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**ALUMNI IN A RELATIONSHIP MARKETING PERSPECTIVE: THE  
ALUMNI-ALMA MATER COMMITMENT RELATIONSHIP**



**UNIVERSIDADE DO ALGARVE  
FACULDADE DE ECONOMIA  
2020**



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**Doutoramento em Ciências Económicas e Empresariais  
Especialidade em Gestão**

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Declaro ser a autora deste trabalho, que é original e inédito. Autores e trabalhos consultados estão devidamente citados no texto e constam da listagem de documentos referida.

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(Ilda Maria Horta Pedro)

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## ABSTRACT

Fostering relationships with alumni has consisted of framing strategies to increase competitiveness amongst higher education institutions (HEIs) in Europe and particularly in Portugal. This thesis aims to understand the alumni-alma mater commitment relationship, through the identification of its drivers, indicators, and alumni patterns leading to an intention to commit.

The work was developed at the University of Algarve (UAlg) through qualitative and quantitative research methods. Results are embodied in three papers. The first study draws upon alumni opinions regarding four main dimensions: academic experience, current situation, commitment indicators and the HEI's commitment. The information was obtained through three focus groups (paper one). A structural equation modelling approach was used to investigate the relationship between a set of latent variables, identified in the qualitative research and supported by the literature, and the commitment relationship. To this end, a sample of 2,008 alumni was obtained through an online survey (paper two). The obtained results helped in the development of the last phase of the work, in which was applied a cluster analysis to segment the alumni and a binomial regression model to identify determinants of the intention to collaborate (paper three).

The results show that the affective, cognitive and HEI's commitment directly influence the commitment relationship. Alumni stress their intention to recommend, share their experience with current students, and give their help when it is necessary as ways to give back. Furthermore, they also recognise the importance of benefits and advantages in this relationship. Five segments of alumni were identified through clustering analysis, revealing valuable information for decision-making, particularly regarding an expressed willingness to participate in fundraising campaigns, which is relevant in a context where these campaigns are not very common. Results of the regression model showed that predictors of intention to collaborate comprised participation in extracurricular activities, sense of belonging, and elements considered in HEI's commitment (solicitation, communication, and quality). HEI's responsibility is underlined as a true catalyst in the commitment relationship process.

The general conclusions of this thesis are in line with the literature, but they also add value in the context of European higher education, particularly in Portugal, where the alumni culture is starting to make small steps.

**Keywords:** Relationship marketing; higher education institution; alumni; commitment relationship; qualitative research; quantitative research

## RESUMO

As instituições de ensino superior (IES) têm vindo a enfrentar nas últimas décadas verdadeiros ventos de mudança. Uma nova realidade impõe-se perante as IES no espaço europeu e particularmente em Portugal.

A globalização trouxe enormes desafios às IES. A rede de oferta aumentou consideravelmente. O processo de Bolonha, para além de fomentar a mobilidade e estandardizar os programas curriculares dos cursos no espaço europeu, veio reduzir o tempo de permanência dos estudantes nas IES. O financiamento público tem vindo a reduzir consideravelmente. O espaço europeu enfrenta níveis muito baixos na taxa de natalidade, reduzindo consideravelmente o número potencial de candidatos ao ensino superior. As IES assistem a uma exigente prestação de contas e escrutínio pelos *rankings*. Para além disto, a internacionalização acrescenta desafios a que as IES não estavam habituadas.

As IES percebem a necessidade de se adaptar à nova realidade e de adotar novas e mais eficientes políticas de gestão académica de modo a substituir a gestão tradicional alicerçada no financiamento público, na quase inexistente prestação de contas e na pouca preocupação com os seus públicos. Uma nova linguagem vem marcar a rotina na gestão das instituições. Assiste-se à adoção de conceitos e políticas da gestão empresarial com a utilização de novas ferramentas de marketing, com particular destaque para o marketing relacional quando o objetivo é fortalecer as relações com os seus *stakeholders*.

O âmbito relacional das IES com os seus estudantes, e particularmente com os seus alumni enquadra o desenvolvimento da presente tese de doutoramento. De entre muitas soluções para fomentar a competitividade as IES reconhecem os benefícios de estabelecer relações fortes e duradouras com os alumni. Esta comunidade reconhece que o sucesso da sua alma mater é o seu também, o que os torna parceiros conscientes e comprometidos no seu desenvolvimento, no fortalecimento da imagem e prestígio institucional.

A investigação qualitativa e quantitativa, desenvolvida na Universidade do Algarve (UAlg) e apresentada em três artigos, dá corpo a este estudo onde se pretende entender as características e os comportamentos dos alumni, bem como os determinantes da sua intenção em colaborar com a UAlg, de modo a definir políticas e estratégias de marketing eficazes, que conduzam a uma forte relação de compromisso entre os alumni e a alma mater. Na primeira fase do trabalho (artigo 1), foi feita uma pesquisa qualitativa suportada pela recolha da opinião dos alumni através de *focus grupos*, tendo em conta as

seguintes dimensões: experiência académica, situação atual, compromisso da IES e modos de colaboração com a instituição. A participação entusiasta e o avivar de memórias ao longo da conversa permitiram identificar uma nostalgia sadia e sentimentos positivos para com a alma mater. As respostas às questões colocadas revelaram informação muito útil, tendo esta sido utilizada para formular um modelo estrutural que relacionou as diferentes variáveis latentes identificadas e suportadas pela literatura. Para testar esse modelo de equações estruturais foi implementado um inquérito por questionário que permitiu observar 2008 alumni (artigo 2), cujos resultados auxiliaram no desenvolvimento da última fase do trabalho, onde se utilizou uma análise de clusters para segmentar os alumni e um modelo de regressão binomial para identificar determinantes da intenção de colaboração com a UAlg (artigo 3).

Os resultados obtidos revelam que o compromisso afetivo, o compromisso cognitivo e o compromisso da IES influenciam diretamente a relação de compromisso. A responsabilidade da IES é sublinhada como verdadeiro catalisador no processo. Os alumni esperam que a sua alma mater solicite a sua ajuda quando esta é necessária, esteja atenta à sua opinião através de um eficaz sistema de comunicação e se esforce por dar continuidade à qualidade do ensino. São aspetos que reforçam a sua confiança e sentido de pertença, patentes no compromisso afetivo, e os levam a querer retribuir o que a instituição lhes deu, através da recomendação, partilha da sua experiência com os atuais estudantes e ajuda nas atividades da instituição. Por outro lado, o papel da IES na integração social e académica dos seus estudantes é também decisivo para elevar o seu sentido de responsabilidade enquanto coprodutores do serviço ensino e reforçar o seu compromisso para com a alma mater depois da graduação. Um outro aspeto, não menos importante, é o conjunto de benefícios e vantagens que os alumni identificam nesta relação, traduzidos no compromisso cognitivo, a que a IES deve dar atenção. A análise de clusters permitiu identificar segmentos de alumni, com características semelhantes, que trazem à luz aspetos particulares em cada segmento, revelando informação valiosa para a tomada de decisão ao nível do relacionamento com os alumni, nomeadamente no que respeita a uma vontade expressa de participar em campanhas de *fundraising*, o que se torna particularmente interessante num contexto em que estas campanhas não são muito comuns. Para além disso, identificou-se que os preditores da intenção de colaborar incluem a participação em atividades extracurriculares, o sentimento de pertença e sublinham mais uma vez elementos considerados no compromisso da IES nesta relação, ou seja, a solicitação, comunicação e qualidade.

As conclusões gerais desta tese estão em sintonia com a literatura, mas também acrescentam valor no contexto do ensino superior europeu e, muito particularmente no contexto Português, onde o registo da investigação no âmbito dos relacionamentos dos alumni com a sua alma mater começa agora a dar pequenos passos.

Palavras-chave: Marketing relacional; Instituições de ensino superior; alumni; relação de compromisso; investigação qualitativa; investigação quantitativa



## **CHAPTER 1**

### **GENERAL INTRODUCTION**

Higher education represents a competitive advantage in nations all over the world. Historically, human capital has been recognised as a determinant productive factor, together with physical capital and labour, thereby contributing to the development of societies and countries.

In the last decades, higher education institutions (HEIs) worldwide face drastic changes due to diverse reasons such as demographic factors, financial crisis, globalisation, and international rankings, which are forcing these institutions to rethink their management practices and to adopt new approaches towards their stakeholders with an attentive focus on students as the main customers. Later on, the enhancement of long and lasting relationships with alumni<sup>1</sup> as true partners becomes a new challenge; they thus use marketing strategies that highlight relationship marketing to develop strong bonds with alumni based on commitment.

Research on alumni-alma mater<sup>2</sup> commitment relationship is of great importance to provide HEIs with consistent information. Contributions have been made mainly by North American and British researchers. However, in the European context, there's still a lack of literature to help develop a stronger alumni culture among European HEIs. Bearing this in mind, the next sections aim to add useful information to this end.

#### 1.1 Problem statement regarding higher education

Higher education (HE) has experienced deep changes and challenges caused by a set of factors with severe impacts in the European Union, particularly in the southern European countries. Here, and in terms of demographic factors, between 2000 and 2017 a decline in the gross birth rate of 17.4% was registered (0.5% for the remaining European countries) and Portugal registered a decline of 28.2% (Pordata, 2019a).

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<sup>1</sup> Alumni is a Latin word whose singular form is *alumnus*, which means disciple, student (Latin-English Dictionary, n.d.). In Portugal, the term *alumni* is used to designate former university students (Ferraz, Fernandes, & Schön, 2009).

<sup>2</sup> The Latin name *alma mater* literally means "nursing mother." It refers to the university. (<http://www.thefreedictionary.com/alma+mater>, retrieved on the 23<sup>rd</sup> April 2014).

The financial crisis (2008–2013) hit the relatively fragile economies of these countries causing, among other consequences, a restriction on access to HE. Considering first-time enrolled students during this period, in Portugal a decline of 28.6% was registered (Pordata, 2019b). Budgetary constraints also stemmed from this crisis. HEIs have assisted in decreasing public funding. According to the Organization for Economic Cooperation and Development' (OECD) report, in 2015 the average European public expenditure in tertiary educational institutions was around 78%, whereas in Portugal it was around 68% with the remaining expenditures being household ones and from other private entities. This report stated that the share transferred from public to private expenditure was below 1% (OECD, 2018).

The Portuguese HE's network adds some difficulties regarding competitiveness. The report of the European University Association "Portuguese higher education: a view from the outside" (EUA, 2013), stressed regional imbalances due to the concentration on the mainland littoral of large public universities and polytechnics and virtually all the private providers. The report recommended restructuring the higher education network and the rationalisation of the educational offer (EUA, 2013). A suggestion of this report concerning leveraging student enrolment was to put emphasis on recruiting foreign students. It had an interesting effect indeed; thus, information provided by the Ministry of Science, Technology and Higher Education in 2019, evidenced an increase of 48% in the number of foreign students in Portuguese HEIs in the last four years, representing 13% of the total number of students in 2019 (Lusa, 2019). In spite of the positive aspects of this figure, foreign students pose new challenges for HEIs' management, like language, cultural differences, and accommodation. Still, globalisation, highly demanded students, and pressure caused by the scrutiny of international rankings push HEIs to demand innovative strategies in order to face such a critical and competitive environment (see e.g. Alves, Mainardes & Raposo, 2010; Alves & Raposo, 2007; Daly, 2013; Pérez-Esparrells & Torre, 2012; Schlesinger, Cervera, & Pérez- Cabañero, 2016).

The role of HEIs in societal development is framed by the production and transference of knowledge and innovation. The efficiency and skills which HEIs add to this process, along with the constant improvement shown, embody the challenge of achieving competitiveness, which deeply depends on the quality of relationships with their stakeholders, particularly with students and alumni. This premise underlines the essence



of this thesis by looking for contributions to reinforce the relationship between the alumni and HEI.

## 1.2 Towards effective solutions through relationship marketing and the role of a commitment relationship as a booster

HEIs play an important role in terms of social and economic development of the countries. This leads to reforms of HEIs' traditional peculiarities towards more business-like enterprises (Bleiklie, Enders, & Lepori, 2012) by adopting entrepreneurial strategies in order to capture alternative financial resources which can be an opportunity for European HEIs to develop their ability to find new resources and overcome their lack of experience in fields like fundraising (Pérez-Esparrells & Torre, 2012). Strategies like commercial marketing, strategic management, and strategic and financial planning are seen as fundamental management instruments to assure success in the HE market (Santiago, Carvalho, Amaral, & Meek, 2006).

Consequently, HEIs have become market- and customer-oriented and have made use of marketing strategies to promote their image and reputation (Helgesen, 2008; Sung & Yang, 2008; Voon, 2008). Marketing concepts have been implemented in the daily strategies of the HE sector, underlying a brand-new language among management routines. Approaches to their stakeholders, with special focus on students as the main customers, reveal a new assignment, based on relationship marketing (Helgesen, 2008).

Relationship marketing applies to a customer-driven culture (Martin, Moriuchi, Smith, Moeder, & Nichols, 2015; Oplatka & Hemsley-Brown, 2007) and consequent commitment relationship, achieved by successful relational exchanges (Morgan & Hunt, 1994) in a profitable way, meaning that the objectives of all those taking part are met, ensured by mutual exchange and fulfillment of promises (Grönroos, 1994). Ultimately relationship marketing aims to attract, maintain, and enhance relationships with customers (Berry, 1995), thereby creating customer values (Helgesen, 2008). Enhancing relationships with students and later with alumni is of paramount importance, challenging HEIs to new perspectives with respect to their traditional role of production and transference of knowledge and innovation into society.

HEIs are aware of the importance of developing strong and lasting relationships with students and alumni, which very much depend on their commitment to understanding how

to do it. Sociological and psychological perspectives have been combined to explain commitment in human relations. Whereas for sociologists, commitment is framed by social factors that compel individuals to a consistent action, psychologists explain commitment by decisions that tend to maintain a behaviour (Sargeant & Woodliffe, 2005). Rusbult (1983) underlined commitment as the tendency of an individual to maintain relationships and feel psychologically attached to them.

