



## Article

# The Work Values of Portuguese Generation Z in the Higher Education-to-Work Transition Phase

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**Abstract:** The cohort of young people born with or after the Internet has been dubbed Generation Z (Gen Z, or post-millennials). They are now entering the higher education-to-work transition phase, although this is yet to be studied. Previous studies have found that work values and work preferences vary across generations and national cultures, justifying regular and localised examination. However, very little is known to date about the work values of Portuguese Gen Zs. In this study, we describe the work values of Portuguese university students in the higher education-to-work transition phase and examine their influence on salient work-related preferences. We surveyed over 3000 students attending university degrees from eight main Portuguese universities. We find that Portuguese Gen Zs value social values above all, followed by intrinsic and then extrinsic work values, potentially configuring a unique profile. Work values partially explain work preferences such as employer size and salary expectations. Gender differences mark our results, with women expressing higher work values in all three dimensions and lower entry salary expectations. These results can be useful for employers seeking to attract the best university graduates, facilitate their integration and promote their development.

**Keywords:** young adults; Generation Z; work values; higher education-to-work transition; Portugal



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## 1. Introduction

Work values are pivotal during the higher education-to-work transition. Expressing people's preferences and expectations about work and the workplace strongly influence career and job choice decisions central in the school-to-work transition phase (Chow et al. 2017; Judge and Bretz 1992; Kuron et al. 2015; Lukeš et al. 2019). Knowledge about young people's work values can therefore be very useful for employers trying to devise effective attraction and retention strategies (Cogin 2012) and to inform public policies to tackle youth unemployment and to facilitate the transition from education to employment (Lukeš et al. 2019).

Research shows that work values vary across generations (e.g., Lyons et al. 2015; Twenge et al. 2010), life and career stages (Kuron et al. 2015), and national cultures (Cennamo and Gardner 2008; Gallie 2019), justifying the continued study of new generations in different countries.

The concept of generation is complex and susceptible to the confounding effects of age, life stage, and career stage (Rudolph et al. 2018; Twenge 2010). We follow Lyons and Kuron (2014, p. S141) in taking "age, period and cohort effects as complementary", which should be concomitantly analysed. A generation is, therefore, the set of individuals experiencing the same historical and sociocultural context at a specific life stage, similarly influenced by common formative experiences and opportunities (Lyons and Kuron 2014).

Young people now facing higher education-to-work transition, born with or after the Internet, have been dubbed "Generation Z" (or Gen Z) (Childers and Boatwright

2020; Pichler et al. 2021). Little academic research has been conducted about them as young adults. Although there is consensus about the environment in which Gen Z grew up that contributes to the development of a specific configuration of preferences and expectations about work and the workplace (Johnson et al. 2012; Pichler et al. 2021), this effect has been scarcely documented. This gap is particularly evident in Portugal, where the literature about the work values and preferences of Portuguese young adults is scarce and dated. Therefore, our research addresses the question “What are the work values of the Gen Z Portuguese university students and how do they influence their job preferences in the higher education-to-work transition?”, aiming to portray the work values of these young people about to enter in the job market and analyse their impact on work-related preferences. We base our empirical research on a survey of over 3000 university students in Portugal. The study contributes to a systematic profiling of the work values and job preferences of a new generation of future employees, adding to the existent knowledge about previous generations. Additionally, we expect to offer guidelines to prospective employers to better target their recruitment efforts and devise communication, socialisation, and development strategies that meet graduates’ expectations and aspirations (Casper et al. 2013; Lukeš et al. 2019).

### 1.1. Generation Z

Generation Z (also known as post-millennials, iGen, Gen 2020, or Gen Zs) is defined as those born with or after the Internet (Pichler et al. 2021). Previous generations include the Silent Generation (born 1925–1945), Baby Boomers (born 1946–1964), Generation X (born 1965–1981), and Generation Y or Millennials (born 1982–1999) (Twenge et al. 2010).

The extant research on Gen Z studies them as children or adolescents, taking educational (e.g., Plochocki 2019), cultural (e.g., Carrington et al. 2015), or marketing perspectives (e.g., Childers and Boatwright 2020). Very few academic studies have observed Gen Z as young adults, and much of what is written in the popular press is conjecture and surmise, to the point that contradictory depictions are presented. For example, they are portrayed both as interacting electronically more than personally and finding online communication more comfortable (Turner 2015; Clark 2017), but also as preferring in-person communication with managers and peers (Bridges 2015). They seem both to have very little concern about sharing private and personal matters (Clark 2017) and be more conscious about online privacy, preferring anonymous social media platforms (Williams 2015). Rigorous study is therefore much in need.

There is more convergence in the description of the context in which Gen Zs were brought up, particularly in the West, much of which is shared by Portuguese Gen Zs. Socio-economic context is a key variable in explaining differences among generations (Macky et al. 2008; De Hauw and De Vos 2010). Gen Zs grew up in the “unsafe world” (Turner 2015, p. 105) of terrorism, war, high unemployment, and economic depression of the early 21st century (Rainsford et al. 2019). Physical and financial security is, therefore, a central concern for themselves (Williams and Page 2011; Bridges 2015) and their parents (Tulgan 2013), who raised them in an over-protective environment, justifying the “bubble-wrap generation” epithet (Malone 2007).

In Portugal, terrorism and war are distant realities, even if made close by (social) media. However, financial uncertainty is very present, with an economic crisis that culminated in an international bailout in 2011 (Suleman and Figueiredo 2019). Rising unemployment (particularly youth unemployment), generalised wage cuts, and a return to (now also highly skilled) emigration (Pereira and Lains 2011; Cruces et al. 2015; Observatório da Emigração 2015) produced a “brain drain” and general disenchantment among young people (Cerdeira et al. 2016, p. 68). Precarious lower-paying jobs have grown, especially for new entrants, affecting young people’s employment expectations and decisions (Suleman and Figueiredo 2019).

The ubiquitous presence of technology (e.g., wireless Internet, smartphones, tracking devices) is another key feature (Pichler et al. 2021). Internet access in family households

in Portugal rose from 15% in 2002 to 84.5% in 2020, 96.7% of which through broadband (INE 2020), which means most Portuguese youngsters have grown up with easy access to the Internet at home. Gen Zs are innately intimate with technology (Pichler et al. 2021), routinely spending extensive time on social media, where they connect with friends and create a sense of community (Childers and Boatwright 2020). They are emotionally attached to their mobile devices and Internet connection (Turner 2015). They are used to having immediate access to their friends and the information they need online (Pichler et al. 2021), as well as constant social recognition, prompting concerns for the need for instant gratification, no time for reflection or idleness (Turner 2015), increase in narcissistic behaviour (Weiser 2015) and declining emotional health (Pichler et al. 2021).

### 1.2. Work Values

Work values represent beliefs related to desired outcomes or aspects of work (Elizur et al. 1991; Judge and Bretz 1992; Lukeš et al. 2019; Ros et al. 1999), serving as criteria for individuals to evaluate work attributes, activities, and results (Elizur et al. 1991; Cugin 2012). As such, they can be expressed as preferences, goals, and expectations (Elizur et al. 1991; Ros et al. 1999; Cennamo and Gardner 2008). They are associated with a number of relevant work-related attitudes and behaviours, including job choice decisions (Judge and Bretz 1992), career intentions (Hirschi and Fischer 2013), entrepreneurial drive (Lukeš et al. 2019), and career satisfaction in later life (Chow et al. 2017).

One of the more established work values frameworks is the three-dimensional configuration that distinguishes among intrinsic (relating to the meaning and interest of the work itself), extrinsic (material benefits such as salary and security), and social values (sense of belonging and social relations with co-workers and supervisors) (Ros et al. 1999; Twenge et al. 2010; De Cooman and Dries 2012).

Work values seem to emerge and evolve during adolescence and are fairly stable from early adulthood (Hirschi and Fischer 2013; Papavasileiou and Lyons 2015; Chow et al. 2017). Although in previous generations, students' work values shifted as they started working, they seemed to remain similar in the school-to-work transition in the case of millennials (Kuron et al. 2015), which means the work values of university students may be a good predictor of later-life work values and related outcomes (Chow et al. 2017).

Variation across generations has received particular attention, with several studies reporting significant differences in the work values of successive generations (e.g., Cennamo and Gardner 2008; Cugin 2012; Krahn and Galambos 2014). One central argument to explain generational variation is exposure to different sociocultural environments that shape values and expectations. People in the same generational cohort are socialised within a specific environment marked by economic, social, cultural, technological, and political salient events. The environment evolves and changes over time, exerting diverse influence over different generations (Macky et al. 2008; De Hauw and De Vos 2010), particularly in the formative years (Lyons and Kuron 2014).

Johnson et al. (2012) argue that conditions of unemployment and precarious jobs, or employment unrelated to career expectations, can weaken extrinsic and intrinsic values, respectively, and they show that extrinsic values are stronger in early adulthood rather than later in life, which is corroborated by recent research of young Europeans (Rainsford et al. 2019). Rainsford et al. (2019) also find that those who feel overqualified place more value on extrinsic rewards (Rainsford et al. 2019). Appreciation for intrinsic values has varied little across generations (Gallie 2019; Twenge et al. 2010), with a decrease noted in some studies (Cennamo and Gardner 2008). Extrinsic work values, in turn, are reported to be on the rise across previous generations (Krahn and Galambos 2014; Lyons et al. 2015; Twenge and Donnelly 2016). In millennials (the generation prior to Gen Z), social values are often prominent (Cennamo and Gardner 2008; Ng et al. 2010). Gen Zs, however, seem to rely more on electronic communication and spend less time in less in-person social interaction, resulting in underdeveloped social skills (Pichler et al. 2021).

Very little, if anything, has been published in international journals about the work values of Portuguese individuals. An exception is [Chaves et al. \(2016\)](#), who studied the work values of 1000 graduates of the two main universities in Lisbon. The data were collected in 2011, and 75% of the sample were aged up to 31, in what can be considered a sample of millennials. Only the Intrinsic and Extrinsic dimensions were included. Results indicate Portuguese millennials' highest priority is to have financial autonomy from parents (extrinsic), closely followed by having an interesting job (intrinsic), one that allows them knowledge acquisition and autonomy. A secure, stable, and high-wage job (extrinsic) comes last (although still highly scored).

Based on these results, and considering the effect of the recession mentioned above ([Johnson et al. 2012](#); [Rainsford et al. 2019](#)), we expect Portuguese Gen Z to score higher on extrinsic than on intrinsic values. For expectations about social values, we rely on cultural aspects. The Globe project reveals that one of the dominant characteristics of Portuguese culture is a high in-group collectivist orientation with a strong appreciation of social loyalty and group ties ([Jesuino 2007](#)). So, we anticipate Portuguese Gen Z to place social values on top.

### 1.3. The Impact of Work Values on Work Preferences

We focus specifically on the impact of work values on preference for some organisational attributes that are highly salient to university students before entering the job market, namely company size and expected entry salary ([Cable and Turban 2001](#); [Demel et al. 2019](#)). The link between work values and these preferences can be explained by classical motivational theories. Herzberg's two-factor theory, for example, proposes that satisfier factors (or motivators) such as achievement, responsibility, and interesting work meet intrinsic needs, whereas dissatisfaction avoidance (or hygiene) factors such as work conditions, status, and security constitute extrinsic incentives ([Herzberg 2003](#)). Hill's affiliation motivation theory explains how people's affiliation needs are met by social rewards such as interpersonal closeness and communion or attention and praise ([Hill 1987](#)).

Previous studies found that young candidates have distinct preferences for employer size ([Demel et al. 2019](#)). Larger companies provide higher earnings and stability, more fringe benefits, and better promotion opportunities but allow employees less autonomy ([Kalleberg and Buren 1996](#)), therefore ensuring mainly extrinsic rewards. This holds true for Portugal ([Suleman and Figueiredo 2019](#)). Organisational climate is also expected to be less sociable in larger organisations ([Payne and Mansfield 1973](#)) and perceived by employees as offering lower organisational support and less flexibility in dealing with individual needs ([Rhoades and Eisenberger 2002](#)), which may be less socially rewarding. More entrepreneurially inclined people, who value variety over long-term security, prefer smaller, less bureaucratic firms ([Sorensen 2007](#)), where their intrinsic needs are more likely to be met. We would, therefore, expect young people with stronger intrinsic and social values to prefer smaller companies and those with stronger extrinsic values to prefer larger firms.

Salary is another major factor in job choice decisions ([Demel et al. 2019](#)) and was especially valued by the millennial generation ([Ng et al. 2010](#)). Valuing high salaries is associated with extrinsic values ([Rainsford et al. 2019](#)). Unemployment and insecurity can justify Gen Z's concern with financial security ([Williams and Page 2011](#)) but may also weaken extrinsic values ([Johnson et al. 2012](#)). On the other hand, Portugal is characterised by low salaries, aggravated by the bailout intervention ([Suleman and Figueiredo 2019](#)). So, we expect Portuguese Gen Z not to expect high wages despite valuing financial security.

## 2. Methods

### 2.1. Sample

Birth dates proposed to define Gen Z range from 1991 ([Malone 2007](#)) to 2000 ([Pichler et al. 2021](#)). For our study, we use 1995 as the reference ([Twenge et al. 2017](#)). The eldest of this generation was, therefore, 23 years old at the time of data collection.

University students were chosen as a population of interest as they fit Gen Z's age range and are in the process of higher-education-to-work transition. To collect data, we conducted an online survey of Portuguese Gen Z's work values, administered to students of business and technology degrees from the main universities in Portugal (Minho, Porto, Aveiro, Coimbra, Lisbon, Nova Lisbon, Catholic Lisbon, ISCTE) between February and April 2018, using e-mail databases, digital communication platforms and the action of student leaders to mobilise participation. We received 3375 questionnaires from which we eliminated 26 (0.77%) because they were very incomplete or showed evidence that answers were given indiscriminately (with all answers positioned in categories 1, 4, or 7 on the Likert scales) (Malhotra 2020). From the resulting 3349 valid questionnaires, a sample of 300 responses was randomly extracted to perform an exploratory factor analysis, and the remaining sample of 3049 responses was used to conduct a confirmatory factor analysis and further data analysis.

## 2.2. Variables and Measures

We measured three dimensions of work values: Intrinsic (the meaning and interest of the work itself), extrinsic (material benefits such as salary and job security), and social (social relations with co-workers and supervisors). An initial pool of 19 items was built based on Berthon et al.'s (2005) scale of employer attractiveness, which measures the "envisioned benefits" of working for an organisation. This conception is similar to our definition of work values as preferences and expectations about work and the workplace (Judge and Bretz 1992; Ros et al. 1999). The items were subject to a process of translation and back-translation (Behling and Law 2000) and were analysed for adequacy by two top recruitment managers and one HRM academic. A reduced list of 15 items (Table 1) was submitted to a pilot test with 50 students to evaluate adequacy, understandability, and phrasing, resulting in minor adjustments.

Table 1. Work values scores.

Rank	Work Values	When Choosing an Employer, How Important Are the Following Aspects? (1—Not at All; 7—Absolutely Important)	Mean	SD
1	I	"Working in an exciting environment"	5.96	0.856
2	S	"Having a good relationship with my colleagues"	5.93	0.912
3	S	"Feeling accepted and have a sense of belonging"	5.90	1.001
4	I	"Working in an enterprising place, with innovative work practices and a vision for the future"	5.88	1.002
5	E	"Having good promotion opportunities within the organisation"	5.82	0.944
6	S	"Having a good relationship with my superiors"	5.75	0.971
7	S	"Having supporting and encouraging colleagues"	5.67	1.078
8	E	"Having job security and stability"	5.67	1.024
9	I	"Working in an organisation that produces high-quality products and services"	5.57	1.047
10	I	"Working in an organisation that values creativity and uses my creative abilities"	5.55	1.099
11	S	"Having a fun work environment"	5.49	1.183
12	E	"Having an attractive overall compensation package"	5.48	0.960
13	E	"Having an above-average basic salary"	5.42	0.922
14	E	"Hands-on interdepartmental experience" <sup>1</sup>	5.34	1.020
15	I	"Working in an organisation that produces innovative/attractive/exciting products and services"	5.29	1.066
1		(S) Social (5 items)	5.75	0.800
2		(I) Intrinsic (5 items)	5.65	0.777
3		(E) Extrinsic (4 items)	5.60	0.745

Notes: Mean and standard deviation values for CFA sample; N = 3049; <sup>1</sup> item 14 excluded in the exploratory factor analysis stage for cross-loadings.

In the final questionnaire, students were asked to respond to the question “When choosing an employer, how important are the following aspects?”, assessing the 15 items on a 1 (not at all) to 7 (extremely important) Likert scale. Students were also asked about their monthly salary expectations upon graduation (in euros). They preferred company size for first employer (micro, small, medium, and large, along with the specifications of the [European Commission \(2003\)](#)). Other classification questions included age, gender, area of study (business vs. technology), and expected final grade. Subsequent exploratory and confirmatory factor analysis (described ahead) led to the refinement of the scales. The final three-factor work values structure, therefore, comprises 14 items.

### 2.3. Data Analysis

We used IBM® SPSS® 26.0 to conduct the descriptive analysis and to test the structure of the data with a subsample of 300 responses randomly extracted from the total sample (3349), following the recommendations regarding the stability and replicability of structural analyses ([Gunuc and Kuzu 2015](#); [Field 2018](#)). The initial item analysis identified two potential problematic items from the extrinsic values factor (“Have an above-average basic salary”; “Having job security and stability.”) with corrected item-to-total correlations and an average item-to-item correlation below the recommended thresholds of 0.50 and 0.30, respectively ([Hair et al. 2014](#)). We decided to keep these items for further analysis as they presented acceptable correlations ( $\geq 0.310$ ) with the group of items of the same expected common factor (extrinsic values).

The pool of 15 items was subject to exploratory factor analysis (EFA) using principal component analysis (PCA) and varimax rotation. The initial rotated component matrix revealed the expected structure, with the variables presenting high loadings on a common factor. The exception was the item “Hands-on interdepartmental experience” (extrinsic value) that presented significant loadings on two factors, justifying its elimination. The final 14 items solution (Table 2) presented a significant Bartlett’s test of sphericity ( $\chi^2(91) = 1688,490, p \leq 0.001$ ), suggesting the appropriateness of using the factor analytic model on this set of data, and a high Kaiser-Meyer-Olkin value ( $KMO = 0.875$ ) indicative of a strong relationship among variables, which made further analysis acceptable. The social, intrinsic, and extrinsic work values factors presented eigenvalues higher than 1 and together explained 60.62% of the variance, exceeding the suggested 60 percent threshold for a satisfactory solution ([Hair et al. 2014](#)). All variables loaded under the expected common factor, the factor loadings of the 14 items ranged from 0.555 to 0.848, and no significant cross-loadings were observed, indicating a well-defined structure ([Hair et al. 2014](#)). The internal consistency of the three-factor scale was assessed using Cronbach’s coefficient alpha ( $\alpha$ ). The Cronbach’s alpha for the entire scale ( $\alpha = 0.877$ ) and for the social ( $\alpha = 0.849$ ), intrinsic ( $\alpha = 0.807$ ), and extrinsic ( $\alpha = 0.742$ ) work values factors were higher than the 0.70 threshold ([Hair et al. 2014](#)), suggesting good internal consistency of the scale and of the three subscales.

To confirm the goodness-of-fit of the factor structure to the collected data and the reliability and validity of the measures, we conducted a confirmatory factor analysis (CFA) with the remaining sample of 3049 respondents using IBM® SPSS® AMOS™ 26.0. This sample shows very similar characteristics to the EFA sample (Table 3). The maximum likelihood method was used to estimate the population parameters from sample data, as it maximises the probability that the model results from the observed data ([Kline 2011](#)). The assumption of normal distribution of the variables required by the maximum likelihood estimation was verified: the highest values of 0.846 for skewness and for 0.835 for kurtosis are far below the thresholds of 2 and 7, respectively ([Finney and DiStefano 2006](#)). The model comprising the three work values factors with 14 observable variables presented a good fit to the data ( $\chi^2(74) = 935.792, p \leq 0.001$ ; CFI = 0.954; RMSEA = 0.062,  $p \leq 0.001$ , 90% CI (0.058, 0.065); SRMR = 0.047) according to recommended thresholds ([Kline 2011](#); [Hair et al. 2014](#)).

**Table 2.** Work values factors (PCA with a subsample of 300).

Values/Items	Dimensions		
	Social	Intrinsic	Extrinsic
Eigenvalues	5.492	1.671	1.323
Variance explained (total: 60.62%)	39.23%	11.94%	9.45%
Cronbach's Alpha (total 14 items: 0.864)	0.849	0.807	0.742
Mean average (total: 5.685)	5.690	5.625	5.754
Variance (total: 0.046)	0.036	0.076	0.038
"Having a good relationship with my colleagues"	0.848		
"Having supporting and encouraging colleagues"	0.775		
"Feeling accepted and have a sense of belonging"	0.765		
"Having a good relationship with my superiors"	0.709		
"Having a fun work environment"	0.605		
"Working in an enterprising place, with innovative work practices and a vision for the future"		0.789	
"Working in an organisation that values creativity and uses my creative abilities"	0.308	0.739	
"Working in an exciting environment"		0.691	
"Working in an organisation that produces innovative/attractive/exciting products and services"		0.674	0.389
"An organisation that produces high-quality products and services"		0.623	0.305
"Having an above-average basic salary"			0.815
"Having an attractive overall compensation package"			0.779
"Having good promotion opportunities within the organisation"			0.703
"Having job security and stability"			0.555

Notes: N = 300; KMO = 0.875; Bartlett's test of sphericity:  $\chi^2(66)$  1688,490;  $p \leq 0.001$ ; extraction method: principal component analysis; rotation method: varimax with Kaiser normalisation; loadings below 0.30 were suppressed.

**Table 3.** Descriptive statistics of respondents and job preferences for EFA and CFA samples.

Variable	EFA				CFA			
	N	%	Mean	SD	N	%	Mean	SD
Gender	300	100.0			3049	100.0		
Female	163	54.3			1658	54.4		
Male	137	45.7			1391	45.6		
Age	300	100.0	20.91	1.623	3049	100.0	20.89	1.560
Area of studies	300	100.0			3049	100.0		
Business	162	54.0			1645	54.0		
Technology	138	46.0			1404	46.0		
Expected final grade (out of 20)	300	100.0	14.98	1.587	3049	100.0	14.80	1.421
Expected monthly salary (in Euros)	300	100.0	€1097.76	€670.06	3049	100.0	€1071.19	€516.71
Preference for employer size (# employees + sales volume)	300	100.0			3049	100.0		
Large (>250 employees; >50 m €)	98	32.7			989	32.5		
Medium (50–250 employees; 10–50 m €)	130	43.3			1315	43.1		
Small (10–49 employees; 2–10 m €)	59	19.7			638	20.9		
Micro (<10 employees; ≤2 m €)	13	4.3			107	3.5		

Notes: The CFA sample (N = 3049) is used as the reference to characterise our respondents; all subsequent analyses were conducted using this sample.

The reliability and validity of the three-factor scale attested to the good quality of the measures. The internal consistency was confirmed by the high standardised factor loadings (from 0.604 to 0.831), the Cronbach's alpha for the entire scale (0.861) and for each factor (from 0.776 to 0.832), and composite reliability (CR) (from 0.776 to 0.861) estimates above the recommended cutoff point of 0.70 (Hair et al. 2014). The factors also evidenced convergent

validity, as the average variance extracted (AVE) estimates, ranging from 0.467 to 0.555, were close or higher than the advocated threshold of 0.50 (Hair et al. 2014). Additionally, the factors exhibited discriminant validity, as the values of the square root of the AVE exceeded the correlations of each factor to all other factors (Fornell and Larcker 1981), suggesting the presence of distinct and uncorrelated factors (Table 4).

**Table 4.** Work values scale reliability and validity assessment.

Work Values	Factor Loadings	$\alpha$	CR	AVE	1	2	3
1. Social	0.683–0.817	0.832	0.861	0.555	<b>0.745</b>		
2. Intrinsic	0.640–0.831	0.822	0.836	0.508	0.481 ***	<b>0.712</b>	
3. Extrinsic	0.604–0.768	0.776	0.776	0.467	0.419 ***	0.438 ***	<b>0.683</b>

Notes: N = 3049; SD—standard deviation;  $\alpha$ —Cronbach’s alpha; CR—composite reliability; AVE -average variance extracted; \*\*\*  $p \leq 0.001$ ; square root of the AVE in bold on the diagonal compared with the inter-construct correlations to test discriminant validity.

After assessing the quality of the scale, we proceeded with the data analysis using the sample of 3049 respondents to evaluate the influence of work values of young people about to enter the job market on work-related preferences. We employed multinomial logistic regression models (Hosmer et al. 2013) for the dependent categorical variable “employer size”, and multiple regression analysis (Hair et al. 2014) for the dependent continuous variable “expected salary”. “Gender” and “area of studies” were transformed into dummy variables and used together with “expected final grade” as control variables in all regression models. We used the nonparametric bootstrapping approach in the regression models to obtain the interval estimates, as it does not require distribution assumptions (Efron and Tibshirani 1993). The regressions models were estimated using bootstrapping with 5000 samples to estimate coverage probabilities for 99% confidence intervals, using the bias-corrected and accelerated method to correct for the bias and skewness of the bootstrap parameter estimates (Efron and Tibshirani 1993).

### 3. Results

Our reference CFA sample (Table 3) comprises 54.4% female students, with ages ranging from 18 to 23 ( $M = 20.89$ ,  $SD = 1.560$ ), studying business (54.0%) and technology (46.0%). The expected final grade ranged from 10 to 20, averaging 14.80 out of 20 ( $SD = 1.421$ ). Prospective monthly salary ranged from €500 to €9000, with a mean of €1071.19 ( $SD = €516.71$ ), with female students expecting lower entry salaries ( $M = €1007.87$ ,  $SD = 474.594$ ) than their male colleagues ( $M = €1146.66$ ,  $SD = 553.981$ ). The difference was statistically significant ( $t(3,047) = -7.450$ ,  $p \leq 0.001$ ) with a medium effect size ( $d = -0.271$ ) (Cohen 1988). Most students prefer medium-sized (43.1%) and large companies (32.5%). A smaller group prefers small companies (20.9%) and a minority favours micro-firms (3.5%).

The evaluation of work values (Table 1) evidence a bias towards the positive end of the scale, perhaps due to the desirable representation of the items. Table 1 shows the mean of the items in each factor, revealing social work values to be the highest ( $M = 5.75$ ,  $SD = 0.800$ ), followed by intrinsic ( $M = 5.65$ ,  $SD = 0.777$ ) and extrinsic work values ( $M = 5.60$ ,  $SD = 0.745$ ).

To explain the effect of work values on preferred employer size, we used a multinomial logistic regression main-effects model (Hosmer et al. 2013) with 5000 bootstrap samples. “Large firms” was defined as the baseline category. The model is statistically significant ( $\chi^2(18) = 142.139$ ,  $p \leq 0.001$ ) (Table 5).



Table 5. Multinomial logistic regression for preferred employer size.

Firm Size <sup>1</sup>	Variables	B	SE	OR	p	BCa 99% CI <sup>4</sup>
						B
Micro	Intercept	3.481	1.640		0.034	[−0.763, 7.435]
	Social	0.216	0.160	1.241	0.173	[−0.197, 0.662]
	Extrinsic	−0.731	0.140	0.482	0.000	[−1.073, −0.391]
	Intrinsic	0.182	0.160	1.199	0.247	[−0.199, 0.611]
	Gender <sup>2</sup>	0.091	0.219	1.095	0.675	[−0.509, 0.642]
	Area of study <sup>3</sup>	0.005	0.213	1.005	0.986	[−0.516, 0.654]
	Expected grade	−0.269	0.077	0.764	0.000	[−0.469, −0.078]
Small	Intercept	4.694	0.744		0.000	[2.781, 6.528]
	Social	0.158	0.074	1.171	0.038	[−0.035, 0.385]
	Extrinsic	−0.429	0.077	0.651	0.000	[−0.638, −0.218]
	Intrinsic	0.116	0.077	1.123	0.133	[−0.082, 0.313]
	Gender <sup>2</sup>	−0.219	0.106	0.804	0.038	[−0.497, 0.045]
	Area of study <sup>3</sup>	−0.182	0.106	0.834	0.093	[−0.473, 0.106]
	Expected grade	−0.277	0.037	0.758	0.000	[−0.374, −0.176]
Medium	Intercept	3.235	0.619		0.000	[1.641, 4.747]
	Social	0.135	0.061	1.145	0.030	[−0.033, 0.297]
	Extrinsic	−0.213	0.065	0.808	0.003	[−0.383, −0.031]
	Intrinsic	0.011	0.063	1.011	0.858	[−0.144, 0.179]
	Gender <sup>2</sup>	−0.381	0.088	0.683	0.000	[−0.595, −0.151]
	Area of study <sup>3</sup>	−0.165	0.087	0.848	0.047	[−0.414, 0.044]
	Expected grade	−0.156	0.030	0.856	0.000	[−0.233, −0.075]

Notes: N = 3049; baseline categories—<sup>1</sup> “large firms”, <sup>2</sup> “female”, <sup>3</sup> “business”; <sup>4</sup> bootstrapping with 5000 samples, 99% confidence interval—bias-corrected and accelerated (BCa);  $\chi^2(18) = 143.162, p \leq 0.001$ ;  $-2 \log$  likelihood = 6860.992; Nagelkerke  $R^2 = 0.051$ .

Holding all other independent variables constant, extrinsic work values, gender, and expected grade partially explain the preference for company size (Nagelkerke  $R^2 = 0.051$ ). For those who favour extrinsic work values, the odds of preferring larger employers increase with the size of the firm ( $OR_{\text{Micro}} = 0.482, p \leq 0.001$ ;  $OR_{\text{Small}} = 0.651, p \leq 0.001$ ;  $OR_{\text{Medium}} = 0.808, p = 0.001$ ), meaning these students are, respectively, 51.8%, 34.9% and 19.2% less likely to prefer micro, small and medium when compared to large companies. Academic achievement in the form of expected final grades also explains students' preference for larger employers. Students expecting higher grades are 23.6%, 24.2%, and 14.4% less likely to prefer micro ( $OR_{\text{Micro}} = 0.764, p = 0.001$ ), small ( $OR_{\text{Small}} = 0.758, p \leq 0.001$ ) and medium ( $OR_{\text{Medium}} = 0.856, p \leq 0.001$ ) rather than large firms. Gender is only relevant in the preference for medium-sized firms: compared to their female colleagues, male students are 31.7% less likely to choose medium-sized rather than large companies ( $OR_{\text{Medium}} = 0.683, p \leq 0.001$ ).

To examine salary expectations, we used multiple linear regression with 5000 samples bootstrap and hierarchical block-wise entry method (Field 2018). The final parsimonious model is significant, explaining 5.2% of the variance ( $F(6,3041) = 27.831, p \leq 0.001$ ;  $R^2 = 0.052$ ) (Table 6). As expected, extrinsic work values are the strongest predictor of anticipated entry salary ( $\beta = 0.142; p \leq 0.001$ ). Intrinsic values are also positively related to salary expectations ( $\beta = 0.061; p = 0.004$ ). On the contrary, social values have a negative relationship with the expected entry salary, which means that, as students' preferences for social values increase, their salary expectations decrease ( $\beta = -0.137; p \leq 0.001$ ).

**Table 6.** Multiple linear regression for expected entry salary.

Model	Variables	B	SE	$\beta$	<i>p</i>	BCa 99% CI <sup>3</sup>
						B
1	Intercept	856.892	88.933		0.000	[684.778, 1041.453]
	Social	−98.691	13.165	−0.153	0.000	[−153.993, −53.365]
	Extrinsic	98.226	13.609	0.142	0.000	[66.598, 133.574]
	Intrinsic	40.972	13.605	0.062	0.006	[4.683, 77.449]
2	Intercept	362.557	129.905		0.004	[46.657, 698.456]
	Social	−88.789	13.079	−0.137	0.000	[−145.526, −42.773]
	Extrinsic	98.802	13.495	0.142	0.000	[67.632, 135.282]
	Intrinsic	40.792	13.480	0.061	0.005	[4.548, 78.715]
	Gender <sup>1</sup>	142.091	18.811	0.137	0.000	[93.227, 192.735]
	Area of studies <sup>2</sup>	16.499	18.691	0.016	0.373	[−27.812, 64.742]
	Expected grade	24.418	6.439	0.067	0.000	[5.261, 43.288]

Notes: N = 3049; dependent variable: expected enter salary; Model 1:  $F(3, 3044) = 31.626$   $p \leq 0.001$ ;  $R^2 = 0.030$ ; VIF 1.207 <-> >1.314; tolerance 0.761 <-> 0.828; Model 2  $F(6, 3041) = 27.831$   $p \leq 0.001$ ;  $R^2 = 0.052$ ; VIF 1.005 <-> >1.318; tolerance 0.759 <-> >0.995; baseline categories—<sup>1</sup> “male”, <sup>2</sup> “business”, <sup>3</sup> bootstrapping with 5000 samples, 99% confidence interval—bias-corrected and accelerated (BCa).

Apart from work values, gender is relevant ( $\beta = 0.137$ ,  $p \leq 0.001$ ), with female students expecting to earn on average €138.79 less per month at the beginning of their career than their male colleagues (cfr. *t*-test on p. 8). Students anticipating better grades equally envisage higher earning ( $\beta = 0.067$ ,  $p \leq 0.001$ ). The area of studies does not explain differences in entry salary expectations.

We also explored differences in work values according to the students’ profile using independent *t*-test with bootstrapping (Table 7). In terms of gender, female students’ rate all working values higher than their male colleagues. Social values present the highest mean difference (female M = 5.83 vs. male M = 5.65, SE = 0.029;  $t(2,906) = 6.214$ ,  $p \leq 0.001$ ;  $d = 0.227$ ), followed by extrinsic work values (female M = 5.65 vs. male M = 5.54, SE = 0.027;  $t(2,902) = 2.902$ ,  $p \leq 0.001$ ;  $d = 0.146$ ) and, to a lesser extent, intrinsic work values (female M = 5.68 vs. male M = 5.61, SE = 0.028;  $t(2,921) = 2.763$ ,  $p = 0.005$ ;  $d = 0.101$ ). Apart from gender, only students’ area of study has a significant relationship with work values, with technology students expressing slightly stronger intrinsic work values than business students (technology M = 5.69 vs. business M = 5.61, SE = 0.028;  $t(3,003) = 2.805$ ,  $p = 0.005$ ;  $d = 0.102$ ).

**Table 7.** Significant differences in work values according to students’ profiles.

Work Values	Variables	N	Mean	<i>t</i>	df	Mean Diff	SE Diff	<i>p</i>	BCa 99% CI <sup>1</sup>	Cohen’s <i>d</i>
									Mean Diff.	
Social	Female	1658	5.83	6.214 <sup>2</sup>	2906	0.180	0.029	0.000	[0.106, 0.256]	0.227
	Male	1391	5.65							
Intrinsic	Female	1658	5.68	2.763 <sup>2</sup>	2921	0.078	0.028	0.008	[0.038, 0.172]	0.101
	Male	1391	5.61							
Extrinsic	Female	1658	5.65	3.063 <sup>2</sup>	2902	0.108	0.027	0.005	[0.007, 0.150]	0.146
	Male	1391	5.54							
Intrinsic	Technology	1404	5.69	2.805 <sup>2</sup>	3003	0.079	0.028	0.005	[0.007, 0.152]	0.102
	Business	1645	5.61							

Notes: N = 3049; <sup>1</sup> bootstrapping with 5000 samples, 99% confidence interval—bias-corrected and accelerated (BCa); <sup>2</sup> Levene’s test: equal variances not assumed.

#### 4. Discussion

Given the lack of studies about Gen Z's work values at the higher education-to-work transition stage, we cannot compare our results with other studies of Gen Z. So, we refer to what is known about previous generations, in particular, Gen Y (or Millennials) at a similar age and life stage, to frame our depiction of Gen Z's perceptions and preferences.

The first noteworthy aspect is that all work values were very highly scored. Other studies find that younger people rate work values higher than older adults (Cennamo and Gardner 2008; Johnson et al. 2012). So, this could be a trait of this life stage.

Otherwise, Portuguese Gen Z students place social values above all, followed by Intrinsic and Extrinsic values. This confirms our predictions that social values would come on top. Despite fears that Gen Zs may have difficulties in socialising in person (Turner 2015; Pichler et al. 2021) and prefer to connect socially online (Clark 2017), Portuguese Gen Zs still place a high value on fitting in the workplace and having positive relationships with colleagues and superiors. It may also be that, for digital natives, online interactions are perfectly appropriate to satisfy the need for social connection and belonging (Childers and Boatwright 2020). Prioritising social work values seems to be uncommon in studies of other countries, an exception being New Zealanders of different generations (Cennamo and Gardner 2008). Some sources suggest that younger generations value the working environment more as they expect work and personal spheres to be connected (Hansen and Leuty 2011). In the case of Portuguese Gen Z, this no doubt also reflects the affiliative nature of the Portuguese culture (Jesuino 2007).

Intrinsic values come second in students' evaluation, contradicting our expectations that extrinsic values would be higher. Portuguese Gen Z seems to value work that is interesting and challenging, even though they remain conscious of the need for material security. These results are similar to those found by Chaves et al. (2016) regarding Portuguese millennials and align with studies of European millennials that point to intrinsic values being more salient than extrinsic values (De Cooman and Dries 2012; Papavasileiou and Lyons 2015). Twenge et al. (2010) and Twenge and Donnelly (2016) find intrinsic values to be consistently higher than extrinsic values across generations of Americans but note a trend towards the decrease in intrinsic and increase in extrinsic values. These dimensions may be levelling out with Gen Z, likely affected by the contemporary context of recession and unemployment (Johnson et al. 2012), justifying a preference for long-term job security, also recently found by Demel et al. (2019) in European university students.

Gender differences were observed relative to work values, with female students rating all work values higher than males, similarly to the findings of Rainsford et al. (2019). Other studies, however, tend to find that intrinsic values are higher in women; and extrinsic values are unaffected by gender (e.g., Gallie 2019; Krahn and Galambos 2014) or higher in males (e.g., Terjesen et al. 2007; Hirschi and Fischer 2013; Chow et al. 2017). So, these results could be indicative of a new trend in Gen Z or a specific trait of the Portuguese sample.

The only other significant difference in work values was observed between technology and business students, with the former expressing higher intrinsic values. Earlier studies have found high scores among technology graduates regarding preference for a challenging job and being motivated by and passionate about work (Jain and Jain 2013).

Apart from describing the work values of Portuguese Gen Z, we also examined how work values influence their preference for highly salient job characteristics, namely employer size, and expected salary. As for the preference for company size, only extrinsic work values emerged as significant. Supporting our expectations from the literature (e.g., Demel et al. 2019; Kalleberg and Buren 1996; Sørensen 2007), students valuing extrinsic rewards expect to get them in large companies. The absence of social values is noteworthy, as we expected this to influence a preference for smaller companies (Rhoades and Eisenberger 2002). Maybe large companies are better at publicising a good work environment, counteracting this effect. It is also likely that university students have more information about larger companies, either through the media or recruitment campaigns, and are thus more drawn to them. This is reinforced in students expecting higher grades,

who prefer larger companies. Female students' preference for medium-sized companies is hard to explain. It may reflect a belief that medium-sized employers will provide more sociable workplaces while still ensuring extrinsic rewards.

Finally, and unsurprisingly (e.g., [Schweitzer et al. 2014](#); [Wan et al. 2014](#)), valuing extrinsic rewards is associated with expectations of high earnings, while social values are negatively related to salary expectations. Students with higher extrinsic values naturally prize higher wages, and those with higher social values are prepared to sacrifice financial earnings for a friendly workplace. More unexpected is the fact that intrinsic work values are also positively related to salary expectations, although the effect is small. Perhaps students associate the enterprising and innovative companies they would like to work for with successful employers whom they expect to value and reward employees.

Gender turned out to have an impact on salary expectations, with female students expressing lower aspirations, in line with previous studies. Female Gen Zs anticipate earning €138.79, or 12%, less per month than their male counterparts. This mirrors findings for previous generations (e.g., [Terjesen et al. 2007](#); [Ng et al. 2010](#)) and aligns with the literature asserting that men and women develop different career priorities and preferences for job attributes that affect, among others, their expectations towards salary ([Fernandes et al. 2021](#); [Schweitzer et al. 2014](#)). It is also reflective of recent findings that women in Portugal are more likely to enter the job market through low-paying non-standard jobs ([Suleman and Figueiredo 2019](#)).

Apart from gender, expected final grade also emerged as relevant in explaining students' job preferences: higher achieving students are more disposed towards large employers and expect higher salaries. These preferences may be explained by the higher levels of self-confidence ([Nicholson et al. 2013](#)) and self-efficacy ([Schunk 1991](#)) typically observed in students reporting higher grades, justifying stronger beliefs about their own capabilities and greater ambition for first employment.

## 5. Conclusions

We surveyed over 3000 Portuguese university students, allowing us to depict Gen Z's work values. This generation, born after the Internet, has previously been studied as children and adolescents, but not as university-attending students, for whom entering the job market is imminent. Understanding their work values in the higher education-to-work transition phase is therefore highly relevant, especially for employers targeting Gen Zs ([Judge and Bretz 1992](#); [Casper et al. 2013](#); [Lukeš et al. 2019](#)).

We find that Portuguese Gen Zs value social values above all, followed by Intrinsic and Extrinsic work values. This arrangement is not commonly found in studies of other generations and other countries, potentially pointing to a specific profile of this generation or of this generation in Portugal. Gender differences were noted, with female students valuing all dimensions more than males. More relevant is the difference in salary prospects, with women demonstrating lower aspirations.

Knowledge about individual work values becomes all the more relevant as workers are said to be increasingly more reliant on their own values rather than their employers' when making career decisions ([Kuron et al. 2015](#)). So, our results can guide employers in designing more segmented and effective recruitment strategies to attract this younger generation, as well as develop HR strategies to suit their work values and keep them engaged during their stay in the company. To address the prominence of social work values, evidence of a social and friendly work environment with supporting co-workers and encouraging supervisors should be highlighted in recruitment. After hiring Gen Zs, effective socialisation programmes and teamwork support tools should be implemented ([Pichler et al. 2021](#)). Employers should also stress an innovative, creative and exciting atmosphere where Gen Zs encounter challenging and meaningful work to match intrinsic work values, particularly when hiring technology graduates who value intrinsic aspects especially. Although extrinsic values came last, they were still highly valued by this sample.

Employers need to be prepared to offer attractive compensation packages, promotion opportunities, and tangible rewards that address Gen Z's concern for financial security.

To tackle the gender gap in salaries, employers should also be aware that young women value salary and security above their male colleagues but have lower initial expectations, curtailing their already less effective negotiation abilities (Mazei et al. 2020). This may determine differences in salaries both at the beginning of their careers and in the future (Fernandes et al. 2021; Schweitzer et al. 2014). Relying more on objective criteria and overall market references and less on individual negotiations may provide a fairer starting point to young women's careers.

Despite the psychometric quality of our scale, the study has some limitations. Firstly, the sample is restricted to university students attending the main universities in Portugal and may not be representative of all Portuguese Gen Z. Although student samples seem to be reliable in work values studies (Kuron et al. 2015), we would treat these results as an initial empirical contribution that requires consolidation in future studies. Additionally, the variance explained is small concerning employer size preference and expected entry salary, suggesting the relevance of considering other psychological (De Hauw and De Vos 2010; Schweitzer et al. 2014) and work-related variables in the model, such as the centrality of work in individuals' lives (Gallie 2019; Lukeš et al. 2019), which modulates the importance of work values in young people's choices. Finally, this study carries all the constraints of a cross-sectional study, including the inability to overcome the age-cohort-period confound (Rudolph et al. 2018).

Despite these limitations, this study provides important and much-needed empirical evidence that can be built upon by future work. Additional empirical studies on Gen Z as adults are called for in order to validate the emergence of a new distinct generation. This must be further corroborated by studies that compare Gen Z with previous generations. Although we relate our results to comparable findings in the literature, a direct comparison is obviously required. It will also be relevant to monitor Gen Z's transition into working life, possibly through longitudinal research, and examine whether actual work experience changes their work values, priorities, and career aspirations, as is expected (Krahn and Galambos 2014). Future work on Gen Z in other countries will also provide grounds for international comparison and test whether our results are specific to this Portuguese sample. The effect of gender also merits continued attention.

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