributes and Sociodemographic Variables for Students (N = 199) and Employees (N = 23)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. Job itself	-	.67**	.63**	.69**	.63**	.43**	.34**	.38**	.24**	.29**	.26**	.04	.23**	.20**	.23**	.19**	.33**	.17*	.13	.24**	.26**	.26**	.01	-.11
2. Provision of perf. feedback	.85**	-	.26**	.37**	.26**	.20**	.16*	.12	.12	.18*	.18*	.06	.11	.15*	.23**	.09	.27**	.22**	.09	.09	.28**	.16*	.15*	-.05
3. Opportunities to learn	.82**	.54**	-	.53**	.38**	.27**	.14*	.22**	.23**	.21**	-.001	-.14	.05	.04	.001	.05	.12	.14	-.04	.04	.09	.12	-.12	-.12
4. Support for initiative taking	.83**	.72**	.54**	-	.38**	.28**	.19**	.28**	.22**	.15*	.26**	.06	.17*	.27**	.20**	.23**	.19**	.04	.13	.18*	.17*	.17*	-.04	-.11
5. Opportunities to use abilities	.76**	.50*	.59**	.41	-	.35**	.28**	.34**	.24**	.16*	.12	-.01	.17*	.01	.19**	.06	-.01	.01	.02	.25**	.08	.20**	.06	-.06
6. Firm attributes	.75**	.59**	.67**	.52*	.69**	-	.81**	.72**	.63**	.74**	.27**	.23**	.29**	.13	.10	.15*	.39**	.16*	.18	.21**	.21**	.38**	-.09	-.09
7. Company size	.41	.30	.41	.34	.29	.76**	-	.41**	.35**	.52**	.18**	.16*	.20**	.12	.06	.09	.24**	.06	.06	.12	.10	.35**	-.05	.002
8. CSR	.73**	.59**	.54**	.50*	.76**	.87**	.49*	-	.42**	.32**	.21**	.18*	.23**	.03	.12	.12	.33**	.13	.09	.26**	.17*	.20**	-.04	-.15*
9. Reputation of company	.63**	.55**	.61**	.45*	.45*	.81**	.75**	.73**	-	.18*	.08	.08	.14*	.06	-.08	.07	.23**	.04	.07	.19**	.20**	.22**	-0.4	-.08
10. Location of company	.60**	.36	.47*	.29	.54**	.45*	.18	.40	.10	-	.27**	.22**	.25**	.16*	.15*	.14*	.32**	.22**	.12	.07	.17*	.33**	-.11	-.04
11. Compensation/ rewards	.82**	.74**	.73**	.75**	.44*	.68**	.41*	.60**	.59**	.45*	-	.78**	.72**	.65**	.63**	.68**	.43**	.09	.32**	.21**	.26**	.36**	.09	-.06
12. Salary increases	.76**	.76**	.61**	.73**	.36	.50*	.24	.49*	.49*	.30	.92**	-	.42**	.40**	.38**	.49**	.39**	.11	.31**	19**	.17*	.31**	.05	-.05
13. Opportunity to travel	.50*	.36	.36	.56**	.35	.54**	.41*	.62**	.45*	.18	.65**	.43*	-	.26**	.40**	.28**	.24**	.04	.13	.05	.20**	.24**	.04	-.12
14. Good salary	.75**	.63**	.73**	.65**	.41	.60**	.33	.49*	.56**	.45*	.92**	.88**	.44*	-	.16*	.46**	.25**	.03	.25**	.12	.13	.22**	.10	.02
15. Performance-based promotion	.48*	.44*	.63**	.34	.14	.43*	.31	.12	.35	.52*	.58**	.48*	.02	.67**	-	.26**	.27**	.07	.13	.13	.22**	.21**	.10	-.01
16. Good fringe benefits	.74**	.73**	.61**	.63**	.44*	.58**	.31	.56**	.46*	.40	.87**	.86**	.47*	.72**	.34	-	.37*	.08	.30**	.29**	.21**	.26**	.04	-.05
17. Supportive work env.	.68**	.71**	.45*	.61**	.43*	.72**	.58**	.63**	.62**	.37	.64**	.59**	.39	.60**	.25	.70**	-	.63**	.62**	.62**	.69**	.65**	.06	-.14
18. Stress-free-working env.	.60**	.51*	.45*	.50*	.50*	.70**	.61**	.63**	.57**	.34	.70**	.48*	.45*	.53**	.10	.60**	.56**	-	.18*	.20**	.30**	.25**	-.004	-.09

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
19.	Work-life balance	.58**	.52*	.52*	.41	.43*	.55*	.30	.50*	.59**	.28	.42*	.43*	.13	.57**	.30	.31	.66**	.60**	-	.40**	.36**	.31**	.003	-.11
20.	Job security	.50*	.71**	.23	.46*	.20	.53**	.45*	.45*	.46*	.27	.46*	.44*	.25	.32	.15	.62**	.88**	70**	.48*	-	.29**	.31**	-.02	-.21**
21.	Relaxed work atmosphere	.49*	.43*	.35	.53**	.29	.64**	.75**	.45*	.45*	.33	.47*	.33	.37	.40	.35	.41	.69**	.65**	.53**	.29	-	.30**	.07	-.12
22.	Flexible working hours	.51*	.64**	.24	51*	.24	.32	.04	.34	.34	.24	.58**	.61**	.23	.57**	.24	.67**	.64**	.41	.33	.58**	.16	-	.005	.01
23.	Age	-.03	-.26	.12	-.05	.10	.04	.12	-.18	.06	.15	-.04	-.11	.15	-.24	.38	-.24	-.10	-.08	.17	-.28	.03	-.06	-	.10
24.	Gender	.11	-.08	.39	-.09	.15	-.03	-.15	-.07	-.12	.22	.09	.08	-.17	.17	.20	.16	-.14	-.04	.09	-.21	-.14	-.21	-.11	-

Note. Correlations for the student sample are printed above the diagonal and correlations for the employee sample are printed below the diagonal.
perf. = performance; CSR = corporate social responsibility; env. = environment. Age in years, gender was dummy coded (female = 0; male = 1).
*$p < .05$ **$p < .01$

Differences in Job Attribute Preferences between Students and Employees

As some of the dependent variables were not normally distributed, and the Student's *t*-test is not robust to violations of normality for small sample sizes (Wilcox 2017), we used robust tests to examine the differences in job attribute preferences between students and newly-hired employees (Hypothesis 1). In particular, we calculated Yuen's *t*-test (Wilcox 2017: 166) using 20 % trimmed means to compare the job attribute ratings of the two samples, as this test is much more robust concerning deviations from normal distributions and outliers than Student's *t*-test. The analysis was done using the WRS2-package in R Version 3.3.3. The robust *d*-value was calculated as a measure of the effect size using the akp.effect, a function from the WRS2-package that takes trimming into account. The robust *d*-value can be interpreted like Cohen's *d*, that is, values of 0.2, 0.5, and 0.8 correspond to small, medium, and large effects, respectively. The results are presented in Table 3. Examination of Table 3 reveals that the only job attribute factor for which a significant difference of -0.71 CI 95 % [-0.14, -1.29] between the ratings of students and employees was found is firm attributes, with undergraduates placing more importance on attributes such as company size, location, and reputation compared to newly-hired employees.

Table 3: Differences in Job Attribute Preferences between Students (N = 199) and Employees (N = 23)

	Students		Employees		*t* (df)	*p*	robust *d*
Job Attribute Factor	Trimmed *M*	Trimmed *SE*	Trimmed *M*	Trimmed *SE*			
Job itself	6.09	.07	6.35	.20	1.28 (17.22)	.217	.28
Firm attributes	5.20	.08	4.48	.28	2.605 (16.89)	.019	-.64
Compensation/ Rewards	6.23	.06	5.97	.21	1.24 (17.11)	.231	-.30
Supportive work env.	6.39	.04	6.20	.19	1.05 (15.87)	.311	-.30

Note. env. = environment. *Robust t-tests (Wilcox, 2017)*

Individual Differences in Job Attribute Preferences among Students

To test the effect of individual differences (i.e., growth need strength, academic achievement, gender) on students' perceptions of job attributes (Hypothesis 2, 3, and 4, respectively), multiple regression analysis was employed. Given the small size of the employee sample, multiple regression analysis was conducted only for the student sample. We conducted separate regression analyses for each of the four job attribute factors. The individual difference variables were entered

simultaneously into the regression analyses to predict job attribute factors. Prior to conducting multiple regression analyses, we checked whether the assumptions of regressions were met, that is, whether the distribution of the standardized residuals was normal by plotting histograms and q-q-plots, and whether all tolerance values were above .10.

The results of the multiple regressions analyses are reported in Table 4. As can be seen in Table 4, only growth need strength and gender significantly predicted the perceived importance of two job attribute factors, that is, job itself and supportive work environment. More specifically, the higher the growth need strength, the higher the importance placed on job attributes pertaining to job itself (e.g., opportunities to use individual abilities), and the lower the value placed on job attributes relating to supportive work environment (e.g., work-life balance). In addition, male students rated job attributes concerning supportive work environment significantly lower than female students. It should be noted that the individual difference variables combined accounted for a very small proportion of the variance in the job attribute factors (see Table 4).

Table 4: Regression of Job Attributes on Gender, Academic Ability, and Growth Need Strength in Student Sample (N = 199)

Variables	Job Itself			Firm Attributes			Compensation/Rewards			Supportive Work Environment		
	B	*SE*	*p*	*B*	*SE*	*p*	*B*	*SE*	*p*	*B*	*SE*	*p*
Constant	5.46	.95	<.001	6.09	1.28	<.001	6.01	1.003	<.001	8.80	.84	<.001
Gender[1]	-.25	.14	.072	-.34	.19	.069	-.11	.15	.459	-.37	.12	.003
High school GPA[2]	-.08	.12	.518	-.07	.16	.660	-.09	.12	.455	-.13	.10	.206
Final grade average at bac[3]	.01	.09	.941	-.13	.12	.263	.11	.09	.207	-.04	.08	.574
Growth needs strength[4]	.40	.13	.003	.28	.18	.119	-.02	.14	.878	-.32	.12	.006
R^2		.07			.04			.01			.08	
F	3.36		.011	1.87		.117	.57		.685	4.24		.003

Note. GPA = grade-point average; bac = baccalaureate exam. [1]Males were dummy coded 1 and females 0; [2,3]from 1 to 10; [4]five-point rating scale: 1 = strongly prefer A, 5 = strongly prefer B.

Discussion

The primary objective of this study was to investigate whether incoming first-year students' perceptions of various job attributes differ significantly from those of newly-hired employees in the Romanian labour market. We found significant differences in perceived importance of job attributes between students and recently hired employees for one of the four job attribute factors, that is, firm's attributes. Compared to employees, students perceived firm's attributes such as size, reputation, and location as being more important. This finding may

suggest that organisational attributes are particularly important at the onset of recruitment process, but play less of a role after entering the workforce (cf. Boswell et al. 2003). Firm's attributes are more influential in the early phases of recruitment process, because applicants have little information about job attributes and consequently they focus on more salient attributes such as size and location (Turban/Keon 1993). Our findings are consistent with the results of Reed and Kratchman's (1989) study, according to which students and employees did not differ in the importance assigned to job attributes such as salary and fringe benefits (see also Highhouse et al. 1999) or in their desire for a job that fosters personal growth and self-fulfilment (e.g., use of specific abilities).

Examination of student and employee ratings of specific job attribute items provides a possible explanation for the lack of differences in job attribute preferences (except for firm's attributes) between the two samples. In both samples, job security and work-life balance were rated as the most important attributes, with the next five job attributes most preferred representing a mix of intrinsic (e.g., opportunities to learn new skills) and extrinsic (e.g., job security, good salary) factors (see Murphy/Collins 2015). Furthermore, even though the firm's attributes such as size and location were rated as least important in both samples, they received mean ratings of about 4.0 (i.e., the midpoint of the scale; see Table 1). This may reflect the overall high level of importance students and newly-hired employees attach not only to intrinsic, but also to extrinsic job attributes (cf. Baum/Kabst 2013). The importance assigned to both types of attributes is also indicated by the positive correlations found in the employee sample between all job attribute factors and job satisfaction. These findings suggest that both intrinsic and extrinsic job attributes can be sources of job satisfaction (e.g., Taylor/Westover 2011), and thus organisations should emphasise both types of attributes for attracting and retaining applicants (Baum/Kabst 2013).

Another possible explanation for the lack of differences in job attribute preferences is that students and employees represent the same generational cohort, that is, Millennials. Job attributes such as work-life balance, good salary and benefits, opportunities for advancement, and a nurturing work environment (e.g., friendly co-workers) have been found to be of greatest importance to Millennials (Ng et al. 2010; Brink/Zondag 2019). In our study, both samples identified work-life balance, job security, opportunities to use abilities, and good benefits as top priorities. It is noteworthy that for both, students and employees work-life balance and job security were more important than attributes such as salary and benefits or opportunities to use abilities, which might be explained by the fact that they have seen their boomer parents work long hours, but still being victims of job cuts (Ng et al. 2010). Our findings could also have been influenced by the items grouped into the four job attribute factors, that is, by the use of composite indices rather than single items in the analyses. Konrad, Corrigall, et al. (2000) argued that it is better to use specific job attribute items, because combining

them to develop composite indices is likely to mask differences that may exist. In our study, for example, unlike in some of the early studies (Harris/Fink 1987; Powell 1991) job security loaded on the supportive work environment factor, not on the compensation and rewards factor. Consequently, our results may differ from studies in which job security was included in the compensation/security factor.

Another aim of this study was to identify individual difference variables that influence perceived importance of job attributes within the student sample. Results indicated that students' preferences for job attributes depend on their growth need strength and gender, but not on their academic ability (i.e., high school GPA and final grade average at the baccalaureate exam). Despite the statistically significant predictive value of the two individual difference variables, most variance in job attribute preferences could not be explained.

As expected, and consistent with Feldman and Arnold's (1978) findings, students with high growth needs placed greater importance on the attributes pertaining to job itself (e.g., opportunities to use abilities) than students with low growth needs. However, we did not find a significant relationship between growth need strength and compensation and rewards items, as Feldman and Arnold found. Students high in growth needs also placed less value on the job attributes pertaining to supportive work environment (e.g., work-life balance, job security) than students low in growth needs, which is an original result. Overall, these results suggest that students high in growth needs prefer jobs in which they can take initiative and responsibility, receive performance feedback, and have opportunities to learn and use their abilities (cf. Turban/Keon 1993), rather than jobs with a nurturing work environment that emphasises the work-life balance and social aspects of work (e.g., friendly co-workers).

Concerning gender differences in job attribute preferences, our findings indicated that male and female students attach similar importance to the job attribute factors, except for supportive work environment. In particular, consistent with gender roles and stereotypes, female students placed higher value on job attributes pertaining to work environment such as work-life balance and flexible working hours as compared to males. This is in line with numerous previous studies, which have shown the greater importance attributed to work environment characteristics by women compared to men (e.g., Konrad/Ritchie, et al. 2000; Heckert et al. 2002; Sheppard 2018). Our finding that male and female students do not differ significantly in their preferences for job attributes related to compensation and rewards is consistent with some studies (e.g., Kaufman/White 2015), but contradicts studies which have found that males place more importance on salary considerations than females (e.g., Sheppard 2018). Finally, we did not find a significant gender difference on the importance

attached to the attributes concerning job itself, which was found by Heckert et al. (2002).

The most unexpected finding of this study is that students with high academic ability did not differ in their job attribute preferences from students with low ability. Prior studies that have reported effects of academic ability on job attribute preferences used college GPA as a measure of academic ability (e.g., Trank et al. 2002), whereas in this study high school GPA was used, given that the student sample consisted of incoming first-year undergraduate students. Bacon and Bean (2006) argued that college GPA should be used instead of high school GPA, as high school GPA was a poor predictor of college grades. A noteworthy observation is the lack of correlation of both high school GPA and baccalaureate exam score to growth need strength (i.e., the need for personal accomplishment and learning), which should be a major characteristic of high achievers (Ng et al. 2010). Another plausible explanation for this finding is the above-mentioned aspect of combining items in composite indices. For example, high achievers have been found to prefer merit-based promotion and be less concerned with high pay levels (Trank et al. 2002), but in the present study both of these items load on the same factor (i.e., compensation and rewards).

There are several potential limitations of this study. First, the focus of this study was on self-reported preferences for job attributes, and thus, it is subject to all limitations of self-reported data. In future studies, the use of research designs that assess important job attributes more indirectly (e.g., policy capturing; Judge/Bretz 1992) is desirable, thereby minimizing the biases associated with self-reported data. Second, although our student sample was quite diverse, comprising students from different Romanian cities and different majors, our employee sample was small and limited to one firm. Replication using larger and more diverse employee samples, across various industry types, would be beneficial. It should be noted that although the student sample comprised different majors, no significant differences in job attribute preferences between the majors were found, using Kruskal-Wallis-ANOVAs (all $\chi^2 < 12.28$, $df = 7$, $ps > .092$). Third, as the factor analysis could not be done for employees given the small sample size, we used the same job attribute factors as in the student sample without testing the adequacy of the factor model, which could also be viewed as a limitation. In future studies the factor structure of job attributes for the employee sample could be validated with a larger sample size. Fourth, we have investigated differences in job attribute preferences among students based on growth need strength, academic achievement, and gender. Although significant effects were found for two of these personal characteristics, very little variance has been explained. Therefore, more research is needed to identify other personal characteristics that impact job attribute preferences of students and employees. Finally, as our samples included only Romanians, care must be taken when generalising the findings to other countries.

Despite these limitations, the current study provides valuable contributions to the recruitment literature by increasing our understanding of which job attributes are important for prospective applicants compared to newly-hired employees, and how certain individual characteristics influence job attribute preferences of prospective applicants. In terms of topics meriting future research, it would be worthwhile to examine which job attributes are scored best by prospective and current employees when they are forced to value them against each other (cf. Chapman et al. 2005), and how perceptions of these attributes are combined to make overall evaluations for the job offers (Acikgoz 2020). This is especially important because applicants with tertiary education are more likely to evaluate multiple job offers simultaneously (Jaidi/Van Hooft/Arends 2011), mainly in the labour markets facing high levels of talent shortages such as Romania. Furthermore, the importance of various job attributes has been argued to be critical in shaping individual perceptions of person-organisation fit (Acikgoz 2019), however research has yet to examine whether these fit perceptions are most influential at the beginning of the recruitment process or later on, after entering an organisation. Thus, future research might focus on evaluating subjective fit perceptions of applicants in different stages of recruitment process (i.e., from pre-application stage to post-hire stage; see Harold/Ployhart 2008) and investigating whether these perceptions are influenced by individual differences.

Also of great importance in future research is the investigation of the specific point(s) during the undergraduate or graduate education when the assessment of job attribute preferences would be the most meaningful for initial organisational attraction (Slaughter/Greguras 2009). Future studies should determine whether a freshmen sample, similar with the one used in the current study is less appropriate than other samples (e.g., MBA students) for studying initial organisational attraction.

The study of contextual influences on job attributes in addition to individual differences is another area worthy of research. For example, economic situation might influence job attribute preferences of prospective and current employees (Baum/Kabst 2013), and thus future research could examine whether uncertainty about the probability of finding employment, as a consequence of difficult economic situations (e.g., due to the COVID-19 crisis) impacts preferences for job attributes and their relationship with job choices. A different type of contextual influence on job attribute preferences may be social in nature such as family and friends' influences on learning and development of individuals' expectations towards their first job (i.e., anticipatory socialisation; Petry et al. 2020). Once hired, organisational socialisation (i.e., the process by which newcomers learn the attitudes, behaviours and knowledge needed for their work roles; see Evertz/Süß 2017) continues to play a role in the development and revisions of work expectations. However, research has yet to examine whether this type of

socialisation is more influential than anticipatory socialisation in shaping work expectations, along with the role of individual differences in this process.

Concerning practical implications, our results can be applied to improve the recruitment and retention of new employees into organisations. For organisations hoping to attract many qualified candidates, the finding that students put more emphasis on firm's attributes (e.g., reputation, location) than employees suggest that it is advantageous to highlight these attributes at early stages of recruitment (cf. Harold/Ployhart 2008). As applicants possess only limited information about organisations in the early stages of recruitment, they tend to use these job attributes as signals of organisational values (Judge/Bretz 1992), even as they may not yet have an accurate understanding of how these attributes influence work conditions. Hence, organisations should emphasise how job attributes connect with each other in the work context and what is the rationale beyond these connections (e.g., job security can be linked to opportunities of advancement, development, and flexibility; Ito/Brotheridge/McFarland 2013).

Furthermore, organisations should communicate realistic job attributes (i.e., those attributes which truly exist within organisations) when recruiting and interviewing student applicants, particularly concerning those attributes for which the greatest discrepancies between students' expectations and employees' expectations are revealed. This would help prospective applicants to adjust their expectations to the realities of work and avoid dissatisfaction after hiring (Scholarios et al. 2003). The development of realistic work expectations has been found to reduce turnover intentions (Reed/Kratchman 1989) and facilitate organisational newcomer socialisation (Petry et al. 2020). Therefore, to facilitate the development of realistic expectations of prospective applicants, organisations should create relationships with university departments and better prepare students for their future career through visits, internships, training, orientation programs, etc. (Scholarios et al. 2003).

The current study also suggests that emphasising work-life balance, job security, opportunities for development, salary and benefits may be useful not only for attracting applicants, but also for retaining employees, given that these job attributes were rated high in this study as well as in the previous studies (e.g., Baum/Kabst 2013).

In addition, our results suggest that preferences for certain job attributes may differ depending on the growth needs of prospective applicants. As employees with high growth needs have been found to contribute to the organisational success (Lin et al. 2016), the organisations that want to attract such employees should emphasise their preferred job attributes. More specifically, to attract applicants with high needs for learning and personal development the recruitment messages should focus more on job attributes pertaining to job itself (e.g., op-

portunities to use abilities, support for initiative-taking) and less on job attributes pertaining to supportive work environment (e.g., work-life balance).

Finally, the finding that females reported higher preferences towards a supportive work environment suggests that many organisations could benefit by implementing work-life balance policies and flexible working hours to recruit and retain women (cf. Baum/Kabst 2013). This is especially important for organisations that wish to increase the employment rates for women, both in general and particularly in traditionally male-dominated domains (e.g., IT).

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Appendix

Table A1: Sociodemographic Characteristics of Employee Sample (N = 23)

Variables		Frequency	Percentage
Gender	Female	10	44 %
	Male	13	56 %
Marital status	Married/in a relation	11	48 %
	Single	11	48 %
Children	Yes	2	9 %
	No	21	91 %
Level of education	Bachelor degree	14	61 %
	Master degree	9	39 %
Major	Computer science	9	39 %
	Economics/Managem.	8	35 %
	Humanities	5	22 %
	Others	1	4 %
Type of contract	Full-time	12	54 %
	Part-time	5	23 %
	Registered sole trader	3	14 %
	Temporary	2	9 %
Job satisfaction	Somehow satisfied	7	30 %
	Very satisfied	16	70 %

Note. Managem. = Management.

Table A2: The Full List of Job Attributes Items

Job Attributes Items
Good training opportunities
Opportunities for long-term career development
Variety in daily work
Dynamic and forward-looking approach to the business
Friendly and informal culture
Opportunities for career development within the organisation
Opportunity to travel
Freedom to work on your own initiative
Opportunities to do creative, innovative work
Relaxed work atmosphere and friendly co-workers
Rewards and promotions based on performance
Opportunity for rapid career advancement
Good salary
Good fringe benefits
Reputation of company
Size of the company
Flexible working hours
Relatively stress-free working environment
Job security
Opportunities to use individual abilities
Challenging and interesting work
Location of company
Opportunities to learn and acquire new skills
Support for initiative-taking and responsibility
Provision of performance feedback
Opportunities for teamwork
Autonomy in determining the duration and the way of doing the job
Work-life balance
Frequent salary increases
Good relations with the supervisors or managers
Corporate social responsibility

Table A3: Factor Loadings for the Principal Component Analysis of Job Attributes in Student Sample (N = 199)

Job Attributes Items	Factor 1: Job Itself	Factor 2: Firm Attributes	Factor 3: Compensation/ Rewards	Factor 4: Supportive Work Env.
Provision of performance feedback	.66			
Opportunities to learn new skills	.64			
Support for initiative-taking and responsibility	.56			
Opportunities to use individual abilities	.53			
Size of company		.73		
Corporate social responsibility		.72		
Reputation of company		.65		
Location of company		.53		
Frequent salary increases			.70	
Opportunity to travel			.63	
Good salary			.62	
Rewards and promotions based on performance			.61	
Good fringe benefits			.59	
Relatively stress-free working env.				.62
Work-life balance				.58
Job security				.55
Relaxed work atmosphere and friendly co-workers				.54
Flexible working hours				.49

Note. Item loadings below .50 are not reported, with exception of item "flexible working hours". env. = environment.