
KEY FACTORS TO ATTRACT AND RETAIN GRADUATE STUDENTS-
THE CASE OF FEP.UP

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Abstract

The number of students deciding to continue their studies after they complete their bachelor degree has increased substantially over recent years due to the Bologna process. However, earlier research overlooks the choice of a second cycle institution right after graduation, and consequently do not consider the transition of students from the first cycle to the second cycle institution. Therefore, this dissertation fulfils this gap by identifying: (1) which factors influence students to choose a higher education institution (HEI) for the second cycle, in this case FEP.UP - School of Economics and Management of the University of Porto; (2) which attitudinal factors influence students' loyalty to FEP.UP and (3) whether loyalty influences student's retention. Data was collected through two surveys targeting FEP.UP last year bachelor students (Survey 1) and FEP.UP master students (Survey 2). Overall, findings show employability as the most important factor to choose a second cycle HEI for both students: those who graduate at FEP.UP and repeated the choice and those students who did not graduate at FEP.UP but choose it. However, the results show some differences in the choice factors between these two groups. Location, costs and services are more important for respondents who repeated the choice, while work-study interface, reputation and quality are more significant for students who did not graduate at FEP.UP. Additionally, our findings show that undergraduates' satisfaction is the only attitudinal factor that influences loyalty to the institution, which in turn, influences the decision to continue at FEP.UP to pursue a master's degree. These findings have practical implications for student's attraction and retention strategies that are also discussed.

Keywords: Students, Choice, Factors, Second cycle institution, FEP.UP.

JEL-codes: I230.

Resumo

O número de alunos que decidem continuar os estudos depois de concluírem a licenciatura aumentou substancialmente nos últimos anos devido ao processo de Bolonha. No entanto, estudos anteriores ignoram a escolha de uma instituição de segundo ciclo logo após a graduação e, conseqüentemente, não consideram a transição dos alunos do primeiro ciclo para o segundo ciclo. Esta dissertação preenche esta lacuna de investigação identificando (1) quais os fatores que influenciam os alunos a escolherem uma instituição de ensino superior (IES) para o segundo ciclo, neste caso a FEP.UP - Faculdade de Economia do Porto, (2) quais os fatores atitudinais que influenciam a lealdade dos alunos da instituição e (3) se a lealdade influencia a retenção do estudante. Os dados foram recolhidos através de dois questionários, um dirigido aos alunos finalistas da licenciatura da FEP.UP (Inquérito 1) e o outro dirigido aos alunos de mestrado da FEP.UP (Inquérito 2). No geral, os resultados mostram que a empregabilidade é o fator mais importante quer para os alunos que realizaram a licenciatura na FEP.UP e repetiram a escolha para o segundo ciclo quer para os alunos que não se formaram nessa instituição, mas escolheram a FEP.UP para a sua IES de segundo ciclo. No entanto, os resultados indicam que existem algumas diferenças nos fatores de escolha entre esses dois grupos. A localização, os custos e os serviços da FEP.UP são mais importantes para os inquiridos que repetiram a escolha, enquanto que a combinação dos estudos com o trabalho, a reputação e a qualidade da FEP.UP são mais significativas para os alunos que não realizaram a licenciatura na FEP.UP. Além disso, os resultados mostram que a satisfação é o único fator atitudinal que influencia a lealdade dos alunos, que por sua vez, influencia a decisão dos estudantes continuarem na mesma instituição para a realização do mestrado. Estes resultados têm implicações práticas para as estratégias de atração e retenção de alunos que são discutidas.

Palavras-chave: Estudantes, Escolha, Fatores, Instituição de segundo ciclo, FEP.UP.

Códigos JEL: I230.

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1. Introduction

Throughout this century, the European Higher Education system has been subject to several transformations. The Bologna Declaration, signed in 1999, triggered the Bologna process that was the major driver for these modifications. To establish a European area of Higher Education (HE), twenty-nine European countries decided to implement the Bologna process with the objective of adopting a comparable system of degrees, based on a two-cycle system (undergraduate and graduate). In that system, the first cycle degree lasts a minimum of three years and has the same credit system to promote the mobility of students, professors, researchers and administrative staff (European Higher Education Area, 2016).

The decrease in the number of years required to obtain a first cycle degree in many countries, including Portugal (Cardoso et al., 2008; Portela et al., 2009), combined with the students and employers' belief that a "real degree" is achieved with the master level, led several students to continue their studies (Crosier et al., 2007; Sin & Amaral, 2017). Consequently, more options and new master's programs emerged (Crosier et al., 2007; Joseph et al., 2014).

The compatibility and comparability of the HE systems introduced by Bologna raised the level of competition of HE (Simões & Soares, 2010; Joseph et al., 2014) and Portugal was not an exception (Alves & Raposo, 2007; Cardoso et al., 2008). In this competitive context, the pressure for Higher Education Institutions (HEIs) to attract prospective students (Joseph et al., 2014; Munisamy et al., 2014; Mbawuni & Nimako, 2015) and develop stable relationships with them to enhance retention (Helgesen & Nettet 2007a; Mbawuni & Nimako, 2015) has become evident. Thus, understanding the factors that influence students' choice of a second cycle institution and that influence their loyalty is key (Simões & Soares, 2010; Tavares & Ferreira, 2012; Mbawuni & Nimako, 2015), especially because a large part of the HEIs income come from master programs (Blackburn, 2011).

While there is an extensive research on the factors that affect the choice of a first cycle institution, less is known about the factors that influence the choice of a second cycle institution. Moreover, earlier research is predominantly from outside Europe and therefore overlooks the choice of a second cycle institution right after graduation due to the Bologna process. Existing literature assumes that students are much older, have spouses, children and work, which is not the dominant profile in Europe following the Bologna process. Finally, and to the best of our knowledge in Portugal: (1) most studies focus on the students'

transition from high school to college; (2) no single study, after Bologna, has considered the transition of students from the first cycle to the second cycle institution and (3) no earlier research contemplated the case of the School of Economics and Management of the University of Porto (FEP.UP), which is one of the most prestigious schools of economics and management in the country.

The present research addresses these gaps, contributing to a richer understanding of students perspectives. Therefore, the first objective is to identify which factors influence students' choice of a second cycle HEI, in particular, the choice of FEP.UP. The second objective is to identify which attitudinal factors influence students' loyalty to FEP.UP and the third objective is to determine if loyalty influences student's retention. This HEI was chosen because UP is a benchmark university in Portugal (University of Porto, 2018) and FEP.UP is one of the most prestigious HEI in economics and business in the country. It is ranked as an excellent business school with reinforcing international influence and had 11 masters' degrees in the ranking of the best masters of western Europe (Eduniversal, 2018).

In sum, this research addresses the following research questions:

- 1) Which factors influence FEP.UP students' choice of the same HEI for a second cycle program?
- 2) Which factors influenced the decision to choose FEP.UP for a second cycle program among the students who did not graduate at FEP.UP?
- 3) Do these factors vary between these two groups of students?
- 4) Which attitudinal factors influence FEP.UP students' loyalty?
- 5) Does FEP.UP students' loyalty influence student's retention?

To achieve these goals, we surveyed FEP.UP's last year bachelor students (Survey 1) and FEP.UP's master students (Survey 2) to identify the factors that influence/have influenced their selection of a master's HEI, as well as other relational dimensions related with the school. Overall, the results of this research contribute to a better knowledge of the current situation of FEP.UP which may support the development of strategies to attract new entrants and retain the best bachelor students. The findings are also relevant for other HEIs, despite not being generalizable outside the limitations of this research.

This dissertation is structured as follows: after this introduction, Section 2 comprises the relevant literature on the topic of HE in Portugal, on the factors which influence the choice of a HEI and students' loyalty, as well as the theoretical model and the main hypotheses of the research. Section 3 gives an overview of the methodology, while section 4 presents the

results which are further discussed in section 5. Finally, section 6 presents the conclusions, limitations, future research considerations and the theoretical and practical implications of this research.

2. Literature review

2.1. Higher Education in Portugal

After the 1974 revolution, the democratisation of the higher education system in Portugal evolved rapidly, switching from an elite system with low participation to a system with high enrolment rates (Tavares et al., 2008; Cardoso et al., 2011; Tavares & Ferreira, 2012). Currently, Portugal has a binary higher education system of universities and polytechnics, in the public and private sector (Tavares et al., 2008; Simões & Soares, 2010; Cardoso et al., 2011).

The Bologna process, which started in Portugal in 2006 and was fully implemented in the 2009/2010 school year (DGES, 2018) has led, in most cases, to a reduction in the number of years required to complete a bachelor's degree. In the 90's, the common duration of a bachelor's degree was five years, later reduced to four and then to three with the Bologna process (Cardoso et al., 2008; Sin & Amaral, 2017). In business and economics, after the three initial years students finish the first cycle of studies, i.e., complete a bachelor's degree, following which they decide whether to enter the labour market, to continue their studies or do both. According to Crosier et al. (2007) the need to pursue studies was accentuated with the Bologna process that created a strong connection between the first and second cycle. Moreover, students decide to pursue a graduate degree because they are aware that with a more advanced level of education they benefit from a competitive edge when compared to the students who do not continue their studies (Webb & Allen, 1995). This includes relevant research and analytical competencies, more chances of development and career enrichment and advantages related to monetary compensation (Webb & Allen, 1995).

In continuing studies to the second cycle, students may enrol in a postgraduate program (e.g. a MBA or a specialized program), or in a Master of Science (MSc) degree. In 2007, Portugal had 11.608 students enrolled in Portuguese master programs and in 2017 that figure had rose to 55.684 (PORDATA, 2017). Therefore, the universities increased the offer of master's degrees (Marzo Navarro et al., 2005), which also contributed to the growth of the total number of programs offered in Portugal. Given the exponential development of courses and students enrolled in master's programs, knowing the factors influencing students' choice of a second cycle HEI is clearly relevant.

2.2. The choice of a Higher Education Institution

Besides Bologna, the rise of the demand for HE is also due to multiple social and economic changes that have originated the request for highly skilled workers (Hesketh & Knight, 1999; Sin & Amaral, 2017). In such a context, students tend to look for the graduate programs and institutions that allow them to have a good return on their investment (Hesketh & Knight, 1999). Currently, it is important to have a degree and also a prestigious one (Blackburn, 2011). Therefore, the choice of a second cycle HEI has to be carefully evaluated (Joseph et al., 2014). On the other hand, HEIs want to understand what students are looking for, both to attract new entrants and to retain their own graduates, thereby gaining a competitive edge (Joseph et al., 2012).

The criteria that determine the choice of a HEI have been subject of significant examination. However, the main focus of existing research has been on the choice of a first cycle institution and has been more limited on the factors that lead to the selection of a specific school at the master level. Although there are several common choice factors for undergraduate and graduate students, there may also be differences as, at the time of the decision, students have different needs (Marzo Navarro et al., 2005) and face different life stages (Kallio, 1995).

Given the scarcity of research related to the second cycle institution choice, the present literature review also addresses existing research about the choice of a first cycle institution, as a theoretically ground. Chapman (1981) was one of the pioneers offering a model of student HEI choice. The model proposes that the students' choice of a HEI is affected by internal characteristics and external factors which encompass the influence of significant others, the efforts of the HEI to communicate with students and the characteristics of the HEI.

To summarize the factors found in the literature about the choice of a HEI, Table 1 presents a list of factors compiled and categorized into two different categories: social influence and institution characteristics.

Choice factors	Authors
Social Influence	
Work and spouse influences	Kallio (1995)
Parents/friends/students influences	Tavares et al. (2008), Abubakar et al. (2010), Simões & Soares (2010), Tavares & Cardoso (2013), Munisamy et al. (2014), Stephenson et al. (2016)
Professor and staff influences	Mbawuni & Nimako (2015)

Choice factors	Authors
	Institutional Characteristics
Reputation	Malaney (1987), Webb (1993), Hesketh & Knight (1999), Soutar & Turner (2002), Imenda et al. (2004), Briggs (2006), Abubakar et al. (2010), Simões & Soares (2010), Blackburn (2011), Joseph et al. (2012), Tavares & Ferreira (2012), Tavares & Cardoso (2013), Joseph et al. (2014), Munisamy et al. (2014), Saif et al. (2017)
Financial reasons	Malaney (1987), Webb (1993), Kallio (1995), Hesketh & Knight (1999), Imenda et al. (2004), Maringe (2006), Abubakar et al. (2010), Joseph et al. (2012), Tavares & Cardoso (2013), Joseph et al. (2014), Mbawuni & Nimako (2015), Stephenson et al. (2016), Saif et al. (2017)
Location	Malaney (1987), Webb (1993), Montgomery (2002), Imenda et al. (2004), Briggs (2006), Maringe (2006), Abubakar et al. (2010), Simões & Soares (2010), Joseph et al. (2012), Tavares & Ferreira (2012), Tavares & Cardoso (2013), Joseph et al. (2014), Mbawuni & Nimako (2015), Stephenson et al. (2016)
Quality	Webb (1993), Kallio (1995), Hesketh & Knight (1999), Soutar & Turner (2002), Imenda et al. (2004), Briggs (2006), Tavares et al. (2008), Abubakar et al. (2010), Blackburn (2011), Joseph et al. (2012), Tavares & Cardoso (2013), Saif et al. (2017)
Class size	Blackburn (2011), Joseph et al. (2012), Joseph et al. (2014), Stephenson et al. (2016)
Course diversity	Kallio (1995), Blackburn (2011)
Course content and organization	Hesketh & Knight (1999), Blackburn (2011)
Reliable supervisors	Hesketh & Knight (1999)
Professors' flexibility	Hesketh & Knight (1999), Blackburn (2011)
Program completion time	Webb (1993), Blackburn (2011)
Evening classes	Webb (1993)
Availability of a specific program	Webb (1993), Maringe (2006), Stephenson et al. (2016)
Part-time program	Webb (1993)
Employability prospects	Hesketh & Knight (1999), Imenda et al. (2004), Briggs (2006), Tavares et al. (2008), Blackburn (2011), Soutar & Turner (2002), Tavares & Ferreira (2012), Munisamy et al. (2014), Tavares (2017)
Networking possibilities	Blackburn (2011)
Potential degree marketability	Webb (1993)
Career opportunities	Blackburn (2011)
Social climate/environment	Kallio (1995), Hesketh & Knight (1999), Imenda et al. (2004), Joseph et al. (2012), Stephenson et al. (2016)
Staff's student support	Hesketh & Knight (1999), Imenda et al. (2004), Mbawuni & Nimako (2015)
Faculty interaction	Webb (1993), Joseph et al. (2012)
Facilities	Hesketh & Knight (1999), Price et al. (2003), Blackburn (2011), Joseph et al. (2012), Joseph et al. (2014)
Acceptance rate	Briggs (2006), Joseph et al. (2014), Mbawuni & Nimako (2015)
Type of institution	Tavares & Cardoso (2013), Joseph et al. (2014), Stephenson et al. (2016)

Table 1: Choice factors for a HEI

Source: Author's own elaboration

2.2.1 Social influence

Social influence has an impact on students' decision (Tavares et al., 2008; Simões & Soares, 2010; Tavares & Cardoso, 2013; Stephenson et al., 2016). However, this influence differs among undergraduates and graduates students (Kallio, 1995). The opinion of parents, friends and university students influence undergraduate students in Portugal, USA, Malaysia and Australia (Tavares et al., 2008; Abubakar et al., 2010; Simões & Soares, 2010; Tavares & Cardoso, 2013; Munisamy et al., 2014; Stephenson et al., 2016), while graduates are more influenced by professors, staff, work and spouse recommendations (Mbawuni & Nimako, 2015), which reflect the effects of their life stage development (Kallio, 1995). Furthermore, Portuguese undergraduates also consider the positive and negative perceptions, focusing more on the informal information (from parents, friends and students) than on the information provided by the HEIs (Tavares & Cardoso, 2013). Therefore, one would expect that social influence is important for the students' choice of FEP.UP for a second-cycle institution.

2.2.2 Institutional factors

Reputation

Students have in mind that the academic standing of the program and the school where the program is completed are important aspects in assessing the benefit of continuing studies (Hesketh & Knight, 1999). Therefore, one of the most important characteristics for students' choice is the institution reputation (e.g. Briggs, 2006; Simões & Soares, 2010; Blackburn, 2011; Joseph et al., 2012; Tavares & Cardoso, 2013; Munisamy et al., 2014). Therefore, one would expect that reputation influences the students' choice of FEP.UP for a second-cycle institution.

Financial reasons

Factors related to the economic costs that the enrolment in a certain institution involves are also a weighting factor for students. Students are usually concerned about the tuition cost (e.g. Imenda et al., 2004; Maringe, 2006; Abubakar et al., 2010; Joseph et al., 2014; Stephenson et al., 2016; Saif et al., 2017), the costs of housing and food (Joseph et al., 2012; Mbawuni & Nimako, 2015), as well as the availability of financial aid (Kallio, 1995; Joseph et al., 2012; Tavares & Cardoso, 2013). For some students, the cost becomes an impediment to

choosing the institution they prefer since they opt for the cheaper option (Hesketh & Knight, 1999; Tavares & Cardoso, 2013; Mbawuni & Nimako, 2015).

While this is a key choice factor for most students, Montgomery (2002) and Montgomery and Powell (2006) found different evidence. A nested logit model of the choice factors of a graduate business school demonstrated that the elasticity in the demand for a graduate business school regarding tuition cost is low (Montgomery, 2002). Montgomery and Powell (2006) also found that the tuition did not constitute a major restriction to attend a business school, even for a prestigious (and more expensive) institution. However, the authors warned that these conclusions may not be generalizable because in these two studies the sample was composed of students who registered in the graduate management admission test (GMAT) and who were most likely applying to a graduate management school. Given the aforementioned contrasting evidence, one would expect that financial reasons influence the students' choice of FEP.UP for a second-cycle institution.

Location

The location of the institution has an especial influence in the enrolment choice according to earlier research (e.g. Malaney, 1987; Webb, 1993; Montgomery, 2002; Simões & Soares, 2010; Tavares & Ferreira, 2012; Stephenson et al., 2016). The fact that the institution is close to home is an important determinant for students, including Portuguese undergraduate students, who prefer to stay closer to family and friends while reducing the costs (Maringe, 2006; Simões & Soares, 2010; Tavares & Ferreira, 2012; Tavares & Cardoso, 2013; Stephenson et al. 2016). In addition, the proximity of the workplace is also valuable for graduate business students of schools located in Northeast Ohio (Webb, 1993). Finally, Mbawuni and Nimako (2015) found that students of masters' programs of a university in Ghana when considering the benefits of the HEI location also considering the geographical proximity to family, to students with cultural descent and to a place with good atmospheric and economic conditions, providing good employment prospects. Therefore, one would expect that the location of the institution influences the students' choice of FEP.UP for a second-cycle institution.

Quality and program structure

Students attribute a high value to the quality of the institution, programs and teaching since they want a well spent education investment (e.g. Soutar & Turner, 2002; Tavares et

al., 2008; Blackburn, 2011). The class size (Blackburn, 2011; Joseph et al., 2012; Joseph et al., 2014; Stephenson et al., 2016), the possibility of choosing subjects to tailor their degree (Kallio, 1995; Blackburn, 2011), a well-structured and organized program with an equilibrium between theory and practice, a clear clarification of program requirements (Hesketh & Knight, 1999; Blackburn, 2011), interested supervisors who provide advantageous feedback (Hesketh & Knight, 1999) and the flexibility of professors to the requirements of students that work (Blackburn, 2011) or have young children (Hesketh & Knight, 1999), such as weekend deliveries, are also attractive factors. Particularities related with the completion time of the program (Webb, 1993; Blackburn, 2011), evening classes, part-time program (Webb, 1993) and the availability of a specific program (Webb, 1993; Maringe, 2006; Stephenson et al., 2016) are also aspects that influence the decision of a graduate institution. Therefore, one would expect that factors related to the quality and program structure influence the students' choice of FEP.UP for a second-cycle institution.

Outcomes and benefits

Students are aware that money and time spent in HE will be worthwhile and provide a competitive advantage. Within the expected results and benefits for students are naturally the employment prospects (e.g. Briggs, 2006; Blackburn, 2011; Soutar & Turner, 2002; Munisamy et al., 2014; Tavares, 2017). However, given that some graduate students are already working when they choose a second cycle HEI, new concerns emerge. These students often prefer networking possibilities (Blackburn, 2011), high marketability (Webb, 1993) and career opportunities, such as promotion prospects, job security, higher positions and salaries (Blackburn, 2011). Therefore, these aspects are also expected to influence the students' choice of FEP.UP for a second-cycle institution.

Environment

Students also value the social climate within the institution (Kallio, 1995; Hesketh & Knight, 1999; Imenda et al., 2004; Joseph et al., 2012; Stephenson et al., 2016), including a good relationship with the colleagues (Hesketh & Knight, 1999), a supportive, kind and accessible staff capable of solving students' problems effectively (Hesketh & Knight, 1999; Imenda et al., 2004; Mbawuni & Nimako, 2015) and positive interactions with the faculty (Webb, 1993; Joseph et al., 2012). As Hesketh and Knight (1999) noted, one of the main findings in their research with UK and USA graduate students refers to the crucial role played

by the HEI environment and happiness in the choice of the institution. Graduates are attracted to an institution that treats them well, serve their needs and where they feel happy. Therefore, one would expect that factors associated with the internal environment of the institution influence the students' choice of FEP.UP for a second-cycle institution.

Other factors

College facilities and acceptance rate are also other institution characteristics which are significant for students according to the literature (Table 1). Additionally, the type of the institution (public or private) is weighty for the HEI choice (Tavares & Cardoso, 2013; Joseph et al, 2014; Stephenson et al., 2016). According to the views of Porto undergraduate students, there is a hierarchy between public and private colleges and between university and polytechnic (Tavares & Cardoso, 2013). Most students prefer a public university since they hold the conviction it has a higher social prestige than polytechnics and private colleges. Associated with this idea, there is also the stigma that students in private institutions only get a degree because they pay for that and that students who leave a public institution have a higher chance in a job contest (Tavares & Cardoso, 2013). These concerns are shared by German graduate students who also prefer public institutions (Joseph et al., 2014). Therefore, one would expect that college facilities, acceptance rate and the institution type influence the students' choice of FEP.UP for a second-cycle institution.

2.3. Students' loyalty

As previously mentioned, Bologna introduced significant changes in HE so retaining students has become as important as attracting them (Lin & Tsai, 2008; Nettet & Helgesen, 2009). In the case of graduate students, the concept of *loyal customer*, i.e., the one who repeats the purchase struggling with the pressures to change to a different brand, assumes a central role (Nguyen & LeBlanc, 2001a). Thus, in HE, one of the dimensions of customer loyalty can be translated into student's intention to continue in the same institution for the second cycle (Nguyen & LeBlanc, 2001a; Helgesen & Nettet, 2007a; Helgesen & Nettet, 2007b; Helgesen, 2008; Nettet & Helgesen, 2009).

Students' loyalty has become a very relevant issue for the management of HEIs (Marzo Navarro et al., 2005; Nettet & Helgesen, 2009) since there are several advantages from creating a strong and stable relationship with their students. In fact, by maintaining the existing relationships with students, HEIs can benefit from a more stable financial situation

(Carvalho & de Oliveira Mota, 2010) related with the tuition fees and cost savings, since it is costlier to attract new entrants than to retain the students who are already in the institution (Hennig-Thurau et al., 2001; Rojas-Méndez et al., 2009). In addition to the financial advantage, student's loyalty can contribute to the quality of teaching, since a more motivated and committed student has a greater involvement and participation in classes, which promotes a climate of constant learning (Hennig-Thurau et al., 2001; Helgesen & Nettet, 2007a). Committed students can also positively influence the research activities, bringing ambitious topics to the realization of their dissertations or participating in research projects (Hennig-Thurau et al., 2001). The advantages of loyal students are not limited to the time they are in the institution (Hennig-Thurau et al., 2001; Helgesen & Nettet, 2007a) since after graduation they can continue supporting the institution (Carvalho and de Oliveira Mota, 2010). This support activities include donations (Hennig-Thurau et al., 2001; Rojas-Méndez et al., 2009), cooperation with job proposals for new graduates (Hennig-Thurau et al., 2001; Alves & Raposo, 2007; Rojas-Méndez et al., 2009) or promotion by word-of-mouth, influencing prospective students (Hennig-Thurau et al., 2001; Alves & Raposo, 2007; Helgesen & Nettet, 2007a; Rojas-Méndez et al., 2009).

As aforementioned and to the best of our knowledge, earlier research does not address the factors that lead students to stay in the same institution for a master's program, but the factors that drive student loyalty, assuming that if students are loyal they could stay in the same institution for another program (Nguyen & LeBlanc, 2001a; Helgesen & Nettet, 2007a; Helgesen & Nettet, 2007b; Helgesen, 2008; Nettet & Helgesen, 2009). Given the importance of managing student loyalty for the success of a HEI in the medium and long-term (Hennig-Thurau et al., 2001; Helgesen & Nettet, 2007a; Carvalho & de Oliveira Mota, 2010), the present literature review identifies the factors on which loyalty is based. Table 2 presents a summary of these factors.

Loyalty Factors	Authors
Image	Nguyen & LeBlanc (2001a), Alves & Raposo (2007), Helgesen & Nettet (2007b), Alves & Raposo (2010)
Reputation	Nguyen & LeBlanc (2001a), Helgesen & Nettet (2007a), Helgesen (2008), Nettet & Helgesen (2009)
Student satisfaction	Marzo Navarro et al. (2005), Alves & Raposo (2007), Helgesen & Nettet (2007a), Helgesen & Nettet (2007b), Helgesen (2008), Nettet & Helgesen (2009), Brown & Mazzarol (2009), Osayawe Ehigie & Taylor (2009), Bowden (2011), Thomas (2011), Vianden & Barlow (2014)

Students' commitment	Hennig-Thurau et al. (2001), Rojas-Méndez et al. (2009), Bowden (2011), Mbawuni & Nimako (2015)
Student trust	Hennig-Thurau et al. (2001), Carvalho & de Oliveira Mota (2010)
Perceived value	Brown & Mazzarol (2009), Carvalho & de Oliveira Mota (2010)
Perceived quality of education	Hennig-Thurau et al. (2001); Lin & Tsai (2008), Vianden & Barlow (2014)
Perceived signal of retention	Lin & Tsai (2008)
Perceived service performance	Osayawe Ehigie & Taylor (2009)
Customer expectation	Osayawe Ehigie & Taylor (2009)
Quality of academic life	Pedro et al. (2016)
Frequency of student engagement	Vianden & Barlow (2014)
Institutional fit	Vianden & Barlow (2014)
Initial impressions	Vianden & Barlow (2014)
Perceived skill development	Vianden & Barlow (2014)

Table 2: Factors that influence loyalty

Source: Author's own elaboration

Nguyen and LeBlanc (2001a) measured customer loyalty through customer's retention intention and found that the institutional image and reputation have a strong impact in the retention intention of business students. While the institutional image refers to the global view built on the public mind, institutional reputation is the portrait of the organization created by its past actions (Nguyen & LeBlanc, 2001a). The influence of the HEI's image and reputation on student's loyalty were observed in several studies in Norway (Helgesen & Nettet, 2007a; Helgesen, 2008; Nettet & Helgesen, 2009).

Satisfaction is also an important loyalty factor not only in Norway (Helgesen & Nettet, 2007a; Helgesen & Nettet, 2007b; Helgesen, 2008; Nettet & Helgesen, 2009) but also in USA (Osayawe Ehigie & Taylor, 2009; Vianden & Barlow, 2014), Australia (Brown & Mazzarol, 2009; Bowden, 2011), India (Thomas, 2011) and Spain (Marzo Navarro et al., 2005). In Portugal, Alves and Raposo (2007) highlighted that student satisfaction has a direct impact on loyalty because when students are satisfied with the service provided by a HEI, they are loyal to the institution as well. Alves and Raposo (2007, 2010) concluded that university image influences student's loyalty in Portugal.

Hennig-Thurau et al. (2001) included the students' emotional commitment and the perceived quality of education service as loyalty drivers of German graduates in different programs, including business. They found that trust on the education program had an influence on student's loyalty, while Carvalho & de Oliveira Mota (2010) found that trust in the institution personnel and management played a major role on Brazilian students' loyalty.

The results reported by Rojas-Méndez et al. (2009) differ from some earlier studies in certain aspects. The students' satisfaction has only an indirect influence on loyalty, contrary to what was found in a considerable number of studies on this field. Also, trust has no direct effect on loyalty, which differs from the results of Hennig-Thurau et al. (2001) and Carvalho & de Oliveira Mota (2010). Nevertheless, Rojas-Méndez et al. (2009) found that commitment was the main predictor of students' loyalty, a factor that was also reported by Hennig-Thurau et al. (2001) and Bowden (2011). Equally, Mbawuni and Nimako (2015), in Ghana, noted that students' attachment to the university influenced their decision, making them want to remain.

Similar to Hennig-Thurau et al. (2001), the perceived quality of teaching in Taiwan (Lin & Tsai, 2008) and USA (Vianden & Barlow, 2014) directly influenced students' loyalty. This factor also played an indirect role in loyalty in several other studies (Helgesen & Nettet, 2007a; Helgesen, 2008; Nettet & Helgesen, 2009; Thomas, 2011).

The perceived value of the institution, i.e. the students' perception of the benefits minus the costs of maintaining a continuing relationship with the HEI, also positively affects loyalty (Brown & Mazzarol, 2009; Carvalho & de Oliveira Mota, 2010). In this case, students will recommend the institution and will likely return to further studies if they believe that the price, time and effort they spend will generate results given that the institution boosts their academic and professional development.

Other factors such as the perceived signal of retention (Lin & Tsai, 2008), the perceived service performance, the customer expectation (Osayawe Ehigie & Taylor, 2009), the quality of academic life (Pedro et al., 2016), the frequency of student engagement, the institutional fit, the perceived skill development and initial impressions (Vianden & Barlow, 2014) also influence students' loyalty. Bowden (2011) also noted that students' loyalty and the relationships in a HEI are mainly driven by attitudinal factors, i.e., psychological and emotional bonds as well as the level of students' satisfaction.

This research delves further into this matter and examines if, in fact, the attitudinal factors influence students' loyalty and their loyalty influences their intention to continue in the same institution for the second cycle.

2.4. Theoretical model and hypotheses

The present research has three main research objectives. The first objective is to identify which factors influence students' choice of a second cycle HEI, in particular, the choice of FEP.UP. The second objective is to identify which attitudinal factors influence students' loyalty to FEP.UP and the third objective is to determine if loyalty influences student's retention. Specifically, this research addresses the following research questions (RQ):

- 1) Which factors influence FEP.UP students' choice of the same HEI for a second cycle program?
- 2) Which factors influenced the decision to choose FEP.UP for a second cycle program among the students who did not graduate at FEP.UP?
- 3) Do these factors vary between these two groups of students?
- 4) Which attitudinal factors influence FEP.UP students' loyalty?
- 5) Does FEP.UP students' loyalty influence student's retention?

Given these research questions, two surveys were conducted. The first survey, which targeted FEP.UP undergraduate students, aims to identify the factors that influence their intention to continue in the same institution for the second cycle and identify the determinants of their loyalty to the HEI. The second survey, which targeted actual master students, aims to identify which factors have influenced their decision to enrol in second-cycle at FEP.UP and potentially distinguish non-FEP.UP from FEP.UP graduates.

2.4.1 Factors influencing the choice of a second cycle HEI: Implications of the literature

According to the literature, the choice of a HEI is a complex decision which is influenced by multiple aspects. While there is no direct and unequivocal evidence that the same issues apply to the selection of a second cycle HEI, it is reasonable to presume that most of the factors known to influence high-school students also apply to graduates who continue studying. Therefore, the factors listed in Table 1 were included in Survey 1 and Survey 2 to identify (1) which factors influence FEP.UP students' intention to continue in the same institution for a second cycle program; and (2) which factors influenced the decision to

choose FEP.UP among the students who were attending a master course at the institution. In Survey 2, the distinction between non-FEP.UP and FEP.UP graduates will assist in determining potential decision-making differences between these two groups.

2.4.2 Factors influencing students' loyalty to a HEI: Implications of the literature

As previously mentioned, attitudinal factors have a strong bearing on students' loyalty which supports the formulation of the hypothesis tested in this research.

Hypotheses 1 to 4

Students' satisfaction is one of the most mentioned factors that influence students' loyalty to a HEI (e.g. Marzo Navarro et al., 2005; Alves & Raposo, 2007; Helgesen & Nettet, 2007a; Nettet Helgesen, 2009; Vianden & Barlow, 2014). Also, students' trust, commitment and perceived value of the institution have a positive and enduring influence over loyalty (Hennig-Thurau et al., 2001; Brown & Mazzarol, 2009; Rojas-Méndez et al., 2009; Carvalho & de Oliveira Mota, 2010; Bowden, 2011; Mbawuni & Nimako, 2015). Therefore, one would expect that:

H1: Undergraduates' general satisfaction with FEP.UP is positively associated to students' loyalty.

H2: Undergraduates' trust in FEP.UP is positively associated to students' loyalty.

H3: Undergraduates' commitment to FEP.UP is positively associated to students' loyalty.

H4: Undergraduates' perceived value of FEP.UP is positively associated to students' loyalty.

Hypothesis 5

Earlier research assumes that students' loyalty leads them to continue in the same institution for future programs (Nguyen & LeBlanc, 2001a; Helgesen & Nettet, 2007a; Helgesen & Nettet, 2007b; Helgesen, 2008; Nettet & Helgesen, 2009). Therefore, one would expect that:

H5: Undergraduates' loyalty to FEP.UP is positively associated to the intention to continue in the institution for the second cycle.

2.4.3 Theoretical model and hypotheses

The following diagram shows the theoretical model and summarises the research hypotheses.

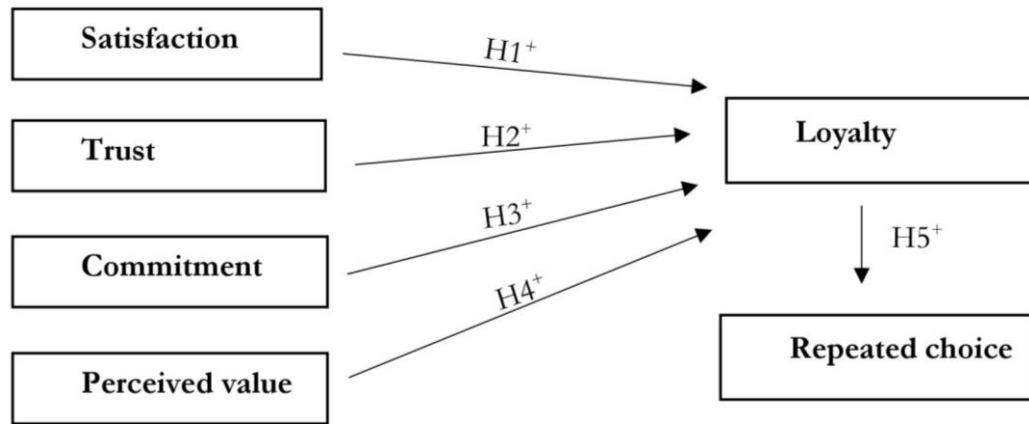


Figure 1: Theoretical model

H1: Undergraduates' general satisfaction with FEP.UP is positively associated to students' loyalty.

H2: Undergraduates' trust in FEP.UP is positively associated to students' loyalty.

H3: Undergraduates' commitment to FEP.UP is positively associated to students' loyalty.

H4: Undergraduates' perceived value of FEP.UP is positively associated to students' loyalty.

H5: Undergraduates' loyalty to FEP.UP is positively associated to the intention to continue in the institution for the second cycle.

3. Methodology

3.1. Methodological approach and procedures of data collection

To address the three research objectives the present study uses a quantitative method (Cooper & Schindler, 2008). Data was collected through two web-based surveys, respectively target to FEP.UP's last year bachelor students and FEP.UP's current master students (first and second academic year).

The collection of data through surveys have several advantages, such as ensuring anonymity and further willingness to provide a true opinion, thereby reducing response biases. Furthermore, its ease of administration, the possibility of reaching a large number of people and the low costs were also advantages (Gosling et al., 2004; Malhotra, 2004) pondered in this research.

The surveys were conducted in Portuguese and made available online through a google survey link. The data was collected between the 10th of April of 2018 and 20th of May of 2018 and the respondents were approached and invited to participate via social media (Facebook) and email. Both questionnaires had a declaration of anonymity to increase respondents' participation and decrease response biases.

3.2. Instruments development and measures

Chapman (1981) model of student HEI choice, complemented by the factors emanating from the literature review (and summarized in Table 1) were used to build the two surveys used in this research. Both surveys were initially pilot-tested with a similar sample of ten students each, to avoid mistakes and misunderstandings (Cooper & Schindler, 2008). Participants' views on the questions and language clarity were requested and considered, following which some minor adjustments were made and included in the final versions.

Survey 1 targeted FEP.UP's bachelor students, attending the 3rd year of the course in the school year of 2017/18 (see Annex I for more details). Initially, all students were asked to answer some questions that characterized their current situation, such as the program they attended (economics or management) and their current academic performance (grade point average or GPA). Then, if to the question "Do you want to continue studying and enrolling in a master's degree?" the students answered "No", then they were directed to a section that asked to select the main reasons for not continuing studies and a few demographic data. In

these cases, the survey took about 1 minute to reply. If students answered “Yes” to the question under discussion, they were then asked: “Did you apply or are you planning to apply for a master’s degree at FEP.UP?”, for which they could answer “yes” or “no”. In case of students replied “yes” they were directed to a section where they were presented with a list of 37 influencing factors derived from the literature. They were asked to rate the level of importance of each item in the decision to choose FEP.UP for the second cycle, and replies were provided on a seven-point Likert-scale (1=No importance and 7=Extremely important). In the following section, these students were asked to rate their level of agreement with a few items about satisfaction, trust, commitment, loyalty and intention to choose FEP.UP. Finally, some demographic data was requested.

To measure the intention to continue in FEP.UP and the attitudinal factors influencing students’ loyalty previously tested measures were selected for the dependent and independent variables. Table 3 presents a summary of the selected variables.

Measure	Adapted from (<i>n</i> items; Alpha Cronbach)	<i>n</i> Items in this study	Cronbach Alpha obtained
Intention to choose	Carmeli & Gefen (2005): 3 items, 0.90 Nguyen & Leblanc (2001b): 1 item, 0.86	4	0.90
Loyalty	Nesset & Helgesen (2009): 3 items, 0.79	3	0.78
Satisfaction	Bonache (2005): 5 items, 0.85	5	0.94
Trust	Hennig-Thurau et al. (2001): 4 items, 0.85	4	0.92
Commitment	Rojas-Méndez et al. (2009): 3 items, 0.85	3	0.90
Perceived Value	Carvalho & de Oliveira Mota (2010): 4 items, 0.81	4	0.82

Table 3: Main research variables for the test of hypothesis

(1) *Intention to choose FEP.UP*: it was measured using a 4-item scale adapted from Carmeli and Gefen (2005) and from Nguyen and Leblanc (2001b). Three items were from Carmeli and Gefen (2005) and one item was from Nguyen and Leblanc (2001b). They were translated and adapted and the answers provided in a five-point Likert-scale (1=totally disagree and 5=totally agree). Scale items include: “Penso muitas vezes em inscrever-me num mestrado na FEP.UP”, “Estou ativamente à procura de um mestrado na FEP.UP”, “Assim que for possível vou ingressar num mestrado na FEP.UP” and “Um mestrado na FEP.UP irá ser a minha primeira opção”. The internal consistency of this scale (Cronbach alfa) is 0.90, which is considered excellent (Nunnally, 1978).

(2) *Loyalty*: it was measured using a 3-item scale adapted from Nettet & Helgesen (2009). Through a seven-point Likert-scale (1=not at all likely and 7=extremely likely) respondents were asked to rate the degree of agreement with the statements. The scale items are: “Recomendarei a FEP.UP aos meus colegas/conhecidos para fazerem um curso superior”, “Escolheria a FEP.UP se voltasse ao início do meu percurso acadêmico” and “Continuarei na FEP.UP para mestrado ou doutoramento”. The internal consistency of this scale (Cronbach alfa) was 0.79, which is considered good (Nunnally, 1978).

(3) *Satisfaction*: it was measured using a 5-item scale adapted from Bonache (2005). Through a five-point Likert-scale (1=totally disagree and 5=totally agree) respondents were asked to rate the degree of agreement with the statements. Scale items include: “Estou satisfeito com a FEP.UP”, “Voltaria a inscrever-me na FEP.UP novamente”, “Recomendo a FEP.UP a um amigo”, “A minha experiência com a FEP.UP está de acordo com as minhas expectativas” and “A minha satisfação com a FEP.UP é excelente”. The internal consistency of this scale (Cronbach alfa) was 0.85, which is very good (Nunnally, 1978).

(4) *Trust*: it was measured using a 4-item scale adapted from Hennig-Thurau et al. (2001). Through a five-point Likert-scale (1=totally disagree and 5=totally agree) respondents were asked to rate the degree of agreement with the statements. Scale items include: “Integridade é uma palavra que eu usaria para descrever o staff da FEP.UP”, “Eu tenho a certeza que o staff da FEP.UP age de acordo com os meus interesses”, “Eu confio plenamente no staff da FEP.UP” and “O staff da FEP.UP cumpriu sempre as promessas que me fez”. The internal consistency of this scale (Cronbach alfa) was 0.85, which is very good (Nunnally, 1978).

(5) *Commitment*: it was measured using a 3-item scale adapted from Rojas-Méndez et al. (2009). Through a five-point Likert-scale (1=totally disagree and 5=totally agree) respondents were asked to rate the degree of agreement with the statements. Scale items include: “Eu sinto-me muito ligado à FEP.UP”, “Eu estou orgulhoso de poder estudar na FEP.UP” and “Eu estou muito feliz por pertencer à FEP.UP”. The internal consistency of this scale (Cronbach alfa) was 0.85, which is very good (Nunnally, 1978).

(6) *Perceived value*: it was measured using a 4-item scale adapted from Carvalho and de Oliveira Mota (2010). Through a five-point Likert-scale (1=totally disagree and 5=totally agree) respondents were asked to rate the degree of agreement with the statements. Sample items include: “Para o valor da propina da FEP.UP eu acho que esta faculdade oferece um serviço muito bom”, “Para o tempo que eu passo a estudar na FEP.UP eu acho que estudar nesta faculdade é muito agradável”, “Para o esforço envolvido nos meus estudos na FEP.UP

eu acho que estudar nesta faculdade vale muito a pena” and “A minha experiência geral com a FEP.UP é muito boa”. The internal consistency of this scale (Cronbach alfa) was 0.81, which is very good (Nunnally, 1978).

Survey 2 targeted current FEP.UP’s master students (see Annex II for more details). After agreeing in participate in the survey, respondents were questioned about their current situation, as for instance if they took the bachelor’s degree at FEP.UP or not. Similar to survey 1, master students were directed to a section listing the same 37 factors influencing the choice of a HEI and requested to rate the level of importance each one had on their decision to choose FEP.UP for the second cycle. The same seven-point Likert-scale (1=No important and 7=Extremely important) was used. Finally, some demographic data was also requested aiming to characterize the sample.

3.3. Sample

The overall sample is composed of 541 FEP.UP students, being 252 from the Bachelor of Economics and Management (3rd year) and 289 master’s students (from several courses). Respondents were mostly female (63.2%), 46.8% were from Porto¹ and 40.6% of students have a family income equal to or higher than 2000€ (see Annex III for more details). 35.3% of the students reported that the father has HE versus 28.8% for the mother, which reflect a lower level of education for women. However, if we observe the results of survey 1 and 2 separately, we can verify that in the case of master’s students, the percentage of mothers with a HE degree (31.1%) is higher than of the fathers (28.7%). The total sample has an average age of 23.37 years old (M=23.37, SD=5.15), lower for bachelors (M= 21.21, SD=1.61) and higher for master’s students (M=25.25, SD=6.31).

Of the 538 FEP.UP’s bachelor students enrolled in the 3rd year of the course, 252 answered the survey, which represents a response rate of 46.8%, considered adequate and higher than equivalent studies (Gonçalves, 2010). 64.3% of the respondents attended the bachelor’s in economics (see Annex IV for more details about bachelor student’s characteristics) and the bachelor’s GPA of the students of survey 1 was, on average, 13.56 values (M=13.56, SD=1.49). In answering survey 1, 128 bachelor students said they wanted to continue studying at FEP.UP (50.8%). Of the remaining students, 25.0% referred they plan to continue in another institution and 24.2% reported they do not plan to continue

¹ In the present study we consider that the students were from Porto if they belong to: Ermesinde, Gaia, Gondomar, Maia, Matosinhos and Porto.

studying. FEP.UP was the first option for 86.7% of the students who chose this institution for the second cycle. The desire to start a professional career (52.5%) and personal choice (37.7%) were the main reasons indicated by bachelor students for not continuing studies. For students who have chosen to apply for a master's degree in another college, this decision was essentially for students' option (77.8%) and the most chosen HEI's vary between the Universidade Nova de Lisboa (33.3%), foreign universities (19%) and the Universidade Católica do Porto (17.5%).

Regarding master's respondents, from a population of 1.528 students, 289 fully replied, which corresponds to a response rate of 18.9%. All master programs are represented with at least six participants (see Annex V for more details about master student's characteristics). Of the respondents who answered survey 2, 137 (47.4%) graduated at FEP.UP, while 152 (52.6%) graduated in other institutions. Universidade do Minho, Universidade do Porto, foreign universities and polytechnics were the graduation universities of 63.3% of the 152 Portuguese respondents who attended the master's degrees but did not graduate at FEP.UP. For 94.1% of the master's students, FEP.UP was the first option when deciding the HEI for the second cycle and, at the time of the applications, all respondents had, on average, at least one year of professional experience (except for students of the master's in Economics, Management and Finance). Finally, the data of the survey 2 also showed that the master's students GPA was, on average, 15.29 values ($M=15.29$, $SD=1.53$) which is higher than the bachelor's students GPA.

3.4. Data analysis

To address the first research objective and identify which factors influence students' choice of a second cycle HEI, in particular, the choice of FEP.UP, the answers of survey 1 and survey 2 were included and compared (Table 4). However, the replies of bachelor's students who did not want to continue studying at FEP.UP and who had no intention to study were excluded from the analysis because they would not provide the answer to this specific research aim.

Sample		N
Bachelor Students	Who will continue study at FEP.UP	128
Master Students	Graduated at FEP.UP	137
	Graduated in another institution	152
Total		417

Table 4: Sample for the first research objective

To address the second and third research objectives, i.e., identify which attitudinal factors influence students' loyalty to FEP.UP and determine if loyalty influences student's retention, only the replies of the 128 bachelor students who intend to repeat the choice were considered. In this case, we excluded from the analysis the students that would not allow us to answer this specific research aim, i.e., students who did not want to continue studying and the students who wanted to study in another HEI because none of these respondents had the intention to choose FEP.UP and thus would not respond to the items that corresponded to the variable of the future intention of choice. We also exclude all masters students because these students had already decided to choose FEP.UP for the second cycle since they already attended the master's degree. Therefore, these students did not respond to the items that allowed to assess their future intention to choose FEP.UP for the second cycle once that choice was already made. For this reason, we only used for the analysis the last year bachelor' students who had at that time intention to continue at FEP.UP.

All statistics were performed using the Statistical Package for the Social Sciences (SPSS) to carry out a series of statistical analysis as further detailed: descriptives and factorial analyses, t-tests, and finally regression analysis to test the hypothesis.

4. Results

The present research was undertaken to identify which factors influence FEP.UP students' choice for the second cycle among the bachelor's students who are about to graduate at FEP.UP and intend to continue at the institution and the current master's students who have graduated at the institution and chose to stay at FEP.UP (for simplicity we will consider these students as the students who have made a **repeated choice**). It is also in our interest to identify the factors that influenced current master students who did not graduate at FEP.UP to choose this college (**new choice**) and examine if these factors vary between the two groups of students. Moreover, this study was conducted to identify which attitudinal factors influence students' loyalty to FEP.UP and if loyalty influences student's retention. For clarity, results are therefore presented in different sections addressing the research questions.

4.1. Which factors influence FEP.UP students' choice?

Table 5 presents the means and standard deviations obtained for each of the 37 choice items. The classification was on a seven-point Likert-scale from (1) *No importance* to (7) *Extremely important*.

For those respondents who made a repeated choice the most important item in the decision was FEP.UP employability prospects (M=5.91, SD=1.25), showing a mean response higher than 5 (i.e. moderate to high importance). Table 5 shows that top five criteria are also constituted by FEP.UP reputation (M=5.81, SD=1.20), Costs (M=5.67, SD=1.51), career prospects (M=5.54, SD=1.50) and availability of the desired programme (M=5.49, SD=1.29).

For those students who have graduated at another institution and decided to choose the FEP.UP for the second cycle (new choice), FEP.UP reputation was rated the most important item (M=6.18, SD=0.95), with a mean rating higher than 6 (i.e., high to extreme importance). In the top five criteria are also the availability of the desired programme (M=5.86, SD=1.24), FEP.UP employability prospects (M=5.79, SD=1.44), rankings (M=5.73, SD=1.29) and career prospects (M=5.68, SD=1.40), all with a mean response higher than 5 (i.e. moderate to high importance).

Repeated choice			New choice		
Descriptive Statistics	Mean	SD	Descriptive Statistics	Mean	SD
1 FEP.UP Employability prospects	5.91	1.25	1 FEP.UP Reputation	6.18	0.95
2 FEP.UP Reputation	5.81	1.20	2 Availability of the desired programme	5.86	1.24
3 Costs	5.67	1.51	3 FEP.UP Employability prospects	5.79	1.44
4 Career Prospects	5.54	1.50	4 Rankings	5.73	1.29
5 Availability of the desired programme	5.49	1.29	5 Career Prospects	5.68	1.40
6 Public institution	5.47	1.45	6 Public institution	5.61	1.59
7 FEP.UP exigency	5.44	1.38	7 FEP.UP Teaching Quality	5.60	1.26
8 FEP.UP Tuition fees	5.42	1.51	8 Social Prestige	5.55	1.36
9 FEP.UP Teaching Quality	5.41	1.29	9 FEP.UP Academic Programs Quality	5.50	1.15
10 Proximity to home	5.28	1.68	10 FEP.UP exigency	5.38	1.38
11 FEP.UP Academic Programs Quality	5.28	1.30	11 Practical utility of FEP.UP courses	5.13	1.54
12 Rankings	5.26	1.43	12 Costs	5.09	1.76
13 FEP.UP Location	5.24	1.66	13 FEP.UP Relationship with companies	4.98	1.83
14 Probability of admission at FEP.UP	5.15	1.38	14 FEP.UP Tuition fees	4.84	1.69
15 Social Prestige	5.13	1.57	15 Probability of admission at FEP.UP	4.84	1.64
16 FEP.UP Relationship with companies	4.89	1.73	16 FEP.UP Location	4.66	1.72
17 Practical utility of FEP.UP courses	4.84	1.55	17 Information sources	4.61	1.71
18 Courses flexibility	4.82	1.66	18 Possibility of combining study with a job	4.59	2.24
19 FEP.UP Current or ex-students' opinions	4.53	1.71	19 Courses flexibility	4.53	1.71
20 FEP.UP Admission criteria	4.42	1.60	20 Night classes	4.52	2.16
21 Reliable supervisors	4.23	1.79	21 FEP.UP Current or ex-students' opinions	4.45	1.80
22 FEP.UP partnerships with other	4.22	1.94	22 FEP.UP Admission criteria	4.28	1.49
23 Availability of english programs	4.19	1.98	23 Reliable supervisors	4.20	1.90
24 Professors' opinions	4.12	1.72	24 Proximity to home	4.20	2.09
25 Quality of academic and social life	4.10	1.92	25 Professors' opinions	4.05	1.70
26 Proximity between students	4.07	1.75	26 FEP.UP partnerships with other	3.89	1.97
27 Family opinions	4.06	1.82	27 Family opinions	3.76	1.97
28 Possibility of combining study with a job	3.84	2.28	28 Friends' opinions	3.74	1.68
29 Information sources	3.79	1.76	29 Availability of english programs	3.55	2.01
30 Night classes	3.60	2.22	30 Work considerations	3.47	1.98
31 Proximity between students and professors	3.53	1.75	31 FEP.UP Administrative support	3.27	1.65
32 FEP.UP Administrative support	3.49	1.75	32 Proximity between students and professors	3.25	1.81
33 Availability of financial aid	3.43	2.14	33 FEP.UP Facilities	3.14	1.66
34 Friends' opinions	3.39	1.74	34 Spouse considerations	3.03	2.03
35 Work considerations	3.38	2.03	35 Proximity between students	3.02	1.81
36 FEP.UP Facilities	2.79	1.66	36 Availability of financial aid	2.93	1.84
37 Spouse considerations	2.68	1.90	37 Quality of academic and social life	2.70	1.66
<i>n</i> = 265			<i>n</i> = 152		

Table 5: The order in which group of students rated the importance of 37 items impacting the decision to choose FEP.UP

A factorial analysis of the 37 choice items was conducted to identify whether a more parsimonious group of factors could be extracted, thus facilitating the comparison. According to Pestana and Gageiro (2003), the factorial analysis is useful because it seeks to explain the correlation between observable variables, simplifying the data by reducing the number of variables necessary to describe them.

A Kaiser-Meyer-Olkin (KMO) coefficient of 0.891 and Bartlett's test of Sphericity ($p = 0.000$) indicated that it is possible to proceed with the factorial analysis since these two statistical procedures allow to assess the quality of the correlations between the variables

(Pestana & Gageiro, 2003). A Principal Component Analysis (PCA) with Direct Oblimin rotation was used as the most suitable way for the extraction of factors. This analysis provided a 9-factor solution which explains 63.523% of the total variance. Five items were eliminated because they were not related to any factor (i.e. reliable supervisors, professors' opinions, information sources, proximity between students and FEP.UP current or ex-students' opinions). Table 6 shows the nine-factor model along with the items and loadings for each factor.

The first component (FEP.UP programs and environment) comprises items related to the specificities of the FEP.UP offer and the institution's climate. The second component (FEP.UP reputation and quality) focuses on issues related to FEP.UP recognition and its academic quality. The third component (FEP.UP work-study interface) concerns the students' desire to reconcile their studies with a job. The fourth component (FEP.UP location) loads on location issues. The fifth component (social influence) relates to the opinions of significant others. The sixth component (FEP.UP admission) comprises items relating admission issues. The seventh component (FEP.UP costs) focuses on the costs that the enrolment at FEP.UP involves. The eighth component (FEP.UP employability) includes employability prospects and the fact that FEP.UP is a public HEI, a feature that can influence employability according to the literature. The ninth component (FEP.UP services) includes items related to FEP.UP beneficial services.

To identify the factors that influence the two groups of students to choose FEP.UP as their institution to hold a master's degree, nine scales were constructed from the items making up each factor. Descriptive statistics were calculated to represent the relevance that each respondent attributed to each factor. Cronbach's alpha coefficients were also computed for each scale to determine the internal reliability (Pestana and Gageiro, 2003).

Reliability results revealed that the factors of FEP.UP reputation and quality and FEP.UP services had coefficients of 0.849 and 0.811, respectively, representing a good internal consistency (Pestana and Gageiro, 2003). FEP.UP programs and environment, FEP.UP work-study interface and FEP.UP location had coefficients ranging from 0.726 to 0.792, indicating a reasonable internal consistency (Pestana and Gageiro, 2003). A weaker consistency but still admissible for the study was observed for social influence and FEP.UP costs, with coefficients of 0.679 and 0.691, respectively. Finally, the reliability coefficients of FEP.UP admission and FEP.UP employability were respectively 0.476 and 0.515, which is low so the results for these variables are to be interpreted cautiously.

<i>Component</i>	Pattern Matrix^a								
	1	2	3	4	5	6	7	8	9
Cronbach's alpha	0.726	0.849	0.792	0.756	0.679	0.476	0.691	0.515	0.811
<i>Items</i>									
Proximity between students and professors	0.553								
Practical utility of FEP.UP courses	0.505								
Courses flexibility	0.450								
FEP.UP Facilities	0.424								
FEP.UP Reputation		-0.816							
FEP.UP Teaching Quality		-0.735							
FEP.UP Academic Programs Quality		-0.709							
Rankings		-0.631							
FEP.UP exigency		-0.472							
Social Prestige		-0.435							
Career prospects		-0.428							
Night classes			-0.930						
Possibility of combining study with a job			-0.898						
Work considerations			-0.510						
Proximity to home				0.837					
FEP.UP Location				0.802					
Friends' opinions					-0.712				
Family opinions					-0.660				
Spouse considerations					-0.648				
Probability of admission at FEP.UP						-0.700			
FEP.UP Admission criteria						-0.529			
Availability of the desired programme						-0.430			
FEP.UP Tuition fees							0.860		
Costs							0.785		
Public institution								0.808	
FEP.UP Employability prospects								0.528	
FEP.UP partnerships with other institutions									0.706
FEP.UP Relationship with companies									0.686
Availability of financial aid									0.679
Availability of english programs									0.652
FEP.UP Administrative support									0.502
Quality of academic and social life									0.450

Notes: n= 417 Total variance explained= 63.523 Extraction Method: Principal Component Analysis. a. Rotation converged in 27 iterations. Rotation Method: Oblimin with Kaiser Normalization. 1-FEP.UP Programs and Environment; 2-FEP.UP Reputation and Quality; 3-FEP.UP Work-Study Interface; 4-FEP.UP Location; 5-Social Influence; 6-FEP.UP Admission; 7-FEP.UP Costs; 8-FEP.UP Employability; 9- FEP.UP Services

Table 6: Pattern matrix factor loadings

As shown in Table 7, FEP.UP employability was the most important factor for both students who made a repeated choice, as well as for non-FEP.UP graduates who are enrolled in a master in the institution for the first time. FEP.UP costs, reputation and quality, location, and admission, were also factors responsible for a repeated choice, showing means ratings higher than 5 (i.e. moderate to high importance).

Regarding the master students who are at FEP.UP for the first time, in addition to FEP.UP employability, reputation and quality was the other main selection factor with an average rate higher than 5 (i.e. moderate to high importance). Finally, it seems that social influence did not play a fundamental role in both groups of students since it is the least important factor.

Descriptive Statistics	Overall Sample		Repeated choice		New choice		<i>t Value</i>	<i>Sig Level</i>
	Mean	SD	Mean	SD	Mean	SD		
FEP.UP Programs and Environment	4.00	1.24	3.99	1.21	4.01	1.29	-0.170	0.865
FEP.UP Reputation and Quality	5.50	0.98	5.41	1.04	5.66	0.84	-2.528	0.012
FEP.UP Work-Study Interface	3.82	1.83	3.61	1.84	4.19	1.78	-3.170	0.002
FEP.UP Location	4.96	1.62	5.26	1.51	4.43	1.67	5.195	0.000
Social Influence	3.42	1.45	3.37	1.43	3.51	1.48	-0.933	0.351
FEP.UP Admission	5.01	1.01	5.02	1.00	4.99	1.04	0.326	0.745
FEP.UP Costs	5.33	1.41	5.54	1.32	4.96	1.49	3.977	0.000
FEP.UP Employability	5.69	1.16	5.69	1.09	5.70	1.29	-0.058	0.954
FEP.UP Services	3.87	1.37	4.05	1.37	3.55	1.31	3.650	0.000
		<i>n=417</i>		<i>n=265</i>		<i>n=152</i>		

Table 7: Components significantly differentiating students who made a repeated choice and students who made a new choice

4.2. Do the decision factors vary between FEP.UP and non-FEP.UP students?

Several t-tests were conducted and are presented in Table 7 comparing students who made a repeated choice (current FEP.UP undergraduates and masters who graduate at FEP.UP) and students who made a new choice (current master students who graduated elsewhere and are studying at FEP.UP for the first time).

Students who repeated the choice rated FEP.UP location, costs and services as significantly more important than students who chose FEP.UP for the second cycle for the first time. By comparison, students who made a new choice rated FEP.UP work-study interface and FEP.UP reputation and quality as significantly more important than students who already belonged to the institution. These findings reflect distinct selection criteria for

these two groups, despite a similar importance attributed to FEP.UP programs and environment, social influence, admission and employability.

4.3. Which attitudinal factors influence FEP.UP students' loyalty?

To determine which attitudinal factors influence students' loyalty, and therefore, test the hypotheses, several confirmatory factorial analyses were run to determine the adequacy of the measures used (see Annex VI for more details). Expectedly, the results confirmed the suitability of the selected measures (Pestana and Gageiro, 2003), which were used in the subsequent statistical analysis.

Table 8 summarizes the means, standard deviations, Cronbach alphas and inter-correlations (Pearson coefficient) for the main research variables.

Variable	M	SD	Correlations						
			1	2	3	4	5	6	
1. Intention	4.164	0.956	(0.904)						
2. Loyalty	5.578	1.370	,624**	(0.776)					
3. Satisfaction	3.730	1.021	,450**	,884**	(0.937)				
4. Trust	3.279	1.008	,298**	,566**	,651**	(0.923)			
5. Commitment	3.839	1.080	,270**	,726**	,796**	,565**	(0.902)		
6. Perceived Value	3.514	0.926	,363**	,774**	,824**	,676**	,771**	(0.828)	

Notes: $n = 128$; two tailed. Significant at: * $p < 0.05$, ** $p < 0.01$. Cronbach's alpha estimates are in parentheses, along the main diagonal.

Table 8: Summary statistics and zero-order correlations

As shown, all measures are positively intercorrelated. This suggests that when the attitudinal factors (satisfaction, trust, commitment and perceived value) are positively evaluated, the students' loyalty and intention to repeat the choice tend to be also positively evaluated.

To test the hypotheses and determine which attitudinal factors influence students' loyalty several regression analyses were performed. Results are shown in Table 9.

Predictors	Loyalty			
	Step 1	Step 2	Step 3	Step 4
Intercept	1.152***	1.172***	1.121***	1.034***
<i>Predictors</i>				
Satisfaction	0.884***	0.895***	0.847***	0.776***
Trust		-0.016	-0.021	-0.056
Commitment			0.064	0.019
Perceived Value				0.157
<i>Overall F</i>	452.076***	224.442***	149.733***	115.661***
<i>R²</i>	0.782	0.782	0.784	0.79
<i>Adjusted R²</i>	0.78	0.779	0.778	0.783
<i>Change in R²</i>	0.782	0.000	0.001	0.006

Notes: Significant at: * $p < .05$, ** $p < .01$, *** $p < .001$; standardized β coefficients are reported after Z-score transformation, $n = 128$

Table 9: Loyalty regression results

Table 9 shows the regression where the dependent variable is students' loyalty and the independent variables are the attitudinal factors (students' satisfaction, trust, commitment and perceived value). Results show that 78.3% of the variance in students' loyalty is explained by the model.

Hypothesis 1 stated that undergraduates' general satisfaction with FEP.UP is positively associated to students' loyalty. According to the regression outcome, this hypothesis is confirmed since the satisfaction coefficient is positive and statistically significant ($\beta = 0.884$, $p < 0.001$).

Hypothesis 2 to 4 stated that undergraduates' trust, commitment and perceived value of FEP.UP are positively associated to students' loyalty. However, the results from the regression analysis do not support these hypotheses since the coefficients of these variables are not statistically significant. As observed, only undergraduates' general satisfaction influences loyalty to the institution, and explain 78% of its variance.

4.4. Does FEP.UP students' loyalty influence student's retention?

To answer this research question and test hypothesis 5, which predicts that undergraduates' loyalty to FEP.UP is positively associated to the intention to continue in the institution for the second cycle, a separate regression analysis was performed. Table 10 presents the main results.

Predictors	Intention to choose
Intercept	1.735***
<i>Predictors</i>	
Loyalty	0.624***
<i>Overall F</i>	80.200***
R^2	0.389
<i>Adjusted R²</i>	0.384
<i>Change in R²</i>	0.389

Notes: Significant at: * $p < .05$, ** $p < .01$, *** $p < .001$;
standardized β coefficients are reported after Z-score
transformation, $n = 128$

Table 10: Regression results of students' intention to choose FEP.UP

As shown, 38.4% of the variance on the intention to choose FEP.UP is explained by the model and the loyalty coefficient is statistically significant ($\beta = 0.624$, $p < 0.001$), which supports hypothesis 5. Therefore, undergraduates' loyalty to FEP.UP is positively associated with their intention to remain and choose the institution for the master's degree.

5. Discussion

5.1. Factors influencing the choice of FEP.UP

While most of the previous research has attempted to identify the factors behind the choice of a first cycle HEI, this study seeks to identify which factors influence students' choice of a second cycle HEI, in particular, the choice of FEP.UP, among (1) FEP.UP undergraduates who intend to continue in the institution and the masters who continued at FEP.UP and (2) current FEP.UP master's students who have graduated elsewhere.

The nine factors resulting from the PCA reflect the multivariate nature of the choice process. Our study reveals that FEP.UP employability is the most influential factor both for students who graduate at FEP.UP and for those who graduated somewhere else. Although employability is a factor mentioned in the literature (e.g. Briggs, 2006; Blackburn, 2011; Soutar & Turner, 2002; Tavares, 2017), its influence is not as important as observed in this research, suggesting that FEP.UP employability is perceived by students as a great advantage of the institution since both groups value this characteristic in the first place.

FEP.UP costs, reputation and quality, location and admission are also factors of moderate to high importance for students who were already studying at FEP.UP and repeated the choice. Therefore, the findings of this study confirm previous research since costs (e.g. Imenda et al., 2004; Maringe, 2006; Joseph et al., 2014), reputation (e.g. Simões & Soares, 2010; Blackburn, 2011; Tavares & Cardoso, 2013), quality (e.g. Hesketh & Knight, 1999; Tavares et al., 2008; Saif et al., 2017) and location (e.g. Montgomery, 2002; Tavares & Ferreira, 2012; Stephenson et al., 2016) are the more relevant factors that students consider when choosing a HEI. Yet, these results do not support earlier findings (Montgomery, 2002; Montgomery & Powell, 2006), which claim that costs are irrelevant to business students' decision.

Following Briggs (2006), Joseph et al. (2014) and Mbawuni and Nimako (2015) who found that the admission criteria condition the choice of students, the findings of the present study confirm that FEP.UP admission is important to respondents, suggesting that students might remain at FEP.UP because they may think that admission to the master's program is easier since they are already students of the institution.

Regarding students who graduated elsewhere, beyond FEP.UP employability, reputation and quality have a moderate to high importance (higher than 5), which is in agreement with

the importance of reputation and quality reported in the literature (e.g. Simões & Soares, 2010; Blackburn, 2011; Tavares & Ferreira, 2012; Tavares & Cardoso, 2013).

Social influence is the least relevant factor in the decision of both students contrarily to what was proposed by earlier research that gives emphasis to the external influences in the decision-making (e.g. Kallio, 1995; Tavares et al., 2008; Tavares & Cardoso, 2013; Stephenson et al., 2016). Apparently, when students choose the institution for the second cycle they have more autonomy to decide for themselves, not being constrained by social influences.

5.2. Factors distinguishing FEP.UP from non-FEP.UP students

The combined analysis of the students perceptions, comparing those who already belonged to a HEI with those who choose it for first time has been neglected in the literature. This research set out to address this limitation by providing a quantitative comparison of the choice factors across these two groups. As outlined in Table 7, significant differences were apparent for five factors.

FEP.UP location was significantly more important to the decision of students who made a repeated choice than for students who made a new choice. Given that students already studying at FEP.UP might live near the institution, presumably, it is easier for them to stay close home. On the other hand, this result can mean that the attraction market for new students is potentially greater since respondents who did not graduate at FEP.UP did not value, to a large extent, the geographic location of the institution.

FEP.UP costs also appeared significantly more important to the decision of students who repeated the choice. The current findings indicate that the price or affordability of FEP.UP have a significant effect to retain FEP.UP students. On the other hand, external students do not seem to be as sensitive to financial variables during the college selection process. It seems that new entrants are more willing to pay to be able to study at FEP.UP than students who are already in the institution.

Students who repeated the choice also consider FEP.UP services more important than students who made a new choice. A possible explanation is that it is expected that students who already belong to the institution had more knowledge of the additional services that the college provides and value them more than students who are not yet aware of them and therefore do not incorporate their impact on the decision. This suggests that external

students are likely to be less informed of the additional services that FEP.UP delivers, which are then more important to retain than to attract students.

On the other hand, a significant difference in the level of importance of FEP.UP work-study interface was apparent for those students who made a new choice. A major concern to reconcile studies with work may be due to the fact that many of these students are already working when they decide to enrol in a master's degree at FEP.UP, while possibly the students who made a repeated choice do not have so many concerns about work-related issues. Hence, it is possible to notice that the masters of specialization have an important weight for attracting new working-students.

While reputation is an important factor for both students, it is significantly more important for the new entrants. As Blackburn (2011) mentioned, students are aware that it is not enough to have a degree but also a degree from a prestigious institution. Given that FEP.UP is among the best institutions in Western Europe in the business area (Eduniversal, 2018), naturally, reputation is more important for students who have not yet had the opportunity to study at the institution.

5.3. Students' attitudes, loyalty and retention

While earlier research has attempted to discover the factors on which loyalty is based, this study preferred to focus only on attitudinal factors, which play a key role in loyalty (Bowden, 2011). Therefore, this study identified which attitudinal factors influence student's loyalty to FEP.UP and whether loyalty influences student's retention.

The results from the test of hypotheses support the link between undergraduates' general satisfaction with FEP.UP and their loyalty to the institution (see Table 11 for a summary of the hypotheses results). These results are in line with the existing literature (e.g. Alves & Raposo, 2007; Nettet & Helgesen, 2009; Vianden & Barlow, 2014), which showed that satisfaction is a key element to student's loyalty.

Contrary to predictions, students' trust, commitment and perceived value of FEP.UP do not influence students' loyalty. These findings differ significantly from those reported by Hennig-Thurau et al. (2001), Brown & Mazzarol (2009), Rojas-Méndez et al. (2009), Carvalho & de Oliveira Mota (2010), Bowden (2011), and Mbawuni & Nimako (2015) who found that the influence of these factors is reflected in the formation of loyalty. Therefore, if FEP.UP wants to increase the loyalty of its undergraduate students should bet first on increasing their satisfaction.

Some researchers assume that a loyal student will continue in the same institution for another program (Nguyen & LeBlanc, 2001a; Helgesen & Nettet, 2007a; Helgesen & Nettet, 2007b; Helgesen, 2008; Nettet & Helgesen, 2009) but, to the best of our knowledge, this has not been empirically tested. This research provides evidence to suggest that the intention to repeat the choice of FEP.UP is influenced by students' loyalty. This finding is consistent with the arguments of several authors (Nguyen & LeBlanc, 2001a; Helgesen & Nettet, 2007a; Helgesen & Nettet, 2007b; Helgesen, 2008; Nettet & Helgesen, 2009) and indicates that managing FEP.UP student's loyalty has a key relevance for the long-term success of FEP.UP since the students' retention is largely affected by their loyalty.

Hypotheses		Results
H1	Undergraduates' general satisfaction with FEP.UP is positively associated to students' loyalty	Supported
H2	Undergraduates' trust in FEP.UP is positively associated to students' loyalty	Not supported
H3	Undergraduates' commitment to FEP.UP is positively associated to students' loyalty	Not supported
H4	Undergraduates' perceived value of FEP.UP is positively associated to students' loyalty	Not supported
H5	Undergraduates' loyalty to FEP.UP is positively associated to the intention to continue in the institution for the second cycle	Supported

Table 11: Overall results from the test of hypotheses

6. Conclusion

This dissertation intended to determine (1) which factors influence students' choice of a second cycle HEI, in particular, the choice of FEP.UP; (2) which attitudinal factors influence students' loyalty to FEP.UP and (3) whether loyalty influences student's retention.

The results of this study highlight FEP.UP employability as the number one factor for students who repeated the choice and who made a new choice when choosing a second cycle institution. FEP.UP costs were the second most important factor for students who graduated at FEP.UP while reputation and quality were more important for the new entrants. The influence of these factors are consistent with previous research, however, new findings in the literature have been found in exploring the differences in the importance of the choice factors between students who already belonged to a HEI in the first cycle and students who did not belong to the institution. In this study, FEP.UP location, costs and services are more important for respondents who repeated the choice while FEP.UP work-study interface and reputation and quality are more significant for students who did not graduate at FEP.UP. These findings suggest that different types of students appreciate different characteristics in FEP.UP and so the institution should tailor its strategy of attracting and retaining students to their preferences.

Based on this study, we now also have a better understanding of which factors affect the loyalty of FEP.UP undergraduate students who continued in the institution for a master's degree. Regression results indicated that students' loyalty is influenced by their satisfaction but not by their trust, commitment and perceived value. These surprising results suggest that a concern to satisfy students becomes a priority given its strong impact on their loyalty. On the other hand, there is a disregard for the human interactions in service relations in HEIs, demonstrating an important change in relation to the findings obtained in previous studies in this field. Finally, it was also confirmed the relevance that the management of student loyalty has for the success of the institution once it has been shown its positive association to students' retention.

Overall, the findings of this study offer a compelling understanding of the choice and needs of two different groups of students. In addition to the contributions to the literature, these study findings have practical implications for other HEIs, especially for FEP.UP, aiming to attract and retain the best students.

6.1. Limitations and future research

The results obtained in this research should be interpreted taking into account its limitations. First, this study is limited by collecting data from a single public higher education institution in Portugal. Thus, the findings are not generalisable outside the limits of the case institution selected. Similar studies may be done in other HEI in Portugal and in other countries, to determine whether the same selection factors apply and compare the findings before generalisations could be made. It would be interesting to replicate this same study with Portuguese private HEIs and polytechnics to determine if there are significant differences in the selection criteria of students from public/private colleges and university/polytechnic institutions.

This study developed a model for measuring attitudinal factors and its effect on students' loyalty, and then, the effect that students' loyalty had on retention. The model has considered suitable given that students' satisfaction explains their loyalty to the HEI, which in turn explain students' retention. However, only direct relationships were assessed. Therefore, future research could also examine indirect effects between attitudinal factors and choosing intentions.

Finally, the analysis performed was quantitative in nature, but it would be interesting to carry out also a qualitative research on the findings found here, to further understand the antecedents that influence FEP.UP students satisfaction. Given the importance of students' satisfaction in establishing lasting relationships with the college, future research would help HEI managers to know what they may do to increase students' satisfaction and correspond to their needs and expectations.

6.2. Theoretical contributions

Following the Bologna process, the present study contributes to understand students' transition from the first to the second cycle by examining the factors influencing their decision to choose a master institution. Since this transition is a growing trend (Crosier et al., 2007; Sin & Amaral, 2017) disregarded in the literature, the present study offers important theoretical contributions.

One theoretical contribution of this research is the reconsideration of the Chapman model (1981) which might apply to the selection of a second cycle HEI with several significant additions. These additions include new factors of choice which may be incorporated successfully in future studies.

Another relevant contribution of this study is methodological. Contrary to earlier research, the surveys relied not only on retrospective accounts of the choice factors but accounted also for prospective opinions by surveying current undergraduates. Therefore, the findings of this study are less limited by the risk that students' opinions could be clouded by time and their actual experience on the master's degree (Doherty et al., 2011).

With the inclusion of the two types of students (those who repeated the FEP.UP choice and those who made a new choice) this research also identified and quantitatively assessed the differences in the choice factors between the two groups of students. While there are common reported issues, there are also factors that differ considerably. This is an area worthy of further exploration since reaching an understanding of what leads different types of students to choose differently will help understand the nature of the decision making.

Based on this study findings, one has empirical support for the link between students' loyalty and students' decision to remain in the same institution. These insights can serve to refine and give impetus for further research on students' loyalty and students' retention field.

Finally, although the results are not generalizable, this study could stimulate similar investigations in other contexts because it is applied in a HEI in the area of economics and management, with international prestige.

6.3. Practical contributions

Currently, due to the competitive environment, HEIs are facing challenges that call for the development of new marketing approaches (Simões & Soares, 2010). The present research provides practical contributions that may be significant for the strategic positioning of HEIs, especially FEP.UP, in the eyes of their future master's students.

The findings show that some factors are more important for students who graduated at FEP.UP and continued in the same institution than for students who did not graduate at FEP.UP but chose the college. Therefore, FEP.UP should consider different strategies for targeting these two populations, distinguishing those aiming to attract new students from those aiming to retain existing ones.

First, if the college wants to attract students from other institutions for its master's degrees a great highlight should be given to FEP.UP employability rate and career benefits, thus extolling the positive professional consequences of being a FEP.UP student and alumni. The reputation and quality of FEP.UP have also a lot to say about the attraction of new students. Defining and reinforcing the FEP.UP brand and its rankings, coupled with a strong

emphasis on quality are definitively key. These findings may guide the definition of appropriate attraction communication tools to provide an advantageous positioning and differentiation of FEP.UP relative to other HEIs.

Second and regarding the student retention strategy, again FEP.UP employability plays an important role since this is the most important factor to remain in the institution. Students are also cost-conscious when they decide not to change of HEI. In line with this, FEP.UP benefits from providing affordable quality programs to retain students and remain competitive. In addition, FEP.UP management could also explore new sources of financially assist students with low family income, through student loans and academic awards, to further retain its best students. The results also showed that FEP.UP should be Reputation and Quality-driven, thus increasing the perception of the reputation and the quality of FEP.UP among its enrolled students. Moreover, the attractiveness of the FEP.UP location and its admission can also be a strong competitive advantage in retaining the best students.

Third, our findings suggest that students may not differ from other service customers because a loyal consumer will continue to buy the service in the same company. By comparison, there should be wider concern with students' loyalty to increase the repeated choice rate of students for the second cycle. To increase students' loyalty, their actual satisfaction should not be underestimated.

To conclude, this study highlights the importance of developing a proactive rather than a reactive management strategy, to attract and retain students. The findings of the present research provide support for building a bridge between what students are looking for in an institution and what the institution knows about the choices of its students. Future research might delve into the details about what to do next, anticipating their needs and discovering new ways of adding value.

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Annexes

Annex I- Survey to last year FEP.UP bachelor students

Fatores de escolha de uma instituição de ensino superior para realizar um mestrado

Desde já agradeço a sua disponibilidade por participar neste inquérito que tem como objetivo compreender os fatores de escolha de uma instituição para a realização de mestrado. O questionário não demorará mais do que 5 minutos a completar e é totalmente anónimo e confidencial. Não existem respostas certas nem erradas, o importante é a sua opinião.

Se tiver alguma dúvida não hesite em contactar a responsável do projeto: Tânia Pereira (taniacspereiraa@gmail.com).

1- É finalista da licenciatura?

Sim Não

2- Qual é o seu curso atual?

Economia Gestão

3- Média atual de licenciatura (arredondada às unidades):

4- Pretende continuar a estudar e inscrever-se num mestrado?

Sim Não

If respondent answer “Sim” to question 4:

5- Concorreu/está a pensar concorrer a um mestrado na FEP.UP?

Sim Não

If respondent answer “Sim” to question 5:

6- Um mestrado na FEP.UP foi/irá ser:

A 1ª opção (Pergunta 8) A 2ª opção (Pergunta 7)
 A 3ª opção (Pergunta 7) Outra (Pergunta 7)

7- Indique, qual das seguintes instituições foi/irá ser a sua primeira opção

- Católica do Porto- Universidade Católica Portuguesa
- Católica de Lisboa- Universidade Católica Portuguesa
- Universidade Nova de Lisboa
- Universidade do Minho
- Outra:

8- Indique em que medida os seguintes critérios poderão ser ou foram (caso já tenha concorrido) importantes na decisão de continuar na FEP.UP para a realização do mestrado. Utilize uma escala de 1 a 7, em que (1) significa “Nada Importante” e (7) significa “Extremamente Importante”.

	1	2	3	4	5	6	7
Reputação externa da FEP.UP							
Probabilidade de entrada num mestrado da FEP.UP							
Qualidade dos programas curriculares da FEP.UP							
Custos envolvidos (por exemplo: acomodação e deslocações)							
Opinião dos familiares							
Qualidade de ensino da FEP.UP							
Posição da FEP.UP nos rankings académicos							
Proximidade de casa							
Oferta de cursos/disciplinas em inglês							
Relacionamento com as empresas (por exemplo: networking e oferta de estágios)							
Oportunidades de carreira (por exemplo: perspetivas de promoção, segurança no emprego e níveis mais elevados de posição e salário)							
Possibilidade de obter bolsas de estudo							
Localização geográfica da FEP.UP							
Opinião de professores							
Proximidade entre alunos verificada na FEP.UP							
Valor da propina na FEP.UP							

Disponibilidade na FEP.UP do programa de mestrado desejado							
Possibilidade de conciliar com o trabalho							
Opinião dos amigos							
Crítérios de entrada nos mestrados da FEP.UP							
Serviços de apoio ao estudante (por exemplo: administrativos, de apoio à carreira, apoio à mobilidade) da FEP.UP							
Parcerias da FEP.UP com outras instituições de ensino superior nacional e estrangeiras							
Proximidade entre professores e alunos existente na FEP.UP							
Integração na vida social e académica da FEP.UP							
Utilidade prática dos cursos da FEP.UP							
Flexibilidade do programa oferecido pelos mestrados da FEP.UP (opção de escolher várias unidades curriculares)							
Instalações da FEP.UP							
Ser uma instituição de Ensino Público							
Empregabilidade dos cursos de mestrado da FEP.UP							
Nível de exigência da FEP.UP							
Opinião de alunos e ex-alunos da FEP.UP							
Prestígio social							
Considerações do(a) namorado(a)/cônjuge							
Orientadores de confiança							
Aulas noturnas							
Considerações do trabalho (por exemplo: aconselhamento sobre a FEP.UP por colegas de trabalho ou superiores)							
Fontes de informação (por exemplo: website, redes sociais, brochuras e eventos)							
Outro (por favor explicitar):							

9-Por favor, indique o seu grau de concordância com cada afirmação, usando uma escala de 1 a 5, onde (1) significa “Discordo Totalmente” e (5) significa "Concordo Totalmente".

	1	2	3	4	5
Estou satisfeito com a FEP.UP					
Voltaria a inscrever-me na FEP.UP novamente					
Recomendo a FEP.UP a um amigo					
A minha experiência na FEP.UP está de acordo com as minhas expectativas					
A minha satisfação geral com a FEP.UP é excelente					
Integridade é uma palavra que eu usaria para descrever o staff da FEP.UP					
Eu tenho a certeza que o staff da FEP.UP age de acordo com os meus interesses					
Eu confio plenamente no staff da FEP.UP					
O staff da FEP.UP cumpriu sempre as promessas que me fez					
Eu sinto-me muito ligado à FEP.UP					
Eu estou orgulhoso de poder estudar na FEP.UP					
Eu estou muito feliz por pertencer à FEP.UP					
Para o valor da propina da FEP.UP eu acho que esta faculdade oferece um serviço muito bom					
Para o tempo que eu passo a estudar na FEP.UP eu acho que estudar nesta faculdade é muito agradável					
Para o esforço envolvido nos meus estudos na FEP.UP eu acho que estudar nesta faculdade vale muito a pena					
A minha experiência geral com a FEP.UP é muito boa					

10-Por favor, indique o seu grau de concordância com cada afirmação, usando uma escala de 1 a 7, onde (1) significa “Nada Provável” e (7) significa "Extremamente Provável".

	1	2	3	4	5	6	7
Recomendarei a FEP.UP aos meus colegas/conhecidos para fazerem um curso superior							
Escolheria a FEP.UP se voltasse ao início do meu percurso académico							
Continuarei na FEP.UP para mestrado ou doutoramento							

11-Por favor, indique o seu grau de concordância com cada afirmação, usando uma escala de 1 a 5, onde (1) significa “Discordo Totalmente” e (5) significa "Concordo Totalmente".

	1	2	3	4	5
Penso muitas vezes em inscrever-me num mestrado na FEP.UP					
Estou ativamente à procura de um mestrado na FEP.UP					
Assim que for possível vou ingressar num mestrado na FEP.UP					
Um mestrado na FEP.UP irá ser a minha primeira opção					

Por fim, preencha por favor alguns dados demográficos.

12-Género:

Masculino Feminino

13- Idade:

14- Concelho de origem:

15- Na sua família próxima (por exemplo: avós, pais, tios, irmãos) há mais alguém que tenha frequentado e concluído o ensino superior?

Sim (Responda à próxima pergunta) Não (Passe para a pergunta 17)

16- Por favor, indique o grau de parentesco:

- Pais
 Irmão(s)
 Avó(s)
 Tio(s)

- Primo(s)
 Outro (por favor explicitar):

17- Habilitações literárias do pai:

- Ensino primário 6º ano de escolaridade 9º ano de escolaridade
 Secundário Licenciatura Mestrado
 Doutoramento Não sei
 Outra situação (por favor explicitar):

18- Habilitações literárias da mãe:

- Ensino primário 6º ano de escolaridade 9º ano de escolaridade
 Secundário Licenciatura Mestrado
 Doutoramento Não sei
 Outra situação (por favor explicitar):

19- Rendimento mensal do agregado familiar:

-]500€, 1000€[[1000€, 1500€[[1500€, 2000€[[2000€, 2500€[
 >2500€

If respondent answer “Não” to question 5

20- A principal razão para decidir não continuar na FEP.UP é:

- Por opção Por uma questão de média/critérios de seriação
 Por uma questão de acabar o curso em setembro de 2018 e não em julho de 2018
 Outro:

21- Indique, qual das seguintes instituições foi/irá ser a sua primeira opção

- Católica do Porto- Universidade Católica Portuguesa
 Católica de Lisboa- Universidade Católica Portuguesa
 Universidade Nova de Lisboa
 Universidade do Minho
 Outra:

22- Indique em que medida os seguintes critérios poderão ser ou foram (caso já tenha concorrido) importantes na decisão de escolha de outra instituição para a realização do mestrado. Utilize uma escala de 1 a 7, em que (1) significa “Nada Importante” e (7) significa “Extremamente Importante”

	1	2	3	4	5	6	7
Reputação externa da instituição							
Probabilidade de entrada num mestrado da instituição							
Qualidade dos programas curriculares da instituição							
Custos envolvidos (por exemplo: acomodação e deslocações)							
Opinião dos familiares							
Qualidade de ensino da instituição							
Posição da instituição nos rankings académicos							
Proximidade de casa							
Oferta de cursos/disciplinas em inglês							
Relacionamento com as empresas (por exemplo: networking e oferta de estágios)							
Oportunidades de carreira (por exemplo: perspetivas de promoção, segurança no emprego e níveis mais elevados de posição e salário)							
Possibilidade de obter bolsas de estudo							
Localização geográfica da instituição							
Opinião de professores							
Proximidade entre alunos existente na instituição							
Valor da propina na instituição							
Disponibilidade na instituição do programa de mestrado desejado							
Possibilidade de conciliar com o trabalho							
Opinião dos amigos							
Critérios de entrada da instituição							

Serviços de apoio ao estudante (por exemplo: administrativos, de apoio à carreira, apoio à mobilidade) da instituição							
Parcerias da instituição com outras instituições de ensino superior nacional e estrangeiras							
Proximidade entre professores e alunos existente na instituição							
Existência de vida social e académica na instituição							
Utilidade prática dos cursos da instituição							
Flexibilidade do programa oferecido pelos mestrados da instituição (opção de escolher várias unidades curriculares)							
Instalações da instituição							
Tipo de instituição de Ensino (Público ou Privado)							
Empregabilidade dos cursos de mestrado da instituição							
Nível de exigência da instituição							
Opinião de alunos e ex-alunos da instituição							
Prestígio social							
Considerações do(a) namorado(a)/cônjuge							
Orientadores de confiança							
Aulas noturnas							
Considerações do trabalho (por exemplo: aconselhamento sobre a instituição por colegas de trabalho ou superiores)							
Fontes de informação (por exemplo: website, redes sociais, brochuras e eventos)							
Outro (por favor explicitar):							

23- Por favor, indique o seu grau de concordância com cada afirmação, usando uma escala de 1 a 5, onde (1) significa “Discordo Totalmente” e (5) significa "Concordo Totalmente".

	1	2	3	4	5
Estou satisfeito com a FEP.UP					
Voltaria a inscrever-me na FEP.UP novamente					

Recomendo a FEP.UP a um amigo					
A minha experiência na FEP.UP está de acordo com as minhas expectativas					
A minha satisfação geral com a FEP.UP é excelente					
Integridade é uma palavra que eu usaria para descrever o staff da FEP.UP					
Eu tenho a certeza que o staff da FEP.UP age de acordo com os meus interesses					
Eu confio plenamente no staff da FEP.UP					
O staff da FEP.UP cumpriu sempre as promessas que me fez					
Eu sinto-me muito ligado à FEP.UP					
Eu estou orgulhoso de poder estudar na FEP.UP					
Eu estou muito feliz por pertencer à FEP.UP					
Para o valor da propina da FEP.UP eu acho que esta faculdade oferece um serviço muito bom					
Para o tempo que eu passo a estudar na FEP.UP eu acho que estudar nesta faculdade é muito agradável					
Para o esforço envolvido nos meus estudos na FEP.UP eu acho que estudar nesta faculdade vale muito a pena					
A minha experiência geral com a FEP.UP é muito boa					

24- Por favor, indique o seu grau de concordância com cada afirmação, usando uma escala de 1 a 7, onde (1) significa “Nada Provável” e (7) significa "Extremamente Provável".

	1	2	3	4	5	6	7
Recomendarei a FEP.UP aos meus colegas/conhecidos para fazerem um curso superior							
Escolheria a FEP.UP se voltasse ao início do meu percurso académico							
Continuarei na FEP.UP para mestrado ou doutoramento							

Por fim, preencha por favor alguns dados demográficos.

25-Género:

Masculino Feminino

26- Idade:

27- Concelho de origem:

28- Na sua família próxima (por exemplo: avós, pais, tios, irmãos) há mais alguém que tenha frequentado e concluído o ensino superior?

Sim (Responda à próxima pergunta) Não (Passe para a pergunta 30)

29- Por favor, indique o grau de parentesco:

- Pais
- Irmão(s)
- Avó(s)
- Tio(s)
- Primo(s)
- Outro (por favor explicita):

30- Habilitações literárias do pai:

- Ensino primário 6º ano de escolaridade 9º ano de escolaridade
- Secundário Licenciatura Mestrado
- Doutoramento Não sei
- Outra situação (por favor explicita):

31-Habilitações literárias da mãe:

- Ensino primário 6º ano de escolaridade 9º ano de escolaridade
- Secundário Licenciatura Mestrado
- Doutoramento Não sei
- Outra situação (por favor explicita):

32- Rendimento mensal do agregado familiar:

]500€, 1000€[[1000€, 1500€[[1500€, 2000€[[2000€, 2500€[

>2500€

If respondent answer “Não” to question 4:

33- A principal razão para decidir não continuar os estudos é:

- Por querer iniciar uma carreira profissional
- Por questões monetárias
- Por opção pessoal (por exemplo: não saber qual o mestrado que pretende ingressar e por essa razão preferir fazer uma pausa nos estudos)
- Pelo facto de ter demorado mais tempo do que o previsto a terminar o curso
- Outra (por favor explicitar):

Por fim, preencha por favor alguns dados demográficos.

34-Género:

- Masculino Feminino

35-Idade:

36-Concelho de origem:

37- Na sua família próxima (por exemplo: avós, pais, tios, irmãos) há mais alguém que tenha frequentado e concluído o ensino superior?

- Sim (Responda à próxima pergunta) Não (Passe para a pergunta 39)

38-Por favor, indique o grau de parentesco:

- Pais
- Irmão(s)
- Avó(s)
- Tio(s)
- Primo(s)
- Outro (por favor explicitar):

39-Habilitações literárias do pai:

- Ensino primário 6º ano de escolaridade 9º ano de escolaridade
 Secundário Licenciatura Mestrado
 Doutoramento Não sei
 Outra situação (por favor explicitar):

40- Habilitações literárias da mãe:

- Ensino primário 6º ano de escolaridade 9º ano de escolaridade
 Secundário Licenciatura Mestrado
 Doutoramento Não sei
 Outra situação (por favor explicitar):

41- Rendimento mensal do agregado familiar:

-]500€, 1000€[[1000€, 1500€[[1500€, 2000€[[2000€, 2500€[
 >2500€

Annex II- Survey to FEP.UP master students

Fatores de escolha de uma instituição de ensino superior para realizar um mestrado

Desde já agradeço a sua disponibilidade por participar neste inquérito que tem como objetivo compreender os fatores de escolha de uma instituição para a realização de mestrado. O questionário não demorará mais do que 5 minutos a completar e é totalmente anónimo e confidencial. Não existem respostas certas nem erradas, o importante é a sua opinião.

Se tiver alguma dúvida não hesite em contactar a responsável do projeto: Tânia Pereira (taniacspereiraa@gmail.com).

1- Qual foi o ano letivo da sua primeira inscrição no mestrado?

2017/2018 2016/2017 2015/2016 Outro

2- Qual é o mestrado que frequenta atualmente?

- Mestrado em Economia Mestrado em Gestão
- Mestrado em Finanças Mestrado em Contabilidade e Controlo de Gestão
- Mestrado em Economia e Administração de Empresas
- Mestrado em Economia e Gestão da Inovação
- Mestrado em Economia e Gestão de Recursos Humanos
- Mestrado em Economia e Gestão do Ambiente
- Mestrado em Economia e Gestão Internacional
- Mestrado em Finanças e Fiscalidade
- Mestrado em Gestão Comercial
- Mestrado em Gestão de Serviços
- Mestrado em Gestão e Economia de Serviços de Saúde
- Mestrado em Marketing
- Mestrado em Modelação, Análise de Dados e Sistemas de Apoio à Decisão

3- Média final de licenciatura (arredondada às unidades):

4- Média atual de mestrado (arredondada às unidades):

5- Quantos anos de experiência profissional tinha quando se candidatou ao mestrado?

6- Realizar mestrado na FEP.UP foi:

- A 1º opção (Pergunta 8) A 2º opção (Pergunta 7)
 A 3º opção (Pergunta 7) Outra opção (Pergunta 7)

7- Indique, qual das seguintes instituições foi a sua primeira opção

- Católica do Porto- Universidade Católica Portuguesa
 Católica de Lisboa- Universidade Católica Portuguesa
 Universidade Nova de Lisboa
 Universidade do Minho
 Outra:

8- Fez a licenciatura na FEP.UP?

- Sim (Question 10) Não (Question 9)

9- Indique em qual instituição fez a sua licenciatura

10- Indique em que medida os seguintes critérios foram importantes na decisão de escolher a FEP.UP para a realização do mestrado. Utilize uma escala de 1 a 7, em que (1) significa “Nada Importante” e (7) significa “Extremamente Importante”.

	1	2	3	4	5	6	7
Reputação externa da FEP.UP							
Probabilidade de entrada num mestrado da FEP.UP							
Qualidade dos programas curriculares da FEP.UP							
Custos envolvidos (por exemplo: acomodação e deslocações)							
Opinião dos familiares							
Qualidade de ensino da FEP.UP							
Posição da FEP.UP nos rankings académicos							
Proximidade de casa							

Oferta de cursos/disciplinas em inglês							
Relacionamento com as empresas (por exemplo: networking e oferta de estágios)							
Oportunidades de carreira (por exemplo: perspectivas de promoção, segurança no emprego e níveis mais elevados de posição e salário)							
Possibilidade de obter bolsas de estudo							
Localização geográfica da FEP.UP							
Opinião de professores							
Proximidade entre alunos verificada na FEP.UP							
Valor da propina na FEP.UP							
Disponibilidade na FEP.UP do programa de mestrado desejado							
Possibilidade de conciliar com o trabalho							
Opinião dos amigos							
Crítérios de entrada nos mestrados da FEP.UP							
Serviços de apoio ao estudante (por exemplo: administrativos, de apoio à carreira, apoio à mobilidade) da FEP.UP							
Parcerias da FEP.UP com outras instituições de ensino superior nacional e estrangeiras							
Proximidade entre professores e alunos existente na FEP.UP							
Integração na vida social e académica da FEP.UP							
Utilidade prática dos cursos da FEP.UP							
Flexibilidade do programa oferecido pelos mestrados da FEP.UP (opção de escolher várias unidades curriculares)							
Instalações da FEP.UP							
Ser uma instituição de Ensino Público							
Empregabilidade dos cursos de mestrado da FEP.UP							
Nível de exigência da FEP.UP							
Opinião de alunos e ex-alunos da FEP.UP							

Prestígio social							
Considerações do(a) namorado(a)/cônjuge							
Orientadores de confiança							
Aulas noturnas							
Considerações do trabalho (por exemplo: aconselhamento sobre a FEP.UP por colegas de trabalho ou superiores)							
Fontes de informação (por exemplo: website, redes sociais, brochuras e eventos)							
Outro (por favor explicitar):							

11-Por favor, indique o seu grau de concordância com cada afirmação, usando uma escala de 1 a 5, onde (1) significa “Discordo Totalmente” e (5) significa "Concordo Totalmente".

	1	2	3	4	5
Estou satisfeito com a FEP.UP					
Voltaria a inscrever-me na FEP.UP novamente					
Recomendo a FEP.UP a um amigo					
A minha experiência na FEP.UP está de acordo com as minhas expectativas					
A minha satisfação geral com a FEP.UP é excelente					
Integridade é uma palavra que eu usaria para descrever o staff da FEP.UP					
Eu tenho a certeza que o staff da FEP.UP age de acordo com os meus interesses					
Eu confio plenamente no staff da FEP.UP					
O staff da FEP.UP cumpriu sempre as promessas que me fez					
Eu sinto-me muito ligado à FEP.UP					
Eu estou orgulhoso de poder estudar na FEP.UP					
Eu estou muito feliz por pertencer à FEP.UP					
Para o valor da propina da FEP.UP eu acho que esta faculdade oferece um serviço muito bom					

Para o tempo que eu passo a estudar na FEP.UP eu acho que estudar nesta faculdade é muito agradável					
Para o esforço envolvido nos meus estudos na FEP.UP eu acho que estudar nesta faculdade vale muito a pena					
A minha experiência geral com a FEP.UP é muito boa					

12-Por favor, indique o seu grau de concordância com cada afirmação, usando uma escala de 1 a 7, onde (1) significa “Nada Provável” e (7) significa "Extremamente Provável".

	1	2	3	4	5	6	7
Recomendarei a FEP.UP aos meus colegas/conhecidos para fazerem um curso superior							
Escolheria a FEP.UP se voltasse ao início do meu percurso académico							
Continuarei na FEP.UP para mestrado ou doutoramento							

Por fim, preencha por favor alguns dados demográficos.

13-Género:

Masculino Feminino

14- Idade:

15- Concelho de origem:

16- Na sua família próxima (por exemplo: avós, pais, tios, irmãos) há mais alguém que tenha frequentado e concluído o ensino superior?

Sim (Responda à próxima pergunta) Não (Passe para a pergunta 18)

17- Por favor, indique o grau de parentesco:

Pais
 Irmão(s)
 Avó(s)

- Tio(s)
- Primo(s)
- Outro (por favor explicitar):

18- Habilitações literárias do pai:

- Ensino primário 6º ano de escolaridade 9º ano de escolaridade
- Secundário Licenciatura Mestrado
- Doutoramento Não sei
- Outra situação (por favor explicitar):

19- Habilitações literárias da mãe:

- Ensino primário 6º ano de escolaridade 9º ano de escolaridade
- Secundário Licenciatura Mestrado
- Doutoramento Não sei
- Outra situação (por favor explicitar):

20- Rendimento mensal do agregado familiar:

-]500€, 1000€[[1000€, 1500€[[1500€, 2000€[[2000€, 2500€[
- >2500€

Annex III- Sample demographics

Demographic Variables	Overall Sample				Sample Survey 1				Sample Survey 2			
	N	%	M	SD	N	%	M	SD	N	%	M	SD
Gender												
Male	199	36.8%			98	38.9%			101	34.9%		
Female	342	63.2%			154	61.1%			188	65.1%		
Total	541	100%			252	100%			289	100%		
Location												
Outside Porto	288	53.2%			125	49.6%			163	56.4%		
Porto	253	46.8%			127	50.4%			126	43.6%		
Total	541	100%			252	100%			289	100%		
Family income												
]500€, 1000€[	68	12.6%			28	11.1%			40	13.8%		
[1000€, 1500€[	139	25.7%			76	30.2%			63	21.8%		
[1500€, 2000€[	114	21.1%			40	15.9%			74	25.6%		
[2000€, 2500€[	83	15.3%			37	14.7%			46	15.9%		
> 2500€	137	25.3%			71	28.2%			66	22.8%		
Total	541	100%			252	100%			289	100%		
Father's education												
Higher Education	191	35.3%			108	42.9%			83	28.7%		
Without Higher Education	343	63.4%			141	56.0%			202	69.9%		
Unknown	7	1.3%			3	1.2%			4	1.4%		
Total	541	100.0%			252	100%			289	100%		
Mother's education												
Higher Education	156	28.8%			66	26.2%			90	31.1%		
Without Higher Education	381	70.4%			186	73.8%			195	67.5%		
Unknown	4	0.7%			0	0.0%			4	1.4%		
Total	541	100.0%			252	100%			289	100%		
Age												
	541	100%	23.37	5.15	252	100%	21.21	1.61	289	100%	25.25	6.31

Annex IV- Bachelor student's characteristics

	Sample Survey 1 Characteristics	N	%	M	SD
Course					
	Bachelor in Economics	162	64.3%		
	Bachelor in Management	90	35.7%		
	Total	252	100%		
Bachelor GPA		252	100%	13.56	1.49
Bachelor Students					
	Who will continue study at FEP.UP	128	50.8%		
	Who will continue study in another institution	63	25.0%		
	Who will not continue to study	61	24.2%		
	Total	252	100%		
A master's degree at FEP.UP was:					
	First option	111	86.7%		
	Second option	15	11.7%		
	Third option	2	1.6%		
	Other	0	0.0%		
	Total number of students who will continue study at FEP.UP	128	100%		
Reason to not continue studies					
	To start a professional career	32	52.5%		
	By personal choice	23	37.7%		
	For financial reasons	3	4.9%		
	Another option	3	4.9%		
	Total number of students who will not continue to study	61	100%		
Reason for deciding not to continue at FEP.UP					
	By choice	49	77.8%		
	By the selection criteria/GPA required	5	7.9%		
	For finishing the bachelor's degree only in September	5	7.9%		
	Other	4	6.3%		
	Total number of students who will continue study in another institution	63	100%		
Institution alternative to FEP.UP to do the master's degree					
	Universidade Nova de Lisboa	21	33.3%		
	Foreign University	12	19.0%		
	Católica Porto	11	17.5%		
	Other Portuguese HEI	8	12.7%		
	Católica Lisboa	6	9.5%		
	Universidade do Minho	5	7.9%		
	Total number of students who want to continue studying in another institution	63	100%		

Annex V- Master student's characteristics

Sample Survey 2 Characteristics		N	%	M	SD
Course					
	Master in Economics	52	18.0%		
	Master in Management	39	13.5%		
	Master in Finance	30	10.4%		
	Master in Services Management	21	7.3%		
	Master in International Business	19	6.6%		
	Master in Accounting and Management Control	16	5.5%		
	Master in Modeling, Data Analysis and Decision Support Systems	16	5.5%		
	Master in Economics and Business Administration	15	5.2%		
	Master in Human Resources Management	15	5.2%		
	Master in Finance and Taxation	15	5.2%		
	Master in Sales Management	14	4.8%		
	Master in Marketing	12	4.2%		
	Master in Environmental Economics and Management	10	3.5%		
	Master in Health Care Economics and Management	9	3.1%		
	Master in Innovation Economics and Management	6	2.1%		
	Total	289	100%		
Master students					
	Bachelor's degree in another institution	152	52.6%		
	Bachelor's degree at FEP.UP	137	47.4%		
	Total	289	100%		
Graduation university					
	Universidade do Minho	32	21.1%		
	Universidade do Porto	22	14.5%		
	Foreign Universities	22	14.5%		
	Polytechnic	20	13.2%		
	Universidade de Aveiro	16	10.5%		
	Private University	14	9.2%		
	Universidade de Coimbra	9	5.9%		
	Universidade de Trás os Montes e Alto Douro	6	3.9%		
	Universidade da Beira Interior	5	3.3%		
	Universidade de Lisboa	3	2.0%		
	Other	3	2.0%		
	Total number of students who did not graduate in FEP	152	100%		
A master's degree in FEP was:					
	First option	272	94.1%		
	Second option	14	4.8%		
	Third option	2	0.7%		
	Other	1	0.3%		
	Total	289	100%		
Master GPA		289	100%	15.29	1.53

Sample Survey 2 Characteristics	N	%	M	SD
Years of professional experience of master students				
Master in Economics	52	18.0%	0.27	1.09
Master in Management	39	13.5%	0.38	0.96
Master in Finance	30	10.4%	0.37	1.07
Master in Accounting and Management Control	16	5.5%	3.00	3.90
Master in Economics and Business Administration	15	5.2%	2.07	4.61
Master in Innovation Economics and Management	6	2.1%	8.50	4.55
Master in Human Resources Management	15	5.2%	15.53	13.12
Master in Environmental Economics and Management	10	3.5%	2.00	3.56
Master in International Business	19	6.6%	1.00	1.83
Master in Finance and Taxation	15	5.2%	3.00	7.03
Master in Sales Management	14	4.8%	1.57	3.46
Master in Services Management	21	7.3%	3.95	7.65
Master in Health Care Economics and Management	9	3.1%	7.78	8.54
Master in Marketing	12	4.2%	3.83	4.67
Master in Modeling, Data Analysis and Decision Support Systems	16	5.5%	3.75	7.10
Total	289	100%	2.66	6.09

Annex VI- Confirmatory factor analysis

1. Intention to choose

Component Matrix ^a	
	Component 1
Penso muitas vezes em inscrever-me num mestrado na FEP	0,869
Estou ativamente à procura de um mestrado na FEP	0,890
Assim que for possível vou ingressar num mestrado na FEP	0,945
Um mestrado na FEP irá ser a minha primeira opção	0,846

Extraction Method: Principal Component

a. 1 components extracted.

2. Loyalty

Component Matrix ^a	
	Component 1
Recomendarei a FEP aos meus colegas/conhecidos para fazerem um curso superior	0,924
Escolheria a FEP se voltasse ao início do meu percurso académico	0,902
Continuarei na FEP para mestrado ou doutoramento	0,648

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

3. Satisfaction

Component Matrix ^a	
	Component 1
Recomendo a FEP a um amigo	0,917
Estou satisfeito com a FEP	0,907
A minha satisfação com a FEP é excelente	0,900
A minha experiência com a FEP está de acordo com as minhas expectativas	0,890
Voltaria a inscrever-me na FEP novamente	0,870

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

4. Trust

Component Matrix^a	
	Component 1
Eu tenho a certeza que o staff da FEP age de acordo com os meus interesses	0,947
Eu confio plenamente no staff da FEP	0,937
O staff da FEP cumpriu sempre as promessas que me fez	0,895
Integridade é uma palavra que eu usaria para descrever o staff da FEP	0,828

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Commitment

Component Matrix^a	
	Component 1
Eu estou muito feliz por pertencer à FEP	0,960
Eu estou orgulhoso de poder estudar na FEP	0,932
Eu sinto-me muito ligado à FEP	0,868

Extraction Method: Principal Component

a. 1 components extracted.

6. Perceived Value

Component Matrix^a	
	Component 1
Para o esforço envolvido nos meus estudos na FEP eu acho que estudar nesta faculdade vale muito a pena	0,858
A minha experiência geral com a FEP é muito boa	0,843
Para o tempo que eu passo a estudar na FEP eu acho que estudar nesta faculdade é muito agradável	0,783
Para o valor da propina da FEP eu acho que esta faculdade oferece um serviço muito bom	0,764

Extraction Method: Principal Component Analysis.

a. 1 components extracted.