



Research Article

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Effect of Personality Traits and Demographics on the Employment Status of Latin American Students

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Abstract

Personality traits have been highlighted as factors that affect workers' behaviour, such as their performance or labour engagement. However, little is currently known about the personality differences between Latin American university students who perform self-employment activities, those who are dependent workers and those who are nonworkers. This research fills this knowledge gap by assessing the influence of the personality traits of 758 university students from Latin America on their employment status. In addition, the effect of gender and age cohort on students' employment status is assessed. A logistic regression analysis is conducted using the personality traits of the Big Six model, gender and belonging to the millennial generation as independent variables has been conducted. The results support the significant effect of openness, conscientiousness and extraversion on students' employment status. Likewise, effects of gender and age are found. The results contribute to a better understanding of how individual conditions may affect the work activity of university students with regard to dependent employment, self-employment and work inactivity. In addition, the results can guide efforts to support entrepreneurship through the design of effective training programmes according to the students' personality traits and demographic characteristics.

Keywords: Employment status; university students; personality; gender; age generation

1. Introduction

Personality is defined as traits that constitute relatively enduring patterns in the way people think, feel, and behave (Roberts, 2009). Personality is a consistent predictor of human actions in various areas of life, such as trends in the consumption of products (Tarka et al., 2022), the work and

leadership styles of managers in organizations (Simic et al., 2022), behaviours in social networks (Dalvi-Esfahani et al., 2021) and eating habits (Pfeiler and Egloff, 2020). Despite the aforementioned findings, little is known about the personality differences between Latin American university students who are self-employed in independent businesses, those who are dependent workers and those who are nonworkers. This information is relevant because Latin America had a significant slowdown in growth in 2022 due to the impact of the COVID-19 pandemic, which increased the unemployment rate in some countries of this region (International Labour Organization, 2022). Therefore, obtaining new evidence that contributes to a better understanding of the influence of personality on students' work activity can guide employability programmes in Latin American universities and governmental institutions.

This research aims to address this knowledge gap by evaluating the incidence of personality traits in 758 university students from Chile and Ecuador as determinants of their employment status. In particular, this study distinguishes the personality patterns of self-employed students, dependent workers and nonworking students. The purpose is to recognize unique personality profiles linked to the employment status of university students. Personality evaluation is conducted using the Big Six personality traits model (agency, agreeableness, openness, neuroticism, extraversion and conscientiousness) which is measured with The Midlife Development Inventory (MIDI) by Lachman and Weaver (1997). This scale has proven validity in assessing the personality of people of different age levels and includes a small number of personal characteristics related to each personality trait, which allows a higher number of responses to be obtained in a limited time.

The effects of gender and generation on students' employment status are also evaluated. The selection of these demographic variables is based on the importance of gender (Lietzmann and Frodermann, 2021; Sargent et al., 2022) and generation (Pant and Venkateswaran, 2019; Zhang and Zhao, 2021) in research about work behaviours in the last decade. The centennial generation was born beginning in 1997 (MCGorry and MCGorry, 2017), and the millennial generation (also called Generation Y) was born from 1980 to 1996 (Van den Bergh and Behrer, 2016). The analysis of gender and generation will make the results more useful by facilitating the identification of specific profiles through the combination of demographic characteristics and personality traits.

Obtaining a better understanding of this matter can improve the efforts of universities and government organizations with regard to training for work in this region since findings about personality and demographics can facilitate the identification of university students with a propensity for self-employment, dependent employment or unemployment. With this knowledge, organizations can support the creation of new ventures or the search for employment according to students' profiles through the implementation of targeted programmes to develop specific skills. Students with a higher risk of unemployment can also be supported by programmes to strengthen skills related to the personality traits that could constitute weaknesses for some types of jobs.

2. Theoretical framework

2.1 Personality traits

The influence of personality traits has been studied in various areas of life, such as the purchase or consumption of goods and services (Lin, 2009; Wen-Chin and Hung - Ru, 2010) and behaviours in the workplace, including job engagement (Akhtar et al., 2015; Janssens et al., 2019) and job abandonment, also called burnout (Prusik and Szulawski, 2019; Grist and Caudle, 2021). In this sense, the study of personality, which is defined as individual differences in characteristic patterns of thought, feeling, and behaviour that distinguish individuals (American Psychological Association, nd), has proven to be a powerful theoretical perspective for understanding how and why people consistently select certain behaviours over time in different contexts. The influence of personality on work-life is highly relevant since employment status affects the way people relate to other people (Wrzus and Wagner, 2018; Chernyak -Hai and Rabenu, 2018) and people's satisfaction with life in general (Drobnič et al.,

2010; Stander et al., 2019). Additionally, work has a special meaning because people allocate a significant proportion of their time to work activities that impact the lives of other people by performing functions that solve problems and provide greater well-being.

A personality model that is widely used to analyse the influence of personality on human behaviour is the Big Five. This model, which was developed and promoted by Goldberg (1981, 1993) and Costa and McCrae (1988, 1992), states that individual personality is constituted by the combination of five major traits or factors: agreeableness, conscientiousness, extraversion, openness and neuroticism. Agreeableness is related to being helpful, warm, caring, soft-hearted and friendly; conscientiousness is revealed through a tendency to be systematic, self-disciplined, and responsible and to follow procedures and rules; extraversion involves being assertive, active, social, talkative, and expressive; openness is associated with strong intellectual curiosity and a preference for novelty and variety; and neuroticism refers to a low degree of emotional stability and impulse control and increased anxiety. Subsequently, Lachman and Weaver (1997) added the agency trait to this configuration to develop a model called the Big Six. The agency trait represents a tendency towards dominance over others and an orientation towards the achievement of individual objectives over a cooperative or community vision.

Research has recognized that these personality traits affect the intention to be an entrepreneur. Studies have argued that some personality traits, such as openness (Kerr et al., 2018; Awwad et al., 2021) and extraversion (Khan et al., 2021; Luc, 2022), are positively related to a greater propensity towards self-employment and that the neuroticism trait shows a negative relationship with new business creation (Obschonka et al., 2020; Sujarwoto, 2020). Moreover, it has been argued that there are personality differences among the most successful workers. In this area, it has been shown that neuroticism has a negative relationship with job success and that conscientiousness and extraversion support work success (Smithikrai, 2007). Additionally, studies have found that personality traits affect the duration of the job search process; specifically, conscientiousness and neuroticism have an important effect on the probability of finding a new job (Uysal and Pohlmeier, 2011). The evidence tends to vary according to the country in which these results are obtained and according to the types of business sectors and circumstances in which they are analysed.

As previously stated, little is known about the role of personality in determining the employment status of Latin American university students who live in a challenging social and economic context that has become even more difficult after the COVID-19 crisis. Based on the aforementioned research, which is associated with differences in personality among self-employed (Hamilton et al., 2019; Li et al., 2021) and unemployed individuals (Mendolia and Walker, 2015; Sansale et al., 2019), and evidence referring to differences in work commitment and job abandonment based on personality traits (Saufi et al., 2017; Altuntaş et al., 2022), this research proposes that the personality of Latin American university students should be a determining factor in their employment status with regard to the options of self-employment, dependent employment or nonworker. Therefore, this research suggests that the configuration of personality traits among self-employed students, dependent workers, and nonworking students should be unique. Consequently, the following research hypothesis is proposed:

- Hypothesis 1: Personality traits affect the propensity of Latin American university students to be self-employed, dependent workers or nonworkers.

2.2 Gender and age generation

Demographic determinants of employment status have been studied extensively. Research has addressed the demographic characteristics of both self-employed individuals as entrepreneurs (Bawakyillenuo et al., 2021) and unemployed persons (Mulugeta et al., 2022; Sajini, 2022). A demographic variable that has attracted great interest from researchers in the last decade is gender; therefore, previous research has investigated gender differences in employment status (Lietzmann and Frodermann, 2021; Hårenstam and Nyberg, 2021). Most studies have supported the finding of a

higher propensity of men in new business creation (Gonzalez-Alvarez and Solis-Rodriguez, 2011; Dissanayake et al., 2022), which implies a higher tendency towards self-employment among men. These findings can be explained by differences in roles between men and women that build social barriers to self-employment and by women's greater difficulty obtaining support for self-employment, such as access to financing (Liñán et al., 2020; Moreno-Gomez et al., 2020).

Differences by gender regarding the proportion of people who are dependent workers and those who are not working have also been found. Research tends to support a higher dependent employment ratio of men; in this sense, it has been argued that there are greater barriers in the search for employment for women in developing countries (Jayachandran, 2021) and that responsibilities of maternity and childcare affect the rate of female dependent employment (Katai et al., 2019). In relation to the proportion of nonworking people, that is, those who are not working for reasons such as unemployment, inability to work or lack of interest in work, it has been recognized that the proportion of nonworking people tends to be predominantly female (Escudero-Castillo et al., 2021; Iftene et al., 2022).

With respect to the unemployment rate in specific terms, that is, the percentage of people looking for a job who have not found one, a higher female unemployment rate has also been found (Annequin et al., 2016; Constantinescu et al., 2021). These results can be explained by women's responsibility for caring for the home and children in some countries (Alfarran et al., 2018; Bastas and Aydindag, 2020) and by health problems that can hinder women's participation in work activities (Amiri, 2022; Tüzün et al., 2021). Moreover, important differences in social roles between women and men have been identified in several countries (Mustafa and Almazrouei, 2020; Alexander et al., 2022), and significant gender gaps in access to work and income levels for the same job have been found in Latin America (Camps-Cura, 2019; Galperin and Arcidiacono, 2021). According to these findings, it can be proposed that gender should be a determinant of self-employment, dependent employment and not working. Therefore, the following hypothesis is proposed.

- Hypothesis 2: Gender affects the propensity of Latin American university students to be self-employed, dependent workers or nonworkers.

Another demographic variable that affects people's employment decisions is their age. This variable represents a person's stage in the life cycle and has been associated with a greater or lesser propensity to create new ventures (Kim, 2007; Xiao et al., 2021). With respect to self-employment, Gielnik et al. (2018) argued that younger people have a broader future time perspective and therefore express a greater intention to create new businesses and engage in self-employment. Hatak et al. (2015) found that older employed people are less inclined to undertake self-employment and that their entrepreneurial intention is lower when they are strongly committed to their dependent employment. In a similar sense, Kautonen et al. (2010) stated that people over 50 years old who have spent most of their lives working in industrial jobs have less entrepreneurial intention.

Differences in the level of unemployment by the stage of the life cycle have also been supported (Gervais et al., 2016; Hairault et al., 2019). While the average age and life expectancy of the population increases, older people tend to extend their working life and postpone their retirement, and this situation affects the unemployment of young people who are seeking to enter the labour market (Lee et al., 2021; Jasmin and Abdur Rahman, 2021). It has also been suggested that the centennial generation maintains a higher tendency towards nonworking due to a lower work commitment and a greater predisposition to leave jobs after a short time (Bakker, 2020) as well as greater pessimism of this generation (Gentina, 2019). A relevant proportion of these investigations has been conducted in Europe, where life expectancy has been significantly extended. This situation implies costs for compensation and the maintenance of the health of older workers on this continent.

In relation to dependent employment by age groups, in some OECD countries such as Greece, Costa Rica and Spain, the unemployment rate among young people (15 to 24 years old) is high, exceeding 20% (OECD, 2022a). In Spain, the unemployment rate among people between 25 and 44 years old and between 45 and 64 years old is significantly lower than the unemployment rate among young people between 16 and 24 years old (National Institute of Statistics, n.d.). Moreover, the

dependent employment rate among older people between 55 and 64 years old in OECD countries is lower than the employment rate of people between 25 and 54 years old (OECD, 2022b). Some recent publications have linked the lower participation of older people in dependent employment to health problems such as depression (McInerney and Mellor, 2012; de Breij et al., 2020). In accordance with these differences in self-employment, dependent employment and nonworking rates by age groups, this research argues that in the case of Latin American university students, belonging to a particular age group should affect their work activity. In particular, it is proposed that there should be an effect of individuals' generation on employment status. Consequently, the following research hypothesis is proposed.

- Hypothesis 3: The propensity of Latin American university students to be self-employed, dependent workers or nonworkers is affected by belonging to a particular age group.

3. Methodology and Methods

3.1 Measurement

This research is quantitative and uses self-administered online questionnaires that were distributed through the SurveyMonkey platform during the first and second academic semesters of 2022. The request for response and access to the survey in the Survey Monkey platform were sent by email to students enrolled at the Universidad de Las Américas in Chile and at Escuela Politécnica de Ecuador. The questionnaire included the scale for measuring personality factors proposed by Lachman and Weaver (1997), which has been used and validated in recent studies (Li et al. 2021; James et al. al., 2021). The personality scale by Lachman and Weaver (1997) measures the six personality traits of the Big Six model through The Midlife Development Inventory (MIDI). As previously stated, the six personality traits in this model are agency, agreeableness, neuroticism, openness, conscientiousness, and extraversion. The MIDI was created by considering other personality scales as a base (Goldberg, 1992) and has demonstrated good construct validity in all age groups. Its main advantage is that it includes a small number of qualities associated with each personality trait, which allows a large number of responses to be obtained in a limited period of time.

The scale by Lachman and Weaver (1997) determines a parameter for each trait through the evaluation of personal characteristics linked to each personality trait. Specifically, Lachman and Weaver's (1997) scale incorporates the phrase, "Please indicate how well each of the following describes you" and then presents a set of personal characteristics, which are shown in Table 1. The MIDI scale uses four levels that represent the intensity of each personal characteristic: not at all (1), a little (2), some (3) and a lot (4). After obtaining the responses to the online survey, a global parameter (or indicator) of each personality trait was calculated using the procedure determined by MIDI authors (Lachman and Weaver, 1997). This procedure was based on the calculation of the arithmetic mean of the magnitudes of the personal characteristics associated with each personality trait. The items on the personality scales (Lachman and Weaver 1997) were translated from English to Spanish to collect responses from Spanish-speaking students and then translated back into English for presentation in this research. Previously, some answers were requested as a test to verify the correct interpretation of these personal qualities.

Students born since 1997 were categorized as members of the centennial generation using McGorry and McGorry's (2017) classification, and those born between 1996 and 1980 were categorized as members of the millennial generation according to the classification by Van den Bergh and Behrer (2016). Age generations were identified through a dummy variable that coded membership in the millennial generation as "1" and belonging to the centennial generation as "0". Gender was also evaluated through a dummy variable that recognized female gender with the number "1" and male gender with "0". Employment status was asked, with the following options: part-time dependent employed, full-time dependent employed, part-time self-employed, full-time self-employed, and not currently working. Table 1 below details the characteristics of the personality traits from the MIDI

personality scale.

Table 1: Personal characteristics associated with the Big Six personality traits

Personality Traits	Characteristic	Scale
Agency	a) Self-confident. (b) Forceful. (c) Assertive. (d) Outspoken. (e) Dominant. (o.7o)	Not at all (1) A little (2) Some (3) A lot (4)
Agreeableness	a) Helpful. (b) Warm. (c) Caring. (d) Soft-hearted. (e) Sympathetic.	
Openness to Experience	a) Creative. (b) Imaginative. (c) Intelligent. (d) Curious. (e) Broadminded. (f) Sophisticated. (g) Adventurous.	
Neuroticism	(a) Moody. (b) Worrying. (c) Nervous. (d) Calm (-).	
Extroversion	(a) Outgoing. (b) Friendly. (c) Lively. (d) Active. (e) Talkative.	
Conscientiousness	a) Organized. (b) Responsible. (c) Hardworking. (d) Careless (-).	

Note: the sign (-) represents the evaluation of a reverse characteristic; the magnitude of these characteristics is reversed. Scale by Lachman and Weaver (1997).

3.2 Sample

The responses of 758 university students from Chile and Ecuador ranging in age from 18 to 42 years old who were studying engineering and business were analysed. These students were selected through nonprobabilistic convenience sampling, which is a technique widely used in research on university students (Borges et al., 2021; Margaça et al., 2021; Saptono et al., 2021; Núñez-Canal et al., 2022). An attempt was made to reduce the bias of the nonprobabilistic sample through the collection of responses from diverse students enrolled in different careers and with different ages as well as through a proportion of responses between males and females close to 50%. The responses were obtained during the first and second academic semesters of 2022. The survey included a request for written informed consent consistent with the guidelines of the Ethics Committee of Chile (ID: 44/2022). Only students who accepted the informed consent request had access to the online survey questions. Additionally, only complete and error-free responses were analysed.

The sample included 194 (25.59%) students from Chile and 564 (75.93%) students from Ecuador. Of students evaluated in Chile, 94.33% were studying in the Metropolitan Region of Santiago, and 95.92% of students evaluated in Ecuador were studying in the city of Quito at the time the survey was answered. Most of the students were enrolled in business, economics or engineering majors. The gender distribution was 390 (51.45%) male students and 368 (48.55%) female students. The average age of those evaluated was 23.49 years, and the standard deviation of age was 4.95 years. Additionally, 606 (76.90%) students were categorized as the centennial generation (18 to 25 years old) according to the classification by McGregor and McGregor (2017), and 152 (23.10%) students were categorized as the millennial generation (26 to 42 years old) according to the classification by Van den Bergh and Behrer (2016). Table 2 below describes the students' characteristics.

Table 2: Sample description

	Men	Women	Millennials	Centennials	Total
Self-employment	75	54	39	90	129
Dependent employment	94	123	89	128	217
Nonworking	221	191	24	388	412
Total	390	368	152	606	758

3.3 Statistical analysis

Since this research seeks to evaluate the effect of personality traits and demographic variables on being self-employed (whether full time or part time), dependent employed (whether full time or part

time), or not working, a logistic regression analysis that included employment status as a dichotomous dependent variable, also called a dummy, was performed. Logistic regression analysis is a method that allows for the evaluation of the incidence of independent variables on dichotomous nominal variables (Sving et al., 2016). Consequently, it was considered a suitable method to achieve the objectives of this research. The six personality traits of the Big Six model, gender and belonging to the centennial and millennial generations were included as independent variables in the logistic regression models. As previously stated, a parameter (indicator) that represented the magnitude of each personality trait was obtained using the procedure of Lachman and Weaver (1997).

The significance of the odds ratios and the coefficients associated with the independent variables were evaluated in the logistic regression models. The odds ratios represent the ratio of probability between the occurrence of an event and the nonoccurrence of the event (Oliveras et al., 2014). Odds ratios greater than 1 indicate a positive relationship (for example, that older age increases the probability of being a dependent worker), and odds ratios less than 1 indicate a negative relationship (for example, that older age reduces the probability of being a nonworker). In addition, standardized regression coefficients were included to facilitate the comparison of magnitudes. The global adjustment of the logistic regressions was evaluated using the Chi² test. The significance of the regression coefficients was tested with p values. Multicollinearity in regressions was measured with the variance inflation factor (VIF).

4. Results

4.1 Logistic regression analysis

Table 3 presents the regression models that included employment status as the dependent variable. Model 1 compared self-employment and dependent employment using a dummy dependent variable; self-employment was coded with “1”, and dependent employment was coded with “0”. Model 2 compared self-employment and nonworking using a dummy dependent variable; self-employment was coded with “1”, and nonworking was coded with “0”. Model 3 compared dependent employment and nonworking using a dummy dependent variable; dependent employment was coded with “1”, and nonworking was coded with “0”. The three regression models showed adequate goodness of fit with 99% confidence (Prob > chiz = 0.00). The VIF parameters related to the independent variables were less than 3 in the three regression models, which supported the absence of multicollinearity (Fox & Weisberg, 2018).

The results of regression Model 1 showed that the openness personality trait (odds ratio >1; $\beta = 0.996$; p value <0.05), which is related to being creative, imaginative, curious, and flexible in thoughts, feelings, and behaviours, had a positive effect on self-employment compared with dependent employment. Additionally, a direct negative effect of female gender on self-employment was shown (odds ratio <1; $\beta = -0.654$; p value <0.05). The coefficients associated with the agency, agreeableness, neuroticism, conscientiousness and extraversion traits were not significant in regression Model 1 with 95% confidence (p value >0.05). Moreover, the coefficient related to belonging to the millennial generation was not significant with 95% confidence (p value >0.05). When comparing the standardized coefficients of the personality traits, the highest positive coefficient was linked to the openness personality trait, suggesting a greater effect of this personality trait on self-employment.

Regression Model 2 also showed that the personality trait of openness (odds ratio >1; $\beta = 0.796$; p value <0.01) had a positive effect on self-employment compared with nonworking. Additionally, regression Model 2 supported a positive effect of belonging to the millennial generation on self-employment compared with nonworking (odds ratio >1; $\beta = 1.977$; p value <0.01). This implies that the millennial generation, compared to the centennial generation, has a higher propensity towards self-employment than not working. The coefficients related to agency, agreeableness, neuroticism, conscientiousness and extraversion were not significant in regression Model 2 with 95% confidence

(p value >0.05). The highest positive coefficient is linked to openness, suggesting a greater effect of this personality trait on self-employment.

Regression Model 3 supported a positive effect of conscientiousness (odds ratio>1; $\beta = 0.682$; p value <0.01) and extraversion (odds ratio>1; $\beta = 0.485$; p value <0.05) on dependent employment compared with nonworking. This suggests that students with a greater tendency towards organization, discipline and responsibility (more conscientiousness traits) and expressive and communicative students (more extraversion traits) tend towards dependent employment. In contrast, the most introverted students (less extroverted) and students with less organization, discipline and responsibility (less conscientiousness) were more likely to be nonworking. The positive effect of belonging to the millennial generation (odds ratio>1; $\beta = 2.371$; p value <0.01) on dependent employment was supported. This finding is consistent with the lowest employment rate for young people between the ages of 15 and 24 in Latin America and the Caribbean countries (International Labour Organization, n.d.), which implies that work inactivity is higher among centennials than in millennials. The highest positive coefficient was linked to belonging to the millennial generation, suggesting a higher effect of this age group on dependent employment in comparison to nonworking.

Table 3: Logistic regression models

	Model 1. Self-Employment -Dependent Employment			Model 2. Self-Employment - Nonworking			Model 3. Dependent Employment-Nonworking		
	Odds	β	P value	Odds	β	P value	Odds	β	P value
Agency	0,744	-0,296	0,374	0,957	-0,044	0,885	1,142	0,133	0,613
Agreeableness	1,150	0,140	0,683	0,707	-0,346	0,278	0,807	-0,215	0,437
Neuroticism	1,480	0,392	0,170	1,190	0,174	0,493	0,849	-0,164	0,481
Openness	2,708	0,996	0,011	2,217	0,796	0,018	1,115	0,109	0,708
Conscientiousness	0,613	-0,489	0,076	1,211	0,191	0,444	1,978	0,682	0,003
Extraversion	0,642	-0,443	0,162	1,332	0,287	0,307	1,624	0,485	0,047
Gender	0,520	-0,654	0,007	0,755	-0,281	0,226	1,341	0,293	0,143
Millennial	0,723	-0,324	0,191	7,224	1,977	0,000	10,708	2,371	0,000
Constant	0,451	-0,796	0,543	0,012	-4,387	0,000	0,012	-4,425	0,000
Observations	346			541			629		
Prob > chiz	0,002			0,000			0,000		
Pseudo R2	0,053			0,111			0,183		

Note: A P value<0.01 supports significant differences with 99% confidence. A P value<0.05 supports significant differences with 95% confidence. β represents standardized regression coefficients.

4.2 Validation or rejection of hypotheses

The acceptance or rejection of the hypotheses is detailed in Table 4. This table includes the hypotheses of the study and the evidence obtained from the logistic regression models.

Table 4: Acceptance or rejection of hypotheses

	Evidence	Result
Hypothesis 1	Openness positively affects self-employment compared with dependent employment ($\beta = 0.996$; p value <0.05). Openness positively affects self-employment compared with nonworking ($\beta = 0.796$; p value <0.05). Conscientiousness and extraversion positively affect dependent employment compared with nonworking ($\beta = 0.682$; P<0.05. $\beta = 0.485$; p value<0.05).	Accepted
Hypothesis 2	Female gender negatively affects self-employment compared with dependent employment ($\beta = -0.654$; p value <0.01).	Partially accepted
Hypothesis 3	Compared with nonworking, self-employment ($\beta = 0.869$; p <0.01) is positively influenced by belonging to the millennial generation. Compared with nonworking, dependent employment ($\beta = 0.869$; p <0.01) is positively influenced by belonging to the millennial generation.	Partially accepted

Note: P < 0.01 represents significant regression coefficients with 99% confidence. P < 0.05 represents significant regression coefficients with 95% confidence.

5. Discussion and Conclusions

This research seeks to determine the effect of Latin American university students' personality traits, gender and belonging to a particular generation on their employment status. The findings presented in Tables 3 and 4 show that openness, conscientiousness and extraversion influence the employment status of university students. Furthermore, female gender has a negative influence on self-employment, and belonging to the millennial generation has a positive influence on self-employment and dependent employment. Therefore, this research provides new evidence that contributes to a better understanding of the role of personality traits and demographics on the labour activity of undergraduate students in Latin America. The findings allow us to identify a unique configuration of personality traits and demographics among Latin American university students that affects the possibility that they will engage in self-employment or dependent employment or not perform work activities.

The results align with previous research showing that the openness trait positively affects the intention to start new businesses (Zhou et al., 2018; Laouiti et al., 2022). In particular, openness has been widely recognized as a personal characteristic that promotes business creation and self-employment since it is related to the acceptance of new experiences (Mühlig-Versen et al., 2012; Zaninotto et al. 2018), greater creativity (Feist, 2019; Zhang et al., 2019) and a higher predisposition to take risks (Łakuta, 2019; Tagini et al., 2021), all of which are also characteristics related to people who are self-employed through business creation. Moreover, the results related to the positive incidence of conscientiousness among people in dependent employment are in line with previous investigations that found a positive effect of discipline and responsibility on obtaining and maintaining jobs (Pouratashi and Zamani, 2019; Konovalova and Mitrofanova, 2021). In a similar sense, extraversion has been linked to effective communication and greater persuasion. These qualities favour obtaining and maintaining employment, especially employment that requires a high level of interaction with other people, such as sales, consulting, and education jobs (Kaur and Kanojia, 2016; Kornelakis and Petrakaki, 2020; Razmak et al., 2023).

The negative incidence of high conscientiousness and extraversion on nonworking is consistent with research that has found that proactivity, persistence, and planning skills, which are qualities related to the conscientiousness trait, promote job performance (Bourner et al., 2011; Oni and Olaniran, 2022) and facilitate the job search process (Wang, 2013; Honeyman et al., 2022). Consequently, these personal characteristics increase the possibility of maintaining dependent employment. In addition, research has recognized that being talkative and expressive, which are qualities linked to extraversion, are associated with better results in job interviews (Tay et al., 2006; Petruzzello et al., 2020). In summary, the lack of rigor and responsibility associated with low conscientiousness (Madsen, 2018; Dawson et al., 2020) and the lack of ability to relate to other people to develop contact networks associated with low extraversion are personal characteristics that make it more difficult to find dependent employment (Alias et al., 2013; Thebe and Shawa-Mangani, 2022).

The negative influence of female gender on self-employment is also consistent with previous research supporting greater participation of men in entrepreneurship in Ibero-American countries (Gonzalez-Alvarez and Solis-Rodriguez, 2011; Moreno-Gómez et al., 2020). This can be explained by discrepancies in gender roles in some societies. In this regard, van Ewijk et al. (2019) stated that women have a weaker entrepreneurial intention than men due to factors such as education received and social gender roles. The findings related to higher self-employment and dependent employment of the millennial generation compared with the centennial generation are also in line with data from the labour market in Latin America and the Caribbean, which states that the unemployment rate of people from 15 to 24 years old reached 23.8% in the first quarter of 2021 (International Labour Organization, 2021) and that the youth unemployment rate in this region was three times higher than the unemployment rate for older adults in 2020 (International Labour Organization, nd.). Moreover, the positive influence of belonging to the millennial generation on participation in self-employment is consistent with research that supports a significant increase in the propensity towards

entrepreneurial activities among people aged 26 to 35 (Nagendra et al., 2014; Sambo, 2016).

The results of this study have several practical implications for universities and government organizations in Latin America dedicated to supporting the formation of students. The findings make it possible to identify students with a higher and lower propensity for self-employment, dependent employment or nonworking. Consequently, this research can guide the design and implementation of intervention programmes to strengthen employment skills by considering the personality traits, gender and age of students. In particular, the higher education institutions of Latin America could apply the MIDI (Lachman and Weaver, 1997) to assess personality traits and identify students with a greater propensity towards self-employment, employment dependence or unemployment. Students with a higher level of openness could participate in programmes to develop entrepreneurial talent, receive training in business models, and receive special support for access to work networks and financing.

Complementarily, students with high levels of conscientiousness and extraversion could be prepared through programmes to strengthen their labour competencies and improve their career development options in organizations. Students with low conscientiousness and extraversion should receive orientation for job searches or participate in training programmes to improve organization, planning and effective communication, which would give them better chances of obtaining and maintaining dependent employment. These programmes could be targeted to students of the centennial generation because they have shown a greater tendency to not work and greater personality differences between self-employed, dependent workers and nonworkers. These programmes should differentiate students of the millennial generation due to the high effect of the openness trait on self-employment among this group and women because of their lower participation in entrepreneurship.

6. Limitations and Future Research

This research evaluated Latin American university students by incorporating only the responses of students from Chile and Ecuador. Although the 758 students in the sample had different genders and age ranges, it is important for future research to evaluate students from other Latin American countries, such as Colombia, Brazil, Argentina, Peru, and Bolivia. Second, this research defined the nonworking group without identifying the cause of this situation, which may be unemployment, lack of interest in work, or the inability to work due to health problems or family responsibilities. Future research should differentiate these groups to achieve a more precise measurement of the influence of personality traits on nonworking. Moreover, this research evaluated self-employment and dependent work in a general way without distinguishing types of self-employment and dependent employment. Therefore, future research should evaluate the incidence of the personality traits of Latin American university students who are self-employed in specific businesses, such as services or the production of goods, and distinguish the influence of personality traits on dependent employment, such as administrative functions, marketing and sales, logistics or electronic commerce.

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