The concept of commitment has been widely studied, and strong contributions have been made by works of organisational commitment applied in industrial and commercial organisations in the context of relationship marketing. These studies brought valuable insights to the literature on institutional commitment as applied to universities and colleges. A few examples are presented as follows. Huselid and Day (1991) assert that the interactions between organisational commitment and involvement are considered to predict turnover. Mowday, Steers, and Porter (1979) put the focus on measuring attitudinal commitment in organisations in order to realise how it is related to employee behaviour. Organisational commitment encompasses aspects like affinity of values, certainty of having made a good choice, loyalty, and sense of belonging to the organisation (Nora & Cabrera, 1993). Grossman (1999) stated that commitment is the feeling of being voluntarily tied to a firm.

A commitment relationship in a relational exchange tends to be valorised if the partners recognise benefits from it. Geyskens, Steenkam, Scheer, and Kumar (1996) refer to commitment as a nuclear element for successful relationship marketing; therefore, the research targets are the factors that contribute to the maintenance, development, and enhancement of commitment. Through the acknowledgement of commitment as the intention to guarantee the relationship, different motivations can underlie this intention, thus leading to different types of commitment. These authors stress affective and calculative commitment as both being psychological states. Affective commitment is related to the appreciation of a relationship, whereas calculative commitment refers the perception of the inherent switching costs of leaving it.

When applied to HEIs, and concerning relationships with alumni, the concepts are quite similar. The nature of alumni's commitment is rooted in a sense of belonging along with shared values and identification with their alma mater, that is to say affective commitment. Furthermore, the alumni-alma mater relationship is also assessed in terms of switching costs and benefits, thus stressing the calculative dimension. Affective

commitment is very much influenced by academic experience. Alumni tend to assess their academic experience by evaluating the resources at their disposal, the service received, and the establishment of interpersonal relationships. The literature identifies dimensions like satisfaction, image, trust, values, and perception of quality as determinants to make that assessment, which may influence students' loyalty and alumni loyalty in the future (Brown & Mazzarol, 2008; Helgesen & Nettet, 2007; Jiewanto, Laurens, & Nelloh, 2012; McAlexander, Kim, & Roberts, 2003; Newman & Petrosko, 201; Schlesinger et al., 2016). In addition, the related literature also stresses commitment not only as a key variable in relationship marketing but also as a strong determinant of loyalty (Fullerton, 2003; Hennig-Thurau, Langer, & Hansen, 2001; Sargeant & Woodliffe, 2005; Tinto & Cullen, 1973); therefore, it is considered a consistent foundation to explore in order to achieve contributions to the development of alumni-alma mater relationships.

### 1.3 Research on alumni relationship development in European higher education at a glance

Research on the European HE market<sup>3</sup> has increased in recent decades as a response to: (1) transformations in the global knowledge economy- engaging institutions to develop new research infrastructures, to assure effective knowledge sharing, and to deal with different cultures through the internationalisation of HE (European Commission, 2008; Helgesen & Nettet, 2007); (2) a very competitive HE market which urges HEIs to provide high-quality education and accountability, and to reinforce their image, reputation, and consequent positioning (Çetin, 2004); and (3) the repercussions of the recession of 2008-2013- strong cuts in public spending and consequent cuts in HEI budgets, along with severe reductions in student numbers (EUA, 2011).

As a measure to reinforce competitiveness, this shift brought about a new perspective towards HEIs stakeholders, particularly students and alumni, although alumni relationship development in Southern European countries and other parts of Europe have made slow progress. The literature, however, has given useful insights for HEI

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<sup>3</sup> An example is the research programme on Higher Education and Social Change (EuroHESC, 2009–2012) funded by the European Science Foundation (ESF), comprising the Transformation of Universities in Europe (TRUE), focussing on European universities as organisations (Bleiklie et al., 2012).

management. Iskhakova, Hilbert, and Hoffmann (2016) present an integrative model of alumni loyalty; Alwi and Kitchen (2014) show how cognitive and affective brand attributes in a business school affect directly and indirectly satisfaction and loyalty; Lazibat, Bakovic, and Duzevic (2014) refer to the influence of service quality on student satisfaction; Gallo (2012), from the perspective of institutional advancement, defends a cycle of building life-long relationships with alumni to obtain positive outcomes towards advancement at each stage of this cycle; Henning (2012) relates student and institutional success with student engagement; Bennett and Ali-Choudhury (2009) underline the need for universities to enhance their brands as a key factor for competitiveness; Garcia-Aracil (2008) investigates the rates of satisfaction among European higher education graduates; Helgesen and Nettet (2007) highlight satisfaction and image as antecedents for student loyalty; Hennig-Thurau et al. (2001) propose a model to explain student loyalty through relationship-quality dimensions; and Belfield and Beney (2000) explore the determinants of alumni generosity. Pérez-Esparrells and Torre (2012) make a comparison between HEIs in the United States of America (USA) and Europe in terms of institutional development with respect to alumni fundraising. In the USA, fundraising represents a highly professional sector; however, it is not so widespread in European countries and almost unknown in Mediterranean countries (Greece, Italy, Portugal, Spain, etc). Although the subject refers to fundraising, the perception is quite the same if we consider the alumni commitment relationship.

European commission policies and recommendations have framed research on philanthropy targeting universities' activities. Some examples are given by reports from the EUA<sup>4</sup>. In the report, *Engaging philanthropy for university research: Fundraising by universities from philanthropic sources: developing partnerships between universities and private donors*, 2008, it is mentioned that: "Engaging the university leadership and involving all university people in fundraising is critical. Academic leaders need to take ownership and responsibility for philanthropy on their individual campuses. They are the ones that will create a compelling vision; manage the academic priority-setting process; articulate and interpret the case for support; identify prospects; facilitate faculty development partnerships; maintain and advance relationships; do the asking; recognise and thank donors... You cannot change the attitudes of current students or alumni unless

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<sup>4</sup> Other examples are the Financially Sustainable Universities II- EUA (2013) and Public Funding Observatory- EUA (2015).

there is a corresponding attitudinal change amongst academic leaders, faculty and staff.” (p. 9–10). An important aspect arises in this statement: the required engagement of the leadership and entire academic staff in actions towards such relationships. Few and slow steps have been taken in Portuguese HEIs to ensure this principle, a determinant starting point to successful developments in alumni relationship commitments.

In the Portuguese context, although research on this matter is still scarce, some interesting developments have been made. Pedro, Pereira, and Carrasqueira (2018) seek to find determinants of the alumni-alma mater commitment relationship; Pedro, Leitão, and Alves (2016) wonder if the quality of academic life could influence loyalty and university recommendation among other aspects; Mainardes, Raposo, and Alves (2014) concerning funding, reflect upon the role of non-traditional stakeholders as a new source of financing; Duarte, Alves, and Raposo (2010) explore the determinants of current and former student’s satisfaction; Alves, et al. (2010) present a theoretical approach to HEIs’ stakeholder management, pointing out the need to identify HEIs stakeholders namely their alumni and all the consequences that derive from this relationship; Alves and Raposo (2007) develop a model to explain student satisfaction in higher education.

#### 1.4 The importance of the alumni-alma mater commitment relationship

The research on alumni-alma mater relationships has become a relevant source of information for HEIs (e.g. Alwi & Kitchen, 2014; Helgesen & Nettet, 2007; Hennig-Thurau et al., 2001; Iskhakova et al., 2016). For many years now contributions have been made by the alumni literature focused on North American research. Major European contributions come from England (e.g. Belfield & Beney, 2000; Bennett & Ali-Choudhury, 2009; Daly, 2013). Gradually we have started to notice an increase in the number of European researches on the alumni-alma mater relationship, as stated above.

Although North American and British contributions are quite valuable to understanding alumni-alma mater relationships, more developments must be undertaken in terms of European and particularly Portuguese research to reinforce HEIs’ internal culture on alumni matters. In fact, and like other European HEIs, the alumni-alma mater relationship finds a very weak expression in Portugal, and it worsens when it comes to

alumni solicitations.<sup>5</sup> Alumni represent one of the major support sources for their institutions (Gaier, 2005). Pedro et al. (2018, p. 4–5) summarised the role of alumni in this relationship as follows: “(1) as experienced partners, they can transmit feedback to the institution to define needed strategies; (2) as satisfied partners, they are the institution’s best advertising channel; (3) as partners in the education activity, they value the quality and image of the institution for their own benefit and they actively contribute to the formation of that quality image; (4) they contribute financially to the institution, as a way of paying back what they received; and (5) they are employers of graduates and continue to be consumers of the education product”.

The literature points to alumni as substantial source of support HEIs in areas such as lobbying, volunteering, charitable giving, ambassadors, mentors, political advocacy, and personal recommendations (e.g. Fogg, 2008; Gaier, 2005; Iskhakova et al., 2016; Helgesen & Nettet 2007; McAlexander & Koenig, 2001; Weerts, Cabrera, & Stanford, 2010). Moreover, all sorts of supportive ways lead to strong alumni involvement (Gaier, 2005), and shape alumni commitment through the relationship between repeat attitude and repeat patronage (Dick & Basu, 1994). In turn, HEIs play a key role in this process (Alnawas & Phillips, 2015; Holdford & White, 1997). When it comes to the relationship, it is probably where it all starts. This assumption challenges HEIs to find the proper marketing activities towards alumni from a twofold perspective. First, HEIs must realise that this relationship begins when students enrol in the institution and continues to grow during their academic experience, which demands continuous engagement programmes and activities. Secondly, the development of relationship programmes with alumni, aiming for their involvement in HEI activities (e.g. McAlexander & Koenig, 2001), is necessary.

Effective alumni management requires human resources and adequate alumni relationship programmes (adapted customer relationship programmes), but above all an alumni culture must arise within the academy, and a continuous assessment of the outcomes is also a requirement in order to make necessary improvements (McAlexander & Koenig, 2001). Based on the philosophy of relationship marketing, this partnership between alumni and the alma mater is supported by commitment and trust. In fact, there must be confidence in an exchange partner’s reliability and integrity to assure the

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<sup>5</sup> Developments and efforts are directed towards alumni in order to involve them in HEI activities.

continuity of the commitment relationship, as stated by Hennig-Thurau, et al. (2001).

### 1.5 Definition of research questions and objectives

Every strategy concerning alumni commitment must be based upon accurate information. Efforts to comprehend alumni must be undertaken to maintain the relationship, which in turn also show the HEIs' commitment to serve them. The ultimate goal is to enhance commitment relationships with alumni. For that, understanding features of this community in order to define proper alumni management measures and marketing strategies is crucial and leads to the following research questions (RQ) of the thesis:

*RQ 1* What are the drivers of alumni commitment towards the alma mater?

*RQ 2* What are the indicators of alumni commitment towards the alma mater?

*RQ 3* Who are the alumni willing to commit?

In order to obtain answers to these research questions, three objectives are presented:

- 1- To identify the drivers and indicators of commitment, thus permitting a conceptual framework in the alumni-alma mater commitment relationship to be drawn.
- 2- To characterise the alumni commitment by testing a set of hypothesis through a structural equation modelling approach to explain the commitment relationship.
- 3- To describe overall patterns in alumni commitment by conducting segmentation of the alumni database.

To build and sustain the alumni-alma mater commitment relationship, diverse and complex determinants emerge. HEIs must be aware of their responsibility in the process, and the following aspects will be emphasised: (1) communication and information- alumni must be aware of what is going on inside the HEI; (2) relationship- to promote feelings of belongingness and loyalty; and (3) networking and engagement- to attract alumni and encourage them to be involved (Alnawas & Phillips, 2015).

As Wong and Wong (2011) state, education is people-based. Students are HEIs' main customers. From the moment prospective students have made their choice, a relationship arises, and it grows over the course of the academic experience. This phase is transformational as for most students it is a time of many changes (McAlexander &

Koenig, 2001). Academic experience shapes future alumni relationships with the alma mater through: (1) the interactions alumni develop with the HEIs' representatives (professors, staff) and their fellow colleagues; (2) their assessment of the educational service quality; (3) extra benefits (location, cost of tuition, networking opportunities, and internship opportunities); and (4) involvement in extracurricular activities (e.g. Belfield & Beney, 2000; Helgesen & Nettet, 2007; McAlexander & Koenig, 2001; Newman & Petrosko, 2011; Schlesinger et al., 2016). These issues have an impact on the satisfaction, perceived image, perceived prestige, trust, and sense of belonging which contribute to the intention to give back and involvement (e.g. Alves & Raposo, 2010; Clotfelter, 2003; Gaier, 2005; Helgesen & Nettet, 2007; Hennig-Thurau et al., 2001). It is likely that after graduation direct interactions (e.g. solicitations to academic services, library, canteens, etc.) and indirect interactions (receiving news from the alma mater, direct mailers, and advertising) represent an import influence on commitment, as alumni tend to make judgments about the HEI's attitude towards them (McAlexander & Koenig, 2001; Iskhakova et al., 2016).

Portuguese HEIs have not set routines for asking alumni's help, meaning that potential support is being wasted. However, a clear definition of all the tasks alumni are willing to offer is necessary in order to match the HEIs' needs. HEIs' prestige, reputation, brand, and image depend on recognised accomplishments related to research, students' outcomes, students' awards, scientific developments, graduates' employability rate, and internationalisation level, to mention only a few advertised aspects. These attributes also rely on dedicated advocates, with alumni being an important group among them, as they can, direct and indirectly, offer crucial support. As Henning (2012, p. 17) states, engaged alumni are "institutional champions...they wear their college apparel across the world." At the same time, alumni's willingness to give back<sup>6</sup> is also influenced by those attributes and an understanding of the benefits they can obtain from such prestige (Holmes, 2009; Stephenson & Bell, 2014).

Alumni solicitation must be targeted according to a strategic plan, premised upon the segmentation of tasks and committed alumni, and that means a deep acknowledgement of the alumni likely to commit and the range of ways to do it (Weerts & Ronca, 2007). This means that efforts to identify patterns of alumni commitment must be undertaken so

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<sup>6</sup> In this research, the concept "giving back" is understood as a will to "give" intangible resources such as time, experience sharing, and collaboration.



that key strategic decisions on alumni relationship programmes are made, and the efficient use of resources is guaranteed (Durango-Cohen & Balasubramanian, 2015).

The following dimensions identified in literature, are taken into consideration when conducting segmentation: (1) before graduation (academic experience) and (2) after graduation (current situation) (e.g: Belfield & Beney, 2000; Clotfelter, 2001; Lara & Johnson, 2014; Weerts & Ronca, 2007). The literature confirms that both dimensions stress predictive variables of loyalty such as: (1) honours received, involvement in extra curricular activities, sororities or fraternities, degree of satisfaction with one's undergraduate experience, number of years in institution, degree, and course; and in (2): age, gender, residence, household income, job position, number and age of children, marital status, and volunteer activities (Belfield & Beney, 2000; Clotfelter, 2001; Lara & Johnson, 2014; Stephenson & Bell, 2014; Wunnava & Lauze, 2001).

One of the direct consequences of the characterisation of the potential alumni commitment is an effective segmentation of alumni databases. Moreover, the use of segmentation can improve solicitation effectiveness as every solicitation can be tailored to existing database segments and, in addition, can provide clues for future actions concerning alumni relationships and may give insights into other internal areas in HEIs.

## 1.6 The research context- University of Algarve

The University of Algarve is the southernmost public university of Portugal; celebrating its 40<sup>th</sup> anniversary in 2019. It offers both the polytechnic and university educational systems and in the academic year 2018/2019 had around 8,000 students (bachelor's, master's, and doctoral students). Almost 20% of them were international students from 80 different countries. At the end of the academic year 2017/2018, it had an alumni population of around 32,000 individuals.

In terms of alumni relationships, the University of Algarve is following the same evolution as its Portuguese counterparts. For now, initiatives regarding alumni topics are a recent subject with respect to management concerns, and the concept is being spread among the academic community. More, however, must be done to convince stakeholders of the importance of engaged alumni.

Internal research on alumni matters is very scarce, which means that the information to guide activity planning is almost non-existent. This is a serious issue and consequently inconsistent planning may menace the correct execution of activities and all future relationships. Moreover, an alumni database is a weak tool as, firstly, it is recorded on a *excel* sheet, which is not the best path to manage all the necessary information, and secondly, the information itself needs a huge upgrade to allow for segmentation as the deep knowledge of who the alumni are is fundamental to know what to ask for and whom to ask. So far, alumni approaches<sup>7</sup> have been undertaken according to the needs of schools and faculties, focusing on individualism in the alumni-*alma mater* relationship as initiatives target a group and not the whole alumni population. The sense of belonging to the institution must be forged as it is crucial to relationship commitment.

The alumni-*alma mater* commitment relationship must be a concern from the first contact with students since committed students will be committed alumni. Information provided by internal research is a key factor in this process as it gives clues about what is most valued by alumni throughout their academic experience. The better the quality of information, the greater the facility to define strategic initiatives and allocate efficient resources to foster students' commitment. Quantitative and qualitative research permits econometric models to be built to explain the motivation to commit and to define patterns of alumni giving. Insights deriving from this work are internally useful and can be replicated in other HEIs.

Communication with alumni must obey a strategic and integrated communication plan. Information sending, solicitations, and all sorts of demands meet the target if they occur according to plan, and of course the success of the communication planning also depends on the quality of information available. Moreover, it is important to assure a two-way communication channel; the feedback from alumni also enriches the information and shows alumni that the institution cares about their opinion. For the time being, this communication plan is non-existent, which can compromise efforts to reach alumni.

A much more professional alumni structure with the tools and resources to ensure a correct and efficient alumni relationship is required at UAlg. The successful examples

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<sup>7</sup> They have been undertaken to enhance alumni relationship commitment from both perspectives—alumni towards the *alma mater* and vice versa.

coming from the USA and the UK result from very professional structures working together with other HEI structures.

### 1.7 Work development and methodology

To meet the objectives, the work is developed via the following studies.

**Study one**, entitled “Alumni’s perceptions about commitment towards university: drivers and consequences”, seeks to meet objective one. A qualitative research is conducted through three alumni focus groups, comprising 21 individuals. This work is focused on alumni perceptions of the commitment relationship, bearing in mind that its main goal is the achievement of robust information about drivers and consequences of commitment in the way that a theoretical framework can arise to guide subsequent studies. Graduates’ opinions are collected, taking into consideration the following dimensions: (1) academic experience- identifying the decisive factors that influence commitment; (2) after graduation (current situation)- identifying aspects that may influence their intention to be committed; (3) kinds of giving back- identifying the different ways alumni can offer their cooperation to the university; and (4) the university’s commitment towards them- identifying what they expect from the university. Dialogue is also encouraged to give useful insights to the research as new hypotheses, ideas, and concepts may arise (Bernal & Mille, 2013; Silva, Veloso, & Keating, 2014). In order to achieve homogeneity between participants, a purposive sample covering a range of the last 15 years of graduation is considered, as the idea is to cover as many of the different features of the graduates as possible (e.g. years of graduation, both university and polytechnic systems, alumni of the night-time and normal regime, representation of all formation areas) to provide a more productive discussion. Data analysis takes place using *NVivo* software.

**Study two**, entitled “Understanding the alumni-alma mater commitment relationship upstream and downstream”, meets objectives one and two. A quantitative research takes place in order to: (1) estimate the previously defined parameters of key variables; (2) test hypotheses that emerged from study one; and (3) offer an estimation of the theoretical model explaining commitment. To develop this quantitative research, an online survey questionnaire is developed based on a literature review and information given by qualitative research using the LimeSurvey tool. The following dimensions are considered with the aim of evaluating alumni perceptions: satisfaction, quality, image, social and

academic integration, current situation, HEI commitment, affective commitment, cognitive commitment, and commitment relationship. Questionnaires are targeted to the alumni population that finished a bachelor's degree at least 3 years previous to the conclusion of the data collection. The final list, based on updated email addresses, comprised 12,078 individuals. The questionnaire consists of two main parts. Firstly, a set of 9 sections to assess the perceptions of items related to drivers and indicators of commitment are considered in part one. The second part consists of questions related to some aspects related to academic experience and sociodemographic items in order to collect information about the present situation. Variables are assessed through an 8-point Likert scale, anchored by "1 = Extremely dissatisfied" and "8 = Extremely satisfied" for satisfaction, and "1 = Strongly disagree" and "8 = Strongly agree" for the assessment of perceptions. IBM SPSS is used for the descriptive analysis<sup>8</sup>. The conceptual model is tested through IBM SPSS analysis of moment structures (AMOS) using the structural equation modelling technique. The findings provide an opportunity to establish parallels with similar studies and enrich the literature. From a management point of view, the findings provide useful information to the HEI.

**Study three**, entitled "Identifying patterns of alumni commitment in key strategic relationship programmes", achieves objective three. A quantitative research is developed to discern patterns of alumni commitment. Using a database resulting from the online survey of study two and information provided by academic services about academic issues, the conclusions of the previous studies are applied in order to get the "committed" characteristics and tools to identify the probability of potential "philanthropists". In order to recognise the profile of the ones willing to commit, segmentation is conducted on a dataset of 1,075 individuals who assert an intention to collaborate with their alma mater. This analysis gives an optimal grouping characterised by maximum homogeneity within groups and maximum heterogeneity among groups and is a completely empirical process of pattern recognition. The use of this technique is valuable because it is expected to have natural groupings that may represent segments of alumni who have much in common; therefore, further customised marketing and communication approaches can be used upon them (Le Blanc & Ruks, 2009). Segments are formed using a hierarchical method based on the commitment relationship. Further, a binomial model is used to identify predictors of the intention to collaborate with the HEI. IBM SPSS is used for each of the above-

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<sup>8</sup> An example of this questionnaire is to be seen in the Appendix.

mentioned techniques. From a practical management point of view, the findings given by both techniques provide consistent information to draw strategies towards alumni. Additionally, with regard to the literature on alumni-alma mater commitment relationships, this study makes a contribution.

### 1.8 Structure of the thesis

This thesis will be divided into five chapters. The first chapter is the general introduction to the core theme. Research questions and general objectives, the methodology, and the context of the study are presented in this chapter. The second chapter corresponds to paper one, “Alumni perceptions concerning commitment towards their university: Drivers and Consequences”. Chapter three is dedicated to paper two, “Understanding the alumni-alma mater commitment relationship upstream and downstream”. Chapter four follows with the third paper, “Patterns in alumni commitment towards their alma mater: the committed profile”. In the fifth chapter, the general conclusions, limitations of the study, and suggestions for future research are presented.

### 1.9 References

- Agência Lusa: Portugal digital (2019). Número de estudantes estrangeiros no ensino superior em Portugal aumentou 48% nos últimos quatro anos. [Number of foreign students in higher education in Portugal has increased by 48% in the last four years]. Retrieved on the 8<sup>th</sup> August 2019, from : <https://portugaldigital.com.br/numero-de-alunos-estrangeiros-no-ensino-superior-em-portugal-aumentou-48-nos-ultimos-quatro-anos/>
- Alnawas, I., & Phillips, C. (2015). Alumni orientation: Development of the construct. *Journal of Nonprofit & Public Sector Marketing*, 27(2), 183-215.
- Alves, H., Mainardes, E.W., & Raposo, M. (2010). A relationship approach to higher education institution stakeholder management. *Tertiary Education and Management*, 16(3), 159-181.
- Alves, H., & Raposo, M. (2007). Conceptual model of student satisfaction in higher education. *Total Quality Management*, 18(5), 571–588.
- Alwi, S. F., & Kitchen, P. J. (2014). Projecting corporate brand image and behavioral response in business schools: Cognitive or affective brand attributes? *Journal of Business Research*, 67(11), 2324-2336.

- Belfield, C. R., & Beney, A. P. (2000). What Determines Alumni Generosity? Evidence for the UK the UK. *Education Economics*, 8(1), 65-80.
- Bennett, R., & Ali-Choudhury, R. (2009). Prospective Students' Perceptions of University Brands: An Empirical Study. *Journal of Marketing for Higher Education*, 19(1), 85-107.
- Bernal, A., & Mille, D. (2013). Initiating alumni engagement initiatives: Recommendations from MFT alumni focus groups. *Contemporary Family Therapy*, 36, 300-309.
- Berry, L. (1995). Relationship Marketing of Services- Growing Interest, Emerging Perspectives. *Journal of the Academy of Marketing Science*, 23(4), 236-245.
- Bleiklie, I., Enders, J., & Lepori, B. (2012). Introduction: Transformation of universities in Europe. *Higher Education*, 1-4.
- Brown, R. M., & Mazzarol, T. W. (2008). The importance of institutional image to student satisfaction and loyalty within higher education. *Higher Education*, 58(1), 81-95.
- Çetin, R. (2004). Planning and implementing institutional image and promoting academic programs in higher education. *Journal of Marketing for Higher Education*, 13(1-2), 57-75.
- Clotfelter, C.T. (2003). Alumni giving to elite private colleges and universities. *Economics of Education Review*, 22(2), 109-120.
- Daly, S. (2013). Philanthropy, the new professionals and higher education: The advent of directors of development and alumni relations. *Journal of Higher Education Policy and Management*, 35(1), 21-33.
- Dick, A. S., & Basu, K. (1994). Customer Loyalty: Toward an Integrated Conceptual Framework. *Journal of the Academy of Marketing Science*, 22(2), 99-113.
- Duarte, P. O., Alves, H. B., & Raposo, M. B. (2010). Understanding university image: A structural equation model approach. *International Review on Public and Nonprofit Marketing*, 7(1), 21-36.
- Durango-Cohen, E. J. & Balasubramanian, S. K. (2015). Effective Segmentation of University Alumni: Mining Contribution Data with Finite-Mixture Models. *Research in Higher Education*, 56(1), 78-104.
- European commission (2008). Engaging philanthropy for university research. Retrieved on the 24<sup>th</sup> June 2016, from: [https://ec.europa.eu/invest-in-research/pdf/download\\_en/rapport2007\\_final.pdf](https://ec.europa.eu/invest-in-research/pdf/download_en/rapport2007_final.pdf)
- European University Association (2011). Financially Sustainable Universities II-European universities diversifying income streams. EUA Publications. Retrieved on the 16<sup>th</sup> June 2016 from <https://eua.eu/downloads/publications/financially%20sustainable%20universitie>

[s%20ii%20-%20european%20universities%20diversifying%20income%20streams.pdf](#)

European University Association (2013). Portuguese Higher Education: A view from the outside. Retrieved on the 9<sup>th</sup> Mars, 2013, from: [www.eua.be/Libraries/Publication/CRUP\\_final\\_pdf.sflb.ashx](http://www.eua.be/Libraries/Publication/CRUP_final_pdf.sflb.ashx)

European University Association (2015). Public Funding Observatory. Retrieved on the 24<sup>th</sup> June 2016 from <http://www.eua.be/activities-services/projects/eua-online-tools/public-funding-observatory-tool.aspx>

[Ferraz, F., Fernandes, I., & Schön, M. \(2009, novembro\) Interacção Universidade-Empresa: O Portal Alumni como Instrumento Socialmente Responsável e de Design Colaborativo.](#) Comunicação apresentada no XI Seminário Luso-Espanhol de Gestão Empresarial UAAlg-Universidade do Algarve, Faro.

Fogg, P. (2008). How Colleges Use Alumni to Recruit Students. *Chronicle of Higher Education*, 54(34), B13-B14.

Fullerton, G. (2003). When does commitment Lead to Loyalty? *Journal of Service Research*, 5(4), 333-344.

Gaier, S. (2005). Alumni Satisfaction with Their Undergraduate Academic Experience and the Impact on Alumni Giving and Participation. *International Journal of Educational Advancement*, 5(4), 279-288.

Gallo, M. (2012). Beyond philanthropy: Recognizing the value of alumni to benefit higher education institutions. *Tertiary Education and Management*, 18(1), 41- 55.

García-Aracil, A. (2008). European graduates' level of satisfaction with higher education. *Higher Education*, 57, 1-21.

Geyskens, I., SteeKamp, J.B., Scheer, L., & Kumar, N. (1996). The Effects of Trust and Interdependence on Relationship Commitment: A Trans- Atlantic Study. *International Journal of Research in Marketing*, 13, 303-317.

Grönroos, C. (1994). From marketing mix to relationship marketing: Towards a paradigm shift in marketing. *Management Decision*, 32(2), 1-27.

Grossman, R.P. (1999). Relational versus discrete exchanges: the role of trust and commitment in determining customer satisfaction. *The Journal of Marketing Management*. 9(2), 47-58.

Helgesen, Ø. (2008). Marketing for higher education: A relationship marketing approach. *Journal of Marketing for Higher Education*, 18(1), 50-78.

Helgesen, Ø., & Nettet, E. (2007). Images, Satisfaction and Antecedents: Drivers of Student Loyalty? A Case Study of a Norwegian University College. *Corporate Reputation Review*, 10(1), 38-59.

- Hennig-Thurau, T., Langer, M. F., & Hansen, U. (2001). Modeling and Managing Student Loyalty: An Approach Based on the Concept of Relationship Quality. *Journal of Service Research*, 3(4), 331-344.
- Henning, G. W. (2012). Leveraging student engagement for student and institutional success. *About Campus*, 17(4), 15-18.
- Holdford, D. & White, S. (1997). Testing Commitment-Trust Theory in Relationships Between Pharmacy Schools and Students. *American Journal of Pharmaceutical Education*, 61, 249-256.
- Holmes, J. (2009). Prestige, charitable deductions and other determinants of alumni giving: Evidence from a highly selective liberal arts college. *Economics of Education Review*, 28(1), 18-28.
- Huselid, M. A., & Day, N. E. (1991). Organizational Commitment, Job Involvement, and Turnover: A Substantive and Methodological Analysis. *Journal of Applied Psychology*, 76(3), 380-391.
- Iskhakova, L., Hilbert, A., & Hoffmann, S. (2016). An Integrative Model of Alumni Loyalty—an Empirical Validation Among Graduates from German and Russian Universities. *Journal of Nonprofit & Public Sector Marketing*, 28(2), 129-163.
- Jiewanto, A., Laurens, C., & Nelloh, L. (2012). Influence of Service Quality, University Image, and Student Satisfaction toward WOM Intention: A Case Study on Universitas Pelita Harapan Surabaya. *Procedia - Social and Behavioral Sciences*, 40, 16-23.
- Lara, C., & Johnson, D. (2014). The anatomy of a likely donor: econometric evidence on philanthropy to higher education. *Education Economics*, 22(3), 293-304.
- Lazibat, T., Bakovic, T., & Duzevic, I. (2014). How perceived service quality influences students' satisfaction? Teachers' and students' perspectives. *Total Quality Management*. 25(8), 923-934.
- Le Blanc, L. A. & Rucks, C. T. (2009). Data mining of university philanthropic giving: Cluster-discriminant analysis and Pareto effects. *International Journal of Educational Advancement*, 9(2), 64-82.
- Mainardes, E. W., Alves, H., Raposo, M., & Domingues, M. J. C.S. (2012). Marketing in higher education: A comparative analysis of the Brazil and Portuguese cases. *International Review on Public and Nonprofit Marketing*, 9, 43-63.
- Mainardes, E. W., Raposo, M., & Alves, H. (2014). Universities Need a Market Orientation to Attract Non-Traditional Stakeholders as New Financing Sources. *Public Organization Review*, 14(2), 159-171.
- Marič, M., Pavlin, J., & Ferjan, M. (2010). Educational institution's image: A case study. *Organizacija*, 43(2), 58-65.



- Martin, M., Moriuchi, E., Smith, R., Moeder, J., & Nichols, C. (2015). The importance of university traditions and rituals in building alumni brand communities and loyalty. *International Academy of Marketing Studies Journal*, 19(3), 107-119.
- McAlexander, J.H., Kim, S.K., & Roberts, S.D.(2003). Loyalty: the influences of satisfaction and brand community integration. *Journal of Marketing of Theory and Practice*, 11(4), 1-11.
- McAlexander, J. H., & Koenig, H. F. (2001). University Experiences, the Student-College Relationship, and Alumni Support. *Journal of Marketing for Higher Education*, 10(3), 21-44.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(July), 20-38.
- Mowday, R. T, Steers, R.M., & Porter, L.W. (1979). The measurement of organizational commitment. *Journal of vocational behaviour*, 14, 224-247.
- Newman, M. D., & Petrosko, J. M. (2011). Predictors of Alumni Association Membership. *Research in Higher Education*, 52(7), 738-759.
- Nora, A, & Cabrera, A. F. (1993). The construct validity of Institutional Commitment: A Confirmatory Factor Analysis. *Research in Higher Education*, 34(2), 243-262.
- OECD (2018). Education at a glance 2018. Retrieved on the 26<sup>th</sup> July 2019, from: [http://www.cnedu.pt/content/noticias/internacional/Education\\_at\\_a\\_glance\\_2018.pdf#page=1&zoom=auto,-70,794](http://www.cnedu.pt/content/noticias/internacional/Education_at_a_glance_2018.pdf#page=1&zoom=auto,-70,794).
- Oplatka, I., & Hemsley-Brown, J. (2007). The incorporation of market orientation in the school culture: An essential aspect of school marketing. *International Journal of Educational Management*, 4, 292-305.
- Pedro, E., Leitão, J., & Alves, H. (2016). Does the quality of academic life matter for students' performance, loyalty and university recommendation? *Applied Research in Quality of Life*, 11, 293-316.
- Pedro, I., Pereira, L. & Carrasqueira, H. (2018). Determinants for the commitment relationship between Alumni and the Alma Mater. *Journal of Marketing for Higher Education*, 28(1), 128-152.
- Pérez-Esparrells, C., & Torre, E.M. (2012). The Challenge of Fundraising in Universities in Europe. *International Journal of Higher Education*, 1(2), 55-66.
- Pordata (2019a). Taxa bruta de natalidade. EU 28 (Países do sul da Europa) [Gross birth rate. EU 28 (Southern European countries)] retrieved on the 6<sup>th</sup> of August 2019.from: <https://www.pordata.pt/DB/Europa/Ambiente+de+Consulta/Tabela>
- Pordata (2019b). Alunos matriculados pela 1.<sup>a</sup> vez no ensino superior (ISCED 5-8): total e por sexo (2006-2012) [1st time students enrolled in higher education: total and gender (2006-2012). Retrieved on the 6<sup>th</sup> August 2019, from:

[https://www.pordata.pt/Europa/Alunos+matriculados+pela+1.%C2%AA+vez+no+ensino+superior+\(ISCED+5+8\)+total+e+por+sexo+\(2006+2012\)-1311](https://www.pordata.pt/Europa/Alunos+matriculados+pela+1.%C2%AA+vez+no+ensino+superior+(ISCED+5+8)+total+e+por+sexo+(2006+2012)-1311)

- Rusbult, C.E. (1983). A longitudinal test of the investment model: the development (and deterioration) of satisfaction and commitment in heterosexual involvements. *Journal of Personality and Social Psychology*, (45), 101-17.
- Santiago, R., Carvalho, T., Amaral, A., & Meek, V. L. (2006). Changing patterns in the middle management of higher education institutions: The case of Portugal. *Higher Education*, 52(2), 215-250.
- Sargeant, A., & Woodliffe, L. (2005). The Antecedents of Donor. *Nonprofit Management & Leadership*, 16(1), 61-78.
- Schlesinger, W., Cervera, A., & Pérez-Cabañero, C. (2016). Sticking with your university: The importance of satisfaction, trust, image, and shared values. *Studies in Higher Education*, 5079, 1-17.
- Silva I., Veloso A.L., & Keating J.B. (2014). Focus Group: Considerações Teóricas e metodológicas. *Revista Lusófona de Educação*, 26, 175-190.
- Skari, L. (2014). Community College Alumni: Predicting Who Gives. *Community College Review*, 42(1), 23-40.
- Stephenson, A.L., & Bell, N. (2014). Motivation for alumni donations: a social identity perspective on the role of branding in higher education. *International Journal of Nonprofit and Voluntary Sector Marketing*, 186(aug.), 176-186.
- Sung, M., & Yang, S. (2008). Toward the model of university image: The influence of brand personality, external prestige, and reputation. *Journal of Public Relations Research*, 20(4), 357-376.
- Tinto, V. & Cullen, J. (1973). Dropout in higher education: A review and theoretical synthesis of recent research. *Office of Education (DHEW), Washington, D.C. Office of Planning, Budgeting, and Evaluation*, 53(9), 1-100.
- Voon, M. B. H. (2008). SERVMO A measure for service-driven market orientation in higher education. *Journal of Marketing for Higher Education*, 17(2), 216- 237.
- Weerts, D. J., Cabrera, A. F., & Sanford, T. (2010). Beyond giving: Political advocacy and volunteer behaviors of public university alumni. *Research in Higher Education*, 51, 346-365.
- Weerts, D. J., & Ronca, J. M. (2007). Profiles of Supportive Alumni: Donors, Volunteers, and Those Who “Do It All”. *International Journal of Educational Advancement*, 7(1), 20-34.
- Wong, H., & Wong, H. (2011). Building Relationship between Education Institutions and Students: Student Loyalty in Self-Financed Tertiary Education. *IBIMA Business Review Journal*, 1-22.

Wunnava, P. V., & Lauze, M. A. (2001). Alumni giving at a small liberal arts college: evidence from consistent and occasional donors. *Economics of Education Review*. 20(6), 533-543



## CHAPTER 2

### **STUDY 1- ALUMNI'S PERCEPTIONS ABOUT COMMITMENT TOWARDS THEIR UNIVERSITY: DRIVERS AND CONSEQUENCES<sup>9</sup>**

#### **Abstract**

**Purpose:** This paper intends to capture alumni's assessments and perceptions about decisive dimensions of their commitment towards their alma mater. Their academic experience and current situation are highlighted. Moreover, their perception about the role of Higher Education Institution (HEI) in this commitment-relationship is likewise valuable to get their involvement.

**Design:** The study took place at a Portuguese university. Three focus groups, with 21 participants, were conducted to get consistent information permitting further developments. Data were analysed through NVivo software.

**Findings:** The study gives interesting insights revealing dimensions such as the relationships with teachers, extra-curricular activities and initiation as decisive in their academic experience (AE). Recommending and sharing their experience, underline evidence of what they are willing to give back. A strong sense of belonging defined alumni statements, as well as pride at being part of the university. But they all demand an effective ability of the university to communicate with them.

**Value:** Overall conclusions offer a clear scenario of alumni's commitment, giving HEI's management valuable clues to improvement, but its responsibility in this commitment-relationship was also stressed. Moreover, results also provide strong contributions to literature enabling other HEIs to replicate the study or simply use the results for their own development.

**Keywords:** Relationship marketing, university, alumni, commitment-relationship, perceptions, focus group

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<sup>9</sup> Article under review.

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## 2.1 Introduction

The global knowledge economy defines new and complex challenges to the education market, with particular emphasis in the third sector, as it must rapidly respond to profound changes in its environment. European HEIs face a context of increasing competition, financial difficulties and demographic changes, which require innovative responses to achieve competitiveness, and marketization has been definitively one of them.

HEIs' role goes beyond teaching and research, as they are central pillars in economic and social development as service providers (Schlesinger *et al.*, 2015). Relationships with their stakeholders have become a core issue among the strategies to keep HEIs in a competitive position, which is supported by a more professional management structure, based in a customer-driven culture (Oplatka and Hemsley-Brown, 2007).

Relationship marketing (RM) frames approaches to students as main stakeholders, in order to strengthen their loyalty. A loyal student will become a loyal alumnus in the future, and the long term-relationships with alumni will provide significant benefits to HEIs (e.g. Alwi and Kitchen, 2014; Helgesen and Nettet, 2007; Hennig-Thurau *et al.*, 2001; McAlexander and Koenig, 2001). To sustain such relationships, both alumni and HEI must be strongly committed to it. The higher the commitment, the more the intention to remain in the relationship (Morgan and Hunt, 1994).

Commitment consists of affective and cognitive features, explaining individual attitudes and behaviour in a relationship (Nora and Cabrera, 1993; Sargeant and Woodliffe, 2005). HEIs' administrators must clearly understand determinants and consequences of alumni's commitment. Ultimately, they must understand their alumni (Skari, 2013).

This premise sets the starting point of this study, catching their opinions and feelings about a set of questions that may define their commitment. This study's main goal is the collection of robust information about drivers and consequences of commitment in such a way that a theoretical framework can arise to guide future studies.

This research took place at a Portuguese university. A qualitative study is conducted through alumni focus groups. Data analysis takes place through NVivo software. Analysis takes into consideration the following dimensions: (1) academic experience (AE) –

identifying the decisive factors that influence commitment; (2) after graduation (current situation) – aspects that may influence the willingness to commit; (3) kinds of giving back – identification of the different ways alumni can give their collaboration to university; (4) university's commitment towards them – what they expect from the university.

The alumni-alma mater commitment-relationship represents a profitable field for research, and these results provide HEIs with data to take into account when making accurate decisions. This study will bring interesting contributions, and certainly new questions will arise to feed more investigation. Moreover, its replication may help other HEIs to get answers for their questions, especially on what concerns Portuguese HEIs.

This paper is organized as follows: the next section presents the literature review, followed by an in-depth presentation of the methodology; the third section presents the results and a discussion of the findings; the conclusions and implications are presented in the fourth section; and limitations and suggestions for further research are presented in the final section.

## 2.2 Literature Review

Marketing concepts have been implemented in the daily strategies of higher education (HE) sector, underlying a brand new language among management routines. A widespread marketization of HE responds to internationalization and globalization (Hemsley-Brown and Oplatka, 2006). Furthermore, assertive responses to growing demands on their mission, together with financial and management efficiency concerns, must be found. The role of HEIs upon society development is framed by the production and transference of knowledge and innovation. The efficiency and skills they put into this process, along with the constant improvement shown, embody the challenge to achieve competitiveness.

Literature on education marketing first appeared in the USA and UK. Initial studies were conducted back in the seventies and eighties, when terms like marketing and marketing research entered the academic world, borrowed from the business context (Litten, 1980). Works developed at the time were theoretical-normative in nature and based on models for business purposes (Hemsley-Brown and Oplatka, 2006).

Moreover, marketing approaches in HEIs were far from being in accord, due to the duality in the interpretation of students as customers and as products in the educational process (Litten, 1980; Conway *et al.*, 1994). The connotation of marketing with a pure business context threatening the values of education as commercial values of competition, were incompatible with the goal to provide equal opportunities for learning development (Harvey, 1996). Furthermore, marketing was often assumed as merely advertisements and public relations (Hemsley-Brown and Oplatka, 2006).

On the nineties, HE was seen as a pure element of the services sector. Education is primarily “people based”, rather than “equipment based” (Mazzarol and Soutar, 1999). Canterbury (2000) recognizes that educational services have the same characteristics as those in the service industry. However, the inherent complexity of the service delivered demands serious prudence in the transfer of methods used in the business sector to the HE field. The choice of the institution that Canterbury (2000) calls the “unique decision”, the lack of information in what to look for, and the influence and the effect of family matters on that choice are pieces in a complex puzzle that frame marketers' decisions.

Students, as main stakeholders, must be attracted and retained in a very competitive market (Kotler and Fox, 1995). The capability of retaining students can be defined as the securing of students' loyalty and the certainty of their satisfaction. The focus lies now on fostering relationships (defensive marketing) instead of acquisition (offensive marketing) (Helgesen, 2008). A different approach, through a customer-driven culture (Martin *et al.*, 2015; Oplatka and Hemsley-Brown, 2007), relies on relationship marketing. Institutions realize the importance of economic customer values that arise in this process (Grönroos, 1994), and this important concept drives marketing strategies in the HE market as it stresses a strong competitive advantage. When students understand the values embedded in an educational service, they commit to the relationship. Having committed students gives HEIs' advantages, as they can positively influence the quality of teaching and research development and, later, they become committed alumni (Hennig-Thurau *et al.*, 2001).

Sociological and psychological perspectives explain commitment in human relations. Whereas for sociologists, commitment is framed by social factors that compel individuals to perform a consistent action, psychologists explain commitment by decisions that tend to maintain a behaviour (Sargeant and Woodliffe, 2005).



Commitment has been widely studied, and strong contributions appear in an RM context, through research applied in industrial and commercial organizations. Some examples are the studies of Huselid and Day (1991), where the interactions between organizational commitment and involvement were considered to predict turnover. Mowday and colleagues (1979) put the focus on measuring attitudinal commitment in organizations to ascertain how it is related to employee behaviour. Organizational commitment encompasses items such as: affinity; values; the certainty of having done a good choice; loyalty and sense of belonging to the organization (Nora and Cabrera, 1993). Grossman (1999) stated that commitment is the feeling of being voluntarily tied to a firm.

The commitment-relationship in a relational exchange tended to be valorised if the partners recognize benefits coming from the extent of it. Geyskens and colleagues (1996) describe commitment as a nuclear element for successful RM, and therefore the research targets are the factors that contribute to the maintenance, development and enhancement of commitment. Because commitment is the intention to guarantee the relationship, different motivations can underlie this intention, which implies different types of commitment. These authors stress affective (emotional) and calculative (cognitive) commitment as psychological states. Affective commitment is related to the appreciation of a relationship, whereas calculative commitment refers the perception of the inherent switching costs of leaving it.

When applied to HEIs, and concerning relationships with alumni, the concepts are quite similar. The nature of alumni commitment is rooted in a sense of belonging, shared values and identification with their alma mater; in other words, affective commitment. Furthermore, the alumni-alma mater relationship is also assessed in terms of switching costs and benefits, stressing the calculative dimension through different services they expect from HEIs, in terms of career advice, consulting support and free library access, among many others. The skill to offer benefits and value to their students and alumni gives HEIs advantages in building strong relationships (Ravald and Grönroos, 1996).

Commitment is mostly influenced by AE. A set of experiences at this period of a student's lifetime defines feelings about and relationships with their alma mater (Gaier, 2005; McAlexander and Koenig, 2001). These feelings enhance the sense of belonging and oneness through the identification with the university in general (Wilkins and Huisman, 2013; Mael and Ashforth, 1992). Mentioned experiences are multi-dimensional, considering all the educational resources offered, such as the course itself,

support services, campus facilities and campus life, among many others (Browne *et al.*, 1998; Elliot and Shin, 2002).

Alumni assess their AE, evaluating the resources at their disposal, the quality of service received and the establishment of interpersonal relationships. Outcomes of this assessment forge different dimensions like satisfaction, image, trust, values and quality (e.g. Newman and Petrosko, 2011; Brown and Mazzarol, 2008; McAlexander *et al.*, 2003; Voss and Voss, 1997).

Commitment is a determinant of the cooperative behaviour. In terms of the alumni-alma mater relationship, it encompasses different facets, such as: willingness to recommend; selection of the institution for further study; joining the alumni association; voluntary support; mentoring; keeping in touch; receiving the newsletter; and influencing through their professional and personal connections (e.g. Iskhakova *et al.*, 2016; Gallo, 2012; Alwi and Kitchen, 2014; Helgesen and Nettet, 2007; Weerts and Ronca, 2007). Pedro and colleagues (2018) highlighted the following drivers for alumni commitment: (1) willingness to continue training; (2) recommendation of institution and the course; (3) participation; and (4) sense of belonging.

In a calculative perspective, alumni expect to receive all sorts of benefits and services from the institution (Alnawas and Phillips, 2015). A long-term commitment-relationship depends on successful programmes to attain and retain gradual alumni involvement in the institution. To assure the effectiveness of initiatives, HEIs are challenged to know their alumni, namely, identifying the variables that most influence giving and clearly understanding who is willing to give back (Henning, 2012; Pedro *et al.*, 2018; Tom and Elmer, 1994).

The present study is conducted bearing this in mind. Empirical research in southern European countries is important, as it will contribute to developments in alumni affairs and may capture different features. The following sections present the empirical developments of this study.

## 2.3 Methodology

### 2.3.1 Research context

The research took place at the University of Algarve, a Portuguese HEI that began its activity in 1979 and encompasses both systems: polytechnic and university. Through to present day, it has had around 30,000 alumni. The alumni office began its activities in 2009. Some important initiatives have already been undertaken towards the alumni engagement, such as: a mentorship programme; alumni career award; alumni council; and alumni meetings. Approaches concerning the development and reinforcement of those relationships make up part of the institution's strategic plan. The lack of consistent information about alumni relationships is still a limitation when it comes to defining effective marketing strategies.

### 2.3.2 Research strategy and instrument development

A qualitative study took place to collect the alumni point of view and to get a closer understanding of the sense of their actions related to commitment-relationship determinants and consequences. It was also aimed at catching their expectations about the university's role in this commitment-relationship. This is an intrinsic case study, as the researcher aims for a deeper comprehension of a particular case that possesses investigative interest (Stake, 1995).

The qualitative approach enables a clarification of the phenomenon through the following perspectives: in epistemological terms, it leads to an understanding of the interpretation participants have of those dimensions; in the ontological point of view, it stresses the role alumni play on the outcomes of this reality and provides an inductive view of the relationship between theory and research (Bryman, 2012).

The focus group technique was used to collect data. This technique provides inductive reasoning, allowing the researcher to gain a thorough and comprehensive understanding of the research topic. It took place in December 2017 and January 2018 in the university facilities. A first contact inviting participants was made two weeks in advance, giving general explanation about the study and their role in it. A few days before each meeting, participants were given deeper information to avoid misunderstandings. The researcher received informed consent from all participants and also clearly stated that they could

withdraw from the study at any point. A moderately structured interview guide was produced according to the literature. Moderation was conducted by a team of two: a researcher that guided the interviews and a second assistant that helped with some direct transcription of main topics and relevant annotations which emerged during the conversation.

Each focus group discussion was scheduled for 90 minutes, but went beyond this schedule by about 15 minutes for each group. Participants' responses were audio recorded, and a verbatim transcription was made afterwards. First, every perceptible sentence was transcribed in the record, leaving blank spaces when the sound was not clear; then a review was done in order to fill blank spaces and, finally, a clear text was written, with proper grammar in place and useless elements suppressed (Guerra, 2006).

### 2.3.3 Sampling features

The sample comprised 21 individuals covering a time range from 1995 to 2012. A purposive sample was used to cover as much as possible of the different features of the graduates (e.g. graduation years; both systems university and polytechnic; alumni of night and normal schedules; representation of all formation areas; volunteers).

Regarding the participants in the focus groups, 12 were women, and their age ranged from 28 to 53 years old (mean=39, SD=7.4), and 13 usually participate in the alma mater activities. Of the participants, 10 were from the polytechnic, and 11 from the university system.

### 2.3.4 Data analysis

Data were treated through content analysis. Thematic analysis allowed a better understanding of the central meanings, including reading and rereading of the transcripts to the themes identified. Codification was conducted taking into consideration the four dimensions of the study, and categories and subcategories emerged (Guerra, 2006), regarding exclusiveness – each element belongs exclusively to a category, and exhaustiveness – language data represents all recording units without exception (Stemler, 2001). Bardin (1977) adds some more requirements to assure quality in codification: homogeneity – each category demands its own analysis dimension; relevance – a category is relevant when it fits to the analysis method and it belongs to the previous theoretical

frame; and objectivity and fidelity – the researcher must clearly define variables as well as the criterion to include them in specific categories. A semantic criterion was used to classify every recording unit (Bardin, 1977).

Categories were established through a rigorous examination of statements and framed by literature and respecting the aforementioned principles. As Clark and Vealé (2018) state, researchers must avoid personal assumptions and biases regarding the topic. Three phases of coding and categorization took place. Firstly, analysis was conducted based on the theoretical frame of each dimension in the study, but the goal was also to eventually discover specific categories from which to draw a conceptual framework, and therefore inductive and deductive analysis and constant comparison were used; afterwards, there was a second, more accurate, analysis aiming for a deeper understanding and a rearrangement of categories to establish a clear link between data and the ideas (Saldaña, 2009), which led to reducing the number of categories. Finally, a more refined reflection about the categories identified justifies reclassification of some coded data into different categories and subcategories. Results of this development are shown in Table 2.1. The NVivo Pro Version 11 software was used to analyse the data.

## 2.4 Results and discussion

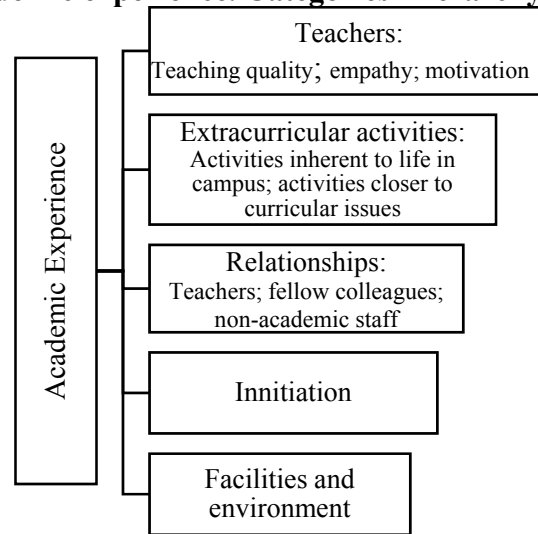
The results underline a set of categories that we can easily identify in the literature, drawing out parallelisms with other studies, revealing an overview of some determinant themes that emerged in participants' statements. Table 2.1 shows these categories and subcategories, as well as some main references to the theoretical frame. Quantitative references refer to NVivo counts.

**Table 2.1 Codification and Categorization**

Dimension	Category	Subcategory	Refs.	References
<b>Academic experience</b>	Teachers	Quality Empathy Motivation	88	e.g. Elliott and Healy (2001); Helgesen and Nettet (2007); Elsharnouby (2015)
	Extracurricular activities	Life in campus Extra activities related to course program	31	e.g. Skari (2013); Newman and Petrosko (2011); Clotfelter (2001)
	Relationships	Teachers Fellow colleagues Nonacademic staff	27	e.g. Hartman and Schmidt (1995); McAlexander and Koenig (2001)
	Initiation		21	e.g. Martin <i>et al.</i> , (2015); McAlexander and Koenig (2012)
	Facilities and environment		15	e.g. Helgesen and Nettet (2007); Elliott and Healy (2001)
<b>Commitment indicators</b>	To give back		42	e.g. Weerts and Ronca (2007); Weerts <i>et al.</i> , (2010); Iskhakova <i>et al.</i> , (2016)
		Recommendation	7	e.g. Bernal and Mille (2013); Pedro <i>et al.</i> , (2018); Wilkins and Huisman (2014)
		To share experience	5	e.g. Iskhakova <i>et al.</i> , (2016); McAlexander and Koenig (2001)
	Further Training		21	e.g. Helgesen and Nettet (2007); McAlexander and Koenig (2001); Schlesinger <i>et al.</i> , (2016)
	Pride (Associated with the sense of belonging)		16	e.g. Hennig- Thurau <i>et al.</i> , (2001); McAlexander and Koenig (2001); Nora and Cabrera (1993); Mael and Ashforth (1992)
<b>Current situation</b>	Constraints		21	e.g. Newman and Petrosko (2011); Belfield and Beney (2000)
<b>HEI's commitment</b>	Training development		18	e.g. Schlesinger <i>et al.</i> , (2016)
	Solicitations		7	e.g. Skari (2013); Belfield and Beney (2000)
	Communication	Obligation to listen	7	Bernal and Mille (2013)

*Academic experience* was explored in Q.1, and it was by far the most discussed item. All the participants expressed significant nostalgia when sharing their memories. Martin and colleagues (2015) refer to the need to consider nostalgia in future research as an important construct concerning the impacts on alumni-brand-community relationships. This dimension revealed five main categories presenting the hierarchy displayed in Figure 2.1. This section contains the analysis of categories and includes a few participants' sentences. Codification at the beginning of each sentence identifies the group (G) and the individuals (I).

**Figure 2.1 Academic experience. Categories' hierarchy**



References to *teachers* transmit either satisfaction or no satisfaction at all and are related to some important aspects, such as quality of teaching, which is described in terms of pedagogic and scientific competence.

The capacity of teachers to welcome them and their empathy towards specific situations were also mentioned. They feel that there was a deep understanding about their situation and feel satisfied as a result.

There is also recognition that some teachers motivated them. There were a few statements underlining the influence teachers had on them, and they remember it as a good thing.

G3. I3 "I appreciated the understanding revealed by my teachers relating to my status as a student worker... It was easy to reach them when it was necessary...When I look back I have a pleasant memory of an institution that somehow facilitated my life."

G1. I11 "I remember teachers who motivated us especially through activities developed during classes [...]"

G1. I12 "There were many teachers who had a great influence on me [...]"

Acknowledging *teachers* as a significant item in alumni memories is in accordance with the literature, and it seems to be related to the fact that students spend much of their time in classes and in permanent contact with their teachers, who play a key role in their instruction. Teachers are the "visible face" of the instruction system, and the literature underscores issues like *quality of teaching; teaching methods; pedagogical quality; instructional effectiveness; teachers' ability*, which may influence satisfaction and image determinants of student/alumni loyalty (Helgesen and Nettet, 2007; Elliott and Healy,

2001). Our findings bring interesting issues to the general discussion concerning an RM framework. They underline the teachers' key role in the process, which goes beyond the academic instruction to high quality human interactions (Elsharnouby, 2015), and simultaneously allows a deeper clarification of the variable itself, revealing that teachers play an important role in their evolution as human beings. Even the hard work and tough challenges they were faced with are seen now as something decisive for their personal growth and, therefore, as very valuable. McAlexander and Koenig (2001) also refer this issue as a determinant for alumni loyalty.

*Extracurricular activities* seem to have a deep influence on their memories, and positive feelings arise. It is worthwhile to mention the achievements resulting from those activities that seem to influence the positive feelings.

For analysis, were considered the activities inherent to students' organizations and volunteer work as well as those under the curricular scope.

Examples of the former activities reveal a great involvement in the life on campus as an instance in academic association and in the academic musical group (Tuna) as well as in other specific campus groups. On the other hand, experiences in the second type of activities are now recognized as determinant to their development as human beings and future professionals.

G1. I5 "[...]As a member of the academic association I was allowed to participated in many activities in other institutions... and I must confess that almost 90% of my life as a student university was spend in the "Tuna", it offered me the chance to develop decisive soft skills."

G3. I9 "[...]It was important for me to be a member of AIESEC. That experience allowed me to open my mind[...]"

G1. I12 "[...]the most exciting moments I remember, were when I had the chance to participate in an international conference of tourism students in Madrid... those moments were very important for us[...]"

*Extracurricular activities* are frequently mentioned in literature as strong antecedents of alumni giving (e.g. Clotfelter, 2001; Gaier, 2005; Newman and Petrosko, 2011). Those activities allow students to develop their sense of responsibility, to benefit from extra learning that is not achieved at the classroom level and provide them with several interactions that help their development as citizens (Skari, 2013) and they also involve a considerable amount of fun (McAlexander and Koenig, 2001). Martin and colleagues (2015) mentioned that those students who are active in university activities tend to



become more active and engaged alumni in the future. Astin (1984, p. 518) refers to student involvement as “[...] the amount of physical and psychological energy that the student devotes to the academic experience. Thus, a highly involved student is one who, for example, devotes considerable energy to studying, spends much time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students”.

Our findings underline these issues, but we also can discern a sense of pride to be a co-producer of the service. The student, as a co-producer of the educational service, has long been a focus of attention. Litten (1980) has already spoken about students as a part of the process of education, adding that benefits and satisfaction in this process depend on the skills, abilities and resources students bring to the process. Throughout the years, studies (Elsharnouby, 2015; Harvey, 1995; Schlesinger *et al.*, 2015) are conducted providing insights that may help to find performance indicators, such as student satisfaction and the fulfilment of their expectations, as well as programmes, corporate image and learning outcomes. However, the core question related to student co-creation still lacks development (Elsharnouby, 2015).

*Relationships* also play an important role in academic experience, as a decisive influence during their lives as students and afterwards. Some of them mentioned that they still maintain deep relationships with some teachers, either by the collaboration they give in seminars, workshops, other activities or simply by keeping in touch with them. Likewise, they appreciate the fact that teachers trusted and respected them; they felt important, which leads now to the maintenance of strong relationships. Relationships with fellow colleagues and with non-academic staff are also stressed as strong issues in the definition of pleasant memories.

G1. I5 "I try to maintain a relationship with some teachers to understand what is going on here, I try to keep in touch to keep updated"

G1. I4 "For me, living together is what comes to my mind and my heart was the relationship with people, with colleagues[...]"

Students' lives are strongly marked by all the interactions they develop in the learning process and connected activities. All kinds of relationships that they develop determine their feelings towards the alma mater. In an RM point of view, this is a core issue, and it has been emphasized in literature. Long-term relationships, such as the ones students develop during their academic life, may frame the way they assess and perceive the institution (Gaier, 2005; McAlexander and Koenig, 2001). Moreover, Skari (2013) also

underlines relationships with staff and with faculty as predictors of alumni giving, and other studies point out the importance of quality student-professor interaction as an antecedent of satisfaction and image (e.g. Hartman and Schmidt, 1995; Schlesinger *et al.*, 2015).

*Initiation* was a dimension identified in academic experience as decisive in their memories. It underlines an experience itself, which comprises different features: fear; integration; and relationships.

G1. I4 "I remember the first freshman reception. I was very scared I was never scolded, but I was very scared anyway. It was certainly a moment to remember[...]"

G1. I5 "[...]without initiation activities it would not be the same thing... I was hearing about the reception to the freshman and I only remember people's shoes[...]"

As determinants of student and alumni loyalty, tradition and rituals such as freshmen initiation activities deserve some reflection, as they may influence student integration and further engagement in campus life. Martin and colleagues (2015) stressed that universities should consider tradition and rituals, where those activities are included, as a means to foster student and, later on, alumni commitment. McAlexander and Koenig (2012) enhancing the role of brand community in HEIs, describing the shared tradition and rituals as a part of it and how the sense of belonging to the community will influence the support behaviour and the interactions between members. Mael and Ashforth (1992) mentioned how rituals and traditions can be important to enhancing identity and stressed that individuals who identify with the organization very likely will support the organization.

*Facilities and environment* were also remembered as underlying positive references.

G1. I4 "The library was definitely my second house[...]"

G1. I5 "I have two places that I fully remember all my student time: the library and the RFA (a student PUB)...even the surrounding environment of the city[...]"

G1. I11 "I remember a lot the several dinners in the canteen[...]"

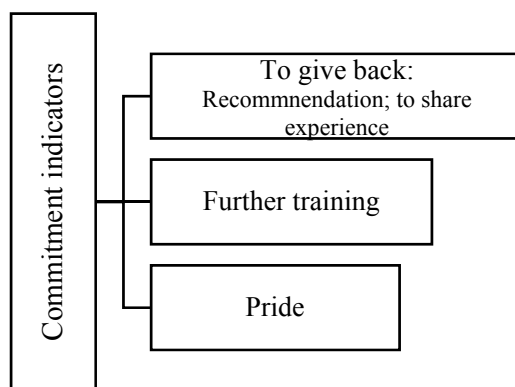
References to facilities appear currently in literature as drivers for dimensions like satisfaction, quality, image, etc. Simultaneously, references to available resources (e.g. library, computer services, study rooms, laboratories) are likely named as evaluation indicators in AE (e.g. Astin, 1984; Duarte *et al.*, 2010; Elliott and Healy, 2001).

Likely, *environment* features seem to play a key role in student satisfaction. Participants mentioned the nearby city and the general region itself, stressing cultural and entertainment aspects, available services and the climate as some examples of the good

conditions offered. Pedro and colleagues (2016) describe a tight connection between a student's relationship with the external and internal campus environment and the quality of AE. However, references to the university physical environment do not appear much in literature as a crucial aspect of student/alumni assessment. Further research on this matter may give interesting clues.

*Commitment Indicators.* Commitment Indicators were explored through Q.2, although in several comments related to other questions, commitment indicators were identified. Three main categories are shown in Figure 2.2.

**Figure 2.2 Commitment indicators. Categories' hierarchy**



The willingness to *give back* appeared in expressions stressing variables like: support; advocacy; mentoring; and all sorts of participation. However, the variables of recommending and sharing experience were the ones most mentioned. The sense of duty for giving back is perceived and mentioned during the conversation, explained by the fact that they feel grateful for what they received. It is noteworthy to mention that this concept is also likely associated with “come back”, which is stressed by the majority of participants, and a significant amount of nostalgia was identified. Although sometimes they couldn't find a clear reason to return they stressed, however, the desire to be involved. The *come back* can assume different facets, either to give a slight collaboration, to a mere visit, to do training or to give their support wherever the institution needs.

G1. I5 "[...] I feel the need to repay a little of what I was given ... That's why I always accept university invitations because it's the way a have to give back."

G2. I7 "I recommend the university [...]"

G3. I2 "[...] I really do not mind giving my contribution according to my experience...to help in promoting visits to my company as a start [...]"

Widely treated in literature, the concept *alumni giving back* holds diverse meanings. Charitable giving is a common example of alumni support that has been deeply studied. Alumni financial support is an important help in an environment of public budgeting constraints [1] (e.g. Belfield and Beney, 2000; Clotfelter, 2003; Daly, 2013; Diamond and Kashyap, 1997; Tom and Elmer, 1994; Weerts and Ronca, 2007). However, alumni influence and support goes beyond charitable giving. Volunteer behaviours play a key role in what alumni support is concerned with, producing enrichment to all activities with which they might be involved and underline an altruistic behaviour that may evolve to other stages of giving. Alumni can be excellent recruiters, lend their experience and expertise to improve academic programmes [2] and may serve as mentors (Weerts *et al.*, 2010). Their professional and personal networking is a useful means to alma mater advocacy and support (Iskhakova *et al.*, 2016).

*Recommendation* and the *will to share their experience* usually appear in literature as drivers for alumni commitment and constitute two references of the value alumni can provide to their alma mater (e.g. Helgesen and Nettet, 2007; Hennig-Thurau *et al.*, 2001; Pérez-Esparrells and Torre, 2012). Recommendation is an excellent aid to build enrolments and a cheap way of advertising. Transferring their experience and expertise may express a way of contributing to enhancing corporate quality and consequent prestige and reputation. Alumni are aware that they also benefit from this process.

*Further training* is mentioned by some participants, as a way to come back.

G1. I4 "... I do think doing a postgraduate or master's degree in the near future..."

G2. I15 "...I consider that is important from time to time to come back and review theoretical concepts... I would like to review a set of subjects, make a refresh, because there are important aspects at academic level that might help us at work..."

The investment in additional academic and professional education is a common way to come back and a proof of loyalty (Helgesen and Nettet, 2007; McAlexander and Koenig, 2001; Schlesinger *et al.*, 2016). Seen under the scope of repeat purchasing behaviour (Dick and Basu, 1994), it gives insights into loyalty and all its inherent premises. But if we take into consideration the implied concern of training quality improvement and the expressed availability to help through their experience and expertise, there is a stream of commitment relationship that gathers different concepts, such as co-producer (Elsharnouby, 2015; Wikström, 1995); partnership (Sperlich and Spraul, 2007);

involvement (Newman and Petrosko, 2011); and effort on behalf of the group (Mael and Ashforth, 1992).

The words *pride* and *proud* were mentioned mostly by those who were involved in several activities during their academic experience, and particularly in a very enthusiastic way. The feeling of belonging to a group was referred to.

G2. I5 "I always felt a huge pride reading the name of the university at the main entrance ... it was a privilege of being of this institution and I still feel it[...]"

G3. I9 "[...] I'm proud of studying here...I'm proud of the institution.... Whenever there is news about accomplishments make me very proud about it [...]"

*Pride* is an emphatic element in commitment-relationship, it reflects positive and consistent outcomes of a relationship, and it is associated with: an emotional attachment in the relationship and to the sense of belonging and share of values, leading to organizational identification and the perception of oneness with or belongingness to an organization (Mael and Ashforth, 1992; Tom and Elmer, 1994; Wilkins and Huisman, 2013). Some studies refer to loyalty to the institution, and the sense of belonging or maintaining membership in the institution (Nora and Cabrera, 1993) or affiliation with the institution (Mael and Ashforth, 1992). Hennig-Thurau and colleagues (2001) refer to emotional commitment as a central construct to explain student loyalty. This construct encompasses, among other items, two expressing pride related to the university and to the course. However, research towards a deeper understanding of the concept and the respective consequences is needed.

*Current situation.* Answers to Q.3 show that constraints to collaboration are: work demands which consume their time; family (children); and distance (the fact that they live far from the university and the costs of transportation are high). However, all the participants described their will to participate and collaborate whenever they are asked, and stressed their availability to cooperate, despite some constraints.

G1. I1 "Whenever I am invited, I'm very pleased to collaborate [...]"

G3. I9 "[...] as long as there are requests for collaboration [...]"

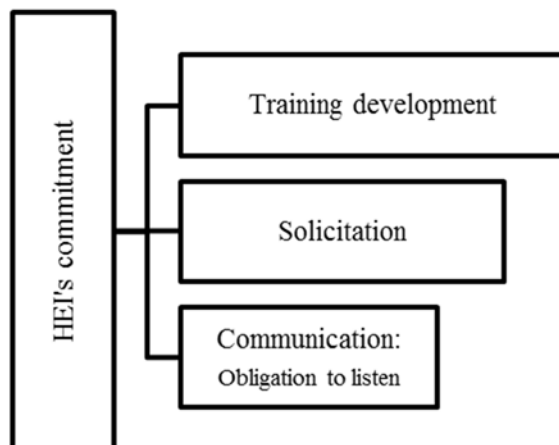
G2. I15 "It's up to the university to ask for my collaboration...Usually when the university asks for my collaboration for whatever it is necessary, I accept the invitation."

Research commonly describes the *current situation* to explain alumni donations, because it includes a considerable number of determinants (social, personal, cultural, professional, demographic, etc.). Several studies refer to it (e.g. Belfield and Beney, 2000; Clotfelter,

2001; Newman and Petrosko, 2011), stressing a perspective of charitable giving which compels one to consider the *income* factor as a common determinant. This study's approach is not charitable giving hence, answers are given bearing in mind non-monetary support. Work, family and place of residence are some constraints pointed out, but are not stressed as limits to their support, and participants underline their will to cooperate instead. This perspective raises further questions. For a start, HEIs must deeply explore the availability to cooperation. This thought takes us to a key point, much mentioned by participants: solicitation, which is described in the next section.

*HEI's commitment.* Finally, Q.4 aimed to capture participants' opinions about what is expected from the university in the commitment-relationship. HEIs have a huge responsibility in conducting this process. Opinions focused on three main aspects, shown in Figure 2.3.

**Figure 2.3 HEI's Commitment. Categories' hierarchy**



Regarding *training development*, many demand quality improvements of the courses and post-graduation. The crucial role the university must play in its environment was stressed. Although this remark had a strong professional basis (all the participants are working in the region, some are entrepreneurs, and others are workers in important and big companies), the feeling of obligation to contribute to the quality was common.

G3. I2 "I think there is a lot that can be done to bring former students to university in terms of training. Training alternatives responding to current needs of the labor market must be provided [...]"

G3. I3 "[...] university must be more involved with the community, it shall promote the practical component of the courses... I hope there is a closer connection to the job market [...]"

Describing *solicitations*, alumni expect that the HEI will ask for their contribution. The message they transmit (even though sometimes subtle) is that they are important, available to collaborate and the alma mater just has to ask.

- G1. I1 "Whenever I am invited, I'm very pleased to collaborate [...]"
- G3. I9 "[...] as long as there are requests for collaboration [...]"
- G2. I15 "It's up to the university to ask for my collaboration...Usually when the university asks for my collaboration for whatever it is necessary, I accept the invitation."

*Communication* was described as crucial to involvement, as well as the need to improve communication strategies. Furthermore, this dimension is quite connected to the *obligation to listen*, which was often mentioned as they feel that alma mater forgets its former students. The fact that they have very important information to deliver, experiences to share and contributions to give towards the development of the institution were used as arguments for the need to build and reinforce channels to active listening.

- G2. I17 "There should be a better communication with the community [...]"
- G2. I19 "Communication with students has to be improved, namely the one sent by email...the university's website should also be revised...to strength image [...]"
- G1. I5 "I hope university has the ability to listen to us, I expected at the very least to be heard [...]"

Literature underlines the role HEIs play in fostering the relationship with their alumni. Skari (2013) refers to strategies to keep alumni connected and engaged; community-building efforts to connect alumni and to build relationships; and promotion of events and publications and solicitation strategies. Bernal and Mille (2013) suggest initiatives towards alumni engagement regarding the following dimensions: communication, loyalty and social, professional interactions. McAlexander and Koenig (2001) advise marketers to bet on trusting relationships with alumni, showing them that the institution values their opinions. Moreover, authors also stressed the need to assess alumni communications and activities, bearing in mind the reinforcement of alumni connections and relationship reciprocity through customer relationship marketing applications.

When it comes to solicitations issues, it is a fertile field. Skari (2013, p. 24) describes "people give because they are asked", and thus institutions need to improve their ability to ask. Alumni must understand the purposes of solicitations, otherwise these have no effectiveness (Belfield and Beney, 2000). These concepts were developed regarding charitable giving however, they apply perfectly to non-monetary giving.

## 2.5 Conclusions and implications

### 2.5.1 Main conclusions

The alumni-alma mater commitment-relationship is a dynamic process and fed by many sources. Four main dimensions define the theoretical basis: *academic experience; current situation; commitment indicators; and HEI's commitment.*

Prior to any objective conclusion, it is important to mention the enthusiastic involvement of the focus group participants, simply because the call was about their alma mater. A significant amount of nostalgia was also common, and generally, positive feelings emerged along conversation. Participant's responses at each dimension revealed useful information for further developments. Memories about their time as students revealed that their interactions with teachers and the empathy and motivation towards students are strong reasons to keep in touch with some of the teachers. Extracurricular activities and inherent accomplishments were mentioned as important at that time, along with all the fun those moments provided, which ultimately contribute to fostering relationships that are strongly embedded in their memories. Initiation of freshman remains in their memories but does not gather consensus. Some remember it as funny moments and a good aid for integration, while a few talk about it in a negative way. Places, facilities and environments came into the discussion as well, and also underlie positive references.

When the question about their current situation was posed, constraints about lack of time and work demands appear to be the main reasons for limiting their participation, although they all stressed their will to collaborate and underlined the HEI's solicitations as crucial to leveraging their engagement. Indeed, solicitations appear among drivers in HEI's commitment, revealing a challenging task that HEIs must include in their strategies. Moreover, structured and consistent communication with alumni seems to be a crucial starting point to achieve positive outcomes in this relationship. The institution's responsibilities were pointed out, and they increase when the HEI assumes the role of *listener*, transmitting a clear sign of recognition of its alumni's importance. Maintaining training quality was also mentioned as a determinant on this commitment relationship. Alumni are aware that training quality has a key role in HEI's prestige, meaning potential



personal and professional benefits for them, too. This may explain their concern about it and highlight their availability to help in this process.

Finally, concerning indicators of alumni commitment, a common sense of duty to give back what they received seems to mark their commitment. The concept *to come back* often appeared during the conversation associated with that duty, underlining a significant amount of nostalgia and denoting will to participate, collaborate and give support whenever it is needed.

Regarding *giving back*, recommendation and the share of their experience stood out, and both encompass a deep sense of value that alumni can provide to their alma mater.

The willingness to get further training emerged not only as a means for academic valorisation, but also as a way to be involved again and a reinforcement of their sense of belonging, as was very much pronounced through several references to pride. Indeed, this feeling arises as one attribute for alumni commitment, emphasizing a consistent starting point for a relationship, but giving the university strong reasons to conduct this process with caution. The next section presents some implications resulting from these findings.

### 2.5.2 Main implications

HEIs are given a set of challenges and opportunities for improvement through findings in this study, namely, the ones related to *academic experience* and *HEI's commitment*. Implementing measures aiming the enhancement of student engagement will guarantee engaged alumni in the future; enhancement of student/alumni satisfaction; and prestige and a positive image. The involvement of all direct intervenient of the educational process in these activities should be a concern when designing strategies. Follow some suggestions:

- ✓ Academic reputation of professors plays an important role in student's perceived image, but that reputation is a complex construct that justifies a deeper study by itself. Yet, continuous efforts to teaching quality improvement must be done, because training is the main service students require. *Empathy* and *motivation* in a relational marketing perspective demand coherent messages towards professors, enhancing the importance students give to those attributes, and shall emphasize the key role professors have in the educational process.

- ✓ Regarding *extracurricular activities*, university officials must implement practices to encourage enrolment in non-academic activities. Even academic activities developed outside the classroom have a strong impact on student development, and consequently, strategies must be devoted to the reinforcement of these activities in every training programme.
- ✓ The *relationships* students foster influence their future involvement with the alma mater, and therefore they must be cultivated (McAlexander and Koenig, 2001). Every event, activity, and communication campaign must be prepared under this scope.
- ✓ Effective communication channels should be a priority, to give HEIs the necessary abilities to relate with their students/alumni, especially to treat their feedback in an efficient way.
- ✓ *Initiation activities* should be considered within integration strategies.
- ✓ A permanent assessment of *training quality* must underline strategic planning.
- ✓ Every effort to enhance organizational culture should raise *pride* and *sense of belonging*.

## 2.6 Limitations and suggestions for further studies

This study has some limitations, which pave the way for further studies, as follows:

- ✓ This work applies to only one institution. To assure generalization of findings, this study should be applied to other similar HEIs.
- ✓ This sample comprised a diversity of alumni features, which do not allow a comparison between different groups. A further study, selecting homogeneous groups, could provide interesting data leading to identification of clusters.
- ✓ The scope of the study comprised four dimensions, each of which allowed generic findings. Regarding the key role of each, conducting a study for every dimension is worthy.
- ✓ The study took place in a certain period of time, and thus it gives a static perception of reality. A longitudinal study over time could map alumni perceptions and behaviours, permitting researchers to observe how these topics evolve.

- ✓ The findings remain at the understanding level of the perceptions and judgments participants make about the topics and they help to develop ideas and hypotheses. Further quantitative studies would provide deeper insights through the examination of the relationships between and among variables, and generalize results from a bigger alumni sample.

Endnotes:

[1] American Colleges and Universities received \$11.37 Billion in alumni gifts, 14.5% of the total amount of fundraising (Council for Aid to Education 2017). The European reality is, nevertheless, different. Fundraising with alumni still lacks development as well as the sense of a donor culture. However, there is the exception, the United Kingdom, where some universities generate close to 10% of philanthropic fundraising (Estermann and Pruvot, 2011).

[2] The possibility of giving their help to improve some of aspects in terms of courses' curricula through their skills and experience was described. The quality of training is a concern shown by most of the participants when it comes to the match between the needs of the labour market and what the institution offers.

## 2.7 References

- Alnawas, I., & Phillips, C. (2015). Alumni orientation: Development of the construct. *Journal of Nonprofit & Public Sector Marketing*, 27(2), 183-215.
- Alwi, S. F., & Kitchen, P. J. (2014). Projecting corporate brand image and behavioral response in business schools: Cognitive or affective brand attributes? *Journal of Business Research*, 67(11), 2324-2336.
- Astin, A. W. (1984). Student Involvement: A Development Theory for Higher Education Student Involvement: A Developmental Theory for Higher Education. *Journal of College Student Development*, 40(5), 518-529.
- Bardin, L. (1977). *Análise de Conteúdo* [L'Analyse de Contenu]. Lisboa: Edições 70.
- Belfield, C. R., & Beney, A. P. (2000). What Determines Alumni Generosity? Evidence for the UK the UK. *Education Economics*, 8(1), 65-80.
- Bernal, A., & Mille, D. (2013). Initiating alumni engagement initiatives: Recommendations from MFT alumni focus groups. *Contemporary Family Therapy*, 36, 300-309.
- Brown, R. M., & Mazzarol, T. W. (2008). The importance of institutional image to student satisfaction and loyalty within higher education. *Higher Education*, 58(1), 81-95.

- Browne, B. A., Kaldenberg, D. O., Browne, W. G., & Brown, D. J. (1998). Student as customer: Factors affecting satisfaction and assessments of institutional quality. *Journal of Marketing for Higher Education*, 8(3), 1-14.
- Bryman, A. (2012). *Social research methods* (4<sup>th</sup> ed.) New York: Oxford University Press.
- Cabrera, A. F., Weerts, D. J., & Zulick, B. J. (2005). Making an Impact with Alumni Surveys. *New Directions for Institutional Research*, 126, 5-17.
- Canterbury, R. M. (2000). Higher Education Marketing: A Challenge. *Journal of Marketing for Higher Education*, 9(3), 15-24.
- Clark, K. R., & Vealé, B. L. (2018). Strategies to Enhance Data Collection and Analysis in Qualitative Research. *Radiologic Technology*, 89(5), 482-485.
- Clotfelter, C.T. (2003). Alumni giving to elite private colleges and universities. *Economics of Education Review*, 22(2), 109-120.
- Conway, T., Mackay, S., & Yorke, D. (1994). Strategic Planning in Higher Education: Who Are the Customers? *International Journal of Educational Management*, 8(6), 29-36.
- Daly, S. (2013). Philanthropy, the new professionals and higher education: The advent of directors of development and alumni relations. *Journal of Higher Education Policy and Management*, 35(1), 21-33.
- Diamond, W. D. & Kashyap, R. K. (1997). Extending Models of Prosocial Behavior to Explain University Alumni Contributions. *Journal of Applied Social Psychology*, 27(10), 915-928.
- Dick, A. S., & Basu, K. (1994). Customer Loyalty: Toward an Integrated Conceptual Framework. *Journal of the Academy of Marketing Science*, 22(2), 99-113.
- Duque, L. (2014). A framework for analyzing higher education performance: Students' satisfaction, perceived learning outcomes, and dropout intentions. *Total Quality Management*, 25(1), 1-21.
- El-Hilali, N., Al-Jaber, S., & Hussein, L. (2015). Students' satisfaction and achievement and absorption capacity in higher education. *Procedia - Social and Behavioral Sciences*, 177, 420-427.
- Elliott, K. M., & Healy, M. A. (2001). Key factors influencing student satisfaction related to recruitment and retention. *Journal of Marketing for Higher Education*, 10(4), 1-11.
- Elliott, K. M., & Shin, D. (2002). Student satisfaction: An alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management*, 24(2), 197-209.
- Elsharnouby, T. H. (2015). Student co-creation behavior in higher education: the role of satisfaction with the university experience. *Journal of Marketing for Higher Education*, 1241, 1-25.

- Estermann, T. & Pruvot, E. B. (2011). *Financially Sustainable Universities II. European universities diversifying income streams*. European University Association. Retrieved from: [http://www.eua.be/Libraries/publications-homepage-list/Financially\\_Sustainable\\_Universities\\_II\\_-\\_European\\_universities\\_diversifying\\_income\\_streams.pdf?sfvrsn=2](http://www.eua.be/Libraries/publications-homepage-list/Financially_Sustainable_Universities_II_-_European_universities_diversifying_income_streams.pdf?sfvrsn=2)
- Fogg, P. (2008). How Colleges Use Alumni to Recruit Students. *Chronicle of Higher Education*, 54(34), B13-B14.
- Farrow, H., & Yuan, C. Y. (2011). Building Stronger Ties With Alumni Through Facebook to Increase Volunteerism and Charitable Giving. *Journal of Computer-Mediated Communication*, 16(3), 445-464.
- Gaier, S. (2005). Alumni Satisfaction with Their Undergraduate Academic Experience and the Impact on Alumni Giving and Participation. *International Journal of Educational Advancement*, 5(4), 279-288.
- Galego, C., & Gomes, A. (2005). Emancipação, ruptura e inovação: o focus group como instrumento de investigação [Emancipation, rupture and innovation: the focus group as a research tool]. *Revista Lusófona de Educação*, 5, 173-184.
- Gallo, M. (2012). Beyond philanthropy: Recognizing the value of alumni to benefit higher education institutions. *Tertiary Education and Management*, 18(1), 41- 55.
- García-Aracil, A. (2008). European graduates' level of satisfaction with higher education. *Higher Education*, 57, 1-21.
- Geyskens, I., Steenkamp, J.B., Scheer, L., & Kumar, N. (1996). The Effects of Trust and Interdependence on Relationship Commitment: A Trans- Atlantic Study. *International Journal of Research in Marketing*, 13, 303-317.
- Grönroos, C. (1994). From marketing mix to relationship marketing: Towards a paradigm shift in marketing. *Management Decision*, 32(2), 1-27.
- Grossman, R.P. (1999). Relational versus discrete exchanges: the role of trust and commitment in determining customer satisfaction. *The Journal of Marketing Management*. 9(2), 47-58.
- Guerra, I.C. (2006). *Pesquisa Qualitativa e Análise de Conteúdo- Sentidos e formas de uso* [Qualitative Research and Content Analysis- purposes and ways of use]. Cascais. Príncipia Editora.
- Hartman, D. E., & Schmidt, S. L. (1995). Understanding student/alumni satisfaction from a consumer's perspective: The effects of institutional performance and program outcomes. *Research in Higher Education*, 36(2), 197-217.
- Harvey, J. A. (1996). Marketing schools and consumer choice. *International Journal of Educational Management*, 10(4), 26-32.

- Helgesen, Ø. (2008). Marketing for higher education: A relationship marketing approach. *Journal of Marketing for Higher Education*, 18(1), 50-78.
- Helgesen, Ø., & Nettet, E. (2007). Images, Satisfaction and Antecedents: Drivers of Student Loyalty? A Case Study of a Norwegian University College. *Corporate Reputation Review*, 10(1), 38-59.
- Hemsley-Brown, J., & Oplatka, I. (2006). Universities in a competitive global marketplace. A systematic review of the literature on higher education marketing. *International Journal of Public Sector Management*, 19(4), 316-338.
- Hennig-Thurau, T., Langer, M. F., & Hansen, U. (2001). Modeling and Managing Student Loyalty: An Approach Based on the Concept of Relationship Quality. *Journal of Service Research*, 3(4), 331-344.
- Henning, G. W. (2012). Leveraging student engagement for student and institutional success. *About Campus*, 17(4), 15-18.
- Huselid, M. A., & Day, N. E. (1991). Organizational Commitment, Job Involvement, and Turnover: A Substantive and Methodological Analysis. *Journal of Applied Psychology*, 76(3), 380-391.
- Iskhakova, L., Hilbert, A., & Hoffmann, S. (2016). An Integrative Model of Alumni Loyalty—an Empirical Validation Among Graduates from German and Russian Universities. *Journal of Nonprofit & Public Sector Marketing*, 28(2), 129-163.
- Jiewanto, A., Laurens, C., & Nelloh, L. (2012). Influence of Service Quality, University Image, and Student Satisfaction toward WOM Intention: A Case Study on Universitas Pelita Harapan Surabaya. *Procedia - Social and Behavioral Sciences*, 40, 16-23.
- Kotler, P., & Fox, K. F. A. (1994). *Marketing estratégico para instituições educacionais* [Strategic marketing for educational institutions]. São Paulo: Editora Atlas.
- Litten, L. (1980). Marketing Higher Education: Benefits and Risks for the American Academic System. *The Journal Of Higher Education*, 51(1), 40-59.
- Mael, F., & Ashforth, B. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, 13, 103-123.
- Mainardes, E. W., Alves, H., Raposo, M., & Domingues, M. J. C.S. (2012). Marketing in higher education: A comparative analysis of the Brazil and Portuguese cases. *International Review on Public and Nonprofit Marketing*, 9, 43-63.
- Martin, M., Moriuchi, E., Smith, R., Moeder, J., & Nichols, C. (2015). The importance of university traditions and rituals in building alumni brand communities and loyalty. *International Academy of Marketing Studies Journal*, 19(3), 107-119.

- McAlexander, J.H., Kim, S.K., & Roberts, S.D.(2003). Loyalty: the influences of satisfaction and brand community integration. *Journal of Marketing of Theory and Practice*, 11(4), 1-11.
- McAlexander, J. H., & Koenig, H. F. (2001). University Experiences, the Student-College Relationship, and Alumni Support. *Journal of Marketing for Higher Education*, 10(3), 21-44.
- McGrath, J. M. (2002). Attitudes about Marketing in Higher Education: An Exploratory Study. *Journal of Marketing for Higher Education*, 12(1), 1-14.
- Mazzarol, T. W., & Soutar, G. N. (1999). Sustainable competitive advantage for educational institutions: a suggested model. *The International Journal of Educational Management*, 13(6), 287-300.
- Misanew, A. & Tadesse, M. (2014). Determinants of Student and Staff Satisfaction with Services at Dilla University, Ethiopia: Application of Single and Multilevel Logistic Regression Analyses. *Social Indicators Research*, 119(3), 1571-1587.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(July), 20-38.
- Mowday, R. T, Steers, R.M., & Porter, L.W. (1979). The measurement of organizational commitment. *Journal of vocational behaviour*, 14, 224-247.
- Newman, M. D., & Petrosko, J. M. (2011). Predictors of Alumni Association Membership. *Research in Higher Education*, 52(7), 738-759.
- Nora, A, & Cabrera, A. F. (1993). The construct validity of Institutional Commitment: A Confirmatory Factor Analysis. *Research in Higher Education*, 34(2), 243-262.
- Okunade, A. A., & Berl, R. L. (2000). Determinants of Charitable Giving of Business School Alumni. *Research in Higher Education*, 38(2), 201-214.
- Oplatka, I., & Hemsley-Brown, J. (2007). The incorporation of market orientation in the school culture: An essential aspect of school marketing. *International Journal of Educational Management*, 4, 292-305.
- Pedro, E., Leitão, J., & Alves, H. (2016). Does the quality of academic life matter for students' performance, loyalty and university recommendation? *Applied Research in Quality of Life*, 11, 293-316.
- Pérez-Esparrells, C., & Torre, E.M. (2012). The Challenge of Fundraising in Universities in Europe. *International Journal of Higher Education*, 1(2), 55-66.
- Pedro, I., Pereira, L. & Carrasqueira, H. (2017). Determinants for the commitment relationship between Alumni and the Alma Mater. *Journal of Marketing for Higher Education*, 1241, april, 1-25.
- Ravald, A., & Grönroos, C. (1996). The value concept and relationship marketing. *European Journal of Marketing*, 30(2), 19-30.

- Rodrigues, S. L. (2012). *Os fatores que influenciam a formação da imagem das instituições de ensino superior: o caso do Instituto Politécnico de Leiria na perspetiva dos professores do ensino secundário do distrito de Leiria*. [Factors influencing the formation of the image of higher education institutions: the case of the Polytechnic Institute of Leiria in the perspective of secondary school teachers in the district of Leiria] (Unpublished master's thesis). Polytechnic Institute of Leiria.
- Rusbult, C.E. (1983). A longitudinal test of the investment model: the development (and deterioration) of satisfaction and commitment in heterosexual involvements. *Journal of Personality and Social Psychology*, (45), 101-117.
- Ryan, G. W., & Bernard, H. R. (2000). Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (2nd ed., pp. 769-802). Thousand Oaks, CA: Sage.  
Retrieved from:  
<http://nersp.nerdc.ufl.edu/~ufruss/documents/ryanandbernard.pdf>
- Saldaña, J. (2009). *The Coding Manual for Qualitative Researchers*. Thousand Oaks, California. Retrieved from:  
[http://stevescollection.weebly.com/uploads/1/3/8/6/13866629/saldana\\_2009\\_the-coding-manual-for-qualitative-researchers.pdf](http://stevescollection.weebly.com/uploads/1/3/8/6/13866629/saldana_2009_the-coding-manual-for-qualitative-researchers.pdf)
- Sargeant, A., & Woodliffe, L. (2005). The Antecedents of Donor. *Nonprofit Management & Leadership*, 16(1), 61-78.
- Schlesinger, W., Cervera, A., & Iniesta, M. A. (2015). Key elements in building relationships in the higher education services context. *Journal of Promotion Management*, 21(4), 475-491.
- Schlesinger, W., Cervera, A., & Pérez-Cabañero, C. (2016). Sticking with your university: The importance of satisfaction, trust, image, and shared values. *Studies in Higher Education*, 5079, 1-17.
- Silva I., Veloso A.L., & Keating J.B. (2014). Focus Group: Considerações Teóricas e metodológicas [Focus Group: Theoretical and methodological considerations] . *Revista Lusófona de Educação*, 26, 175-190.
- Skari, L. (2014). Community College Alumni: Predicting Who Gives. *Community College Review*, 42(1), 23-40.
- Sperlich, A. M. A., & Spraul, K. (2007). Students as active partners: Higher education management in Germany. *The Innovation Journal: The Public Sector Innovation Journal*, 12(3), 1-19.
- Stake, R.E. (1995). *The art of case study research*. Thousand Oaks. California: Sage Publications.



- Stemler, S. (2001). An Overview of Content Analysis. Practical assessment, research & evaluation, 7(17), 137-146.
- Weerts, D. J., Cabrera, A. F., & Sanford, T. (2010). Beyond giving: Political advocacy and volunteer behaviors of public university alumni. *Research in Higher Education*, 51, 346-365.
- Weerts, D. J., & Ronca, J. M. (2007). Profiles of Supportive Alumni: Donors, Volunteers, and Those Who "Do It All". *International Journal of Educational Advancement*, 7(1), 20-34.
- Wilkins, S., & Huisman, J. (2014). Corporate images' impact on consumers' product choices: The case of multinational foreign subsidiaries. *Journal of Business Research*, 67(10), 2224-2230.
- Wikström, S. (1995). The customer as co-producer. *European Journal of Marketing*, 30(4), 6-19.
- Wong, H., & Wong, H. (2011). Building Relationship between Education Institutions and Students: Student Loyalty in Self-Financed Tertiary Education. *IBIMA Business Review Journal*, 1-22.
- Wunnava, P. V., & Lauze, M. A. (2001). Alumni giving at a small liberal arts college: evidence from consistent and occasional donors. *Economics of Education Review*. 20(6), 533-54.



## CHAPTER 3

### STUDY 2- UNDERSTANDING ALUMNI-ALMA MATER COMMITMENT RELATIONSHIPS: UPSTREAM AND DOWNSTREAM<sup>10</sup>

#### **Abstract**

Alumni are among higher education institutes' (HEIs) assets of greatest value, but persistent work is required to strengthen relationships with them. This study sought to collect reliable information on these commitment relationships to increase the existing knowledge about this topic in terms of both theoretical and practical issues.

A mixed method approach was used in the research. First, a qualitative study was conducted through focus group interviews to identify alumni's perceptions of their commitment relationships with their HEI. Next, quantitative research was conducted using the previous study's findings. An online survey allowed 2,008 usable questionnaires to be collected. The data were analyzed using structural equation modeling to test the research hypotheses.

HEIs' commitment, cognitive commitment, and affective commitment are direct, positive drivers of commitment relationship. The results highlight the key role of HEIs' commitment and social and academic integration in the relationship development process. Alumni assert that their desire to share experiences, provide help, and participate in alumni meetings are the reasons they get involved.

This study's findings offer insights into HEIs' alumni management that can be used to guide communication policies. These institutes' administration needs to focus on aspects such as concerns about overall quality, the key role of students in co-creation, strategies to involve students in campus life, the solicitation actions, and the benefits and advantages alumni can gain from their engagement. In addition, pride, a sense of belonging, and trust function well as a framework for HEIs' communication policies. This research's findings also contribute to the literature because they reinforce the importance of strengthening

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specific aspects related to alumni-alma mater commitment relationship in contexts with a weak alumni culture.

Keywords: Commitment relationship; alumni; affective commitment; cognitive commitment

### 3.1 Introduction

Communicating with students and alumni is a constant concern of higher education institutions (HEIs) because these individuals are among HEIs' main stakeholders (Kotler & Fox, 1995), so measures are taken to guarantee closer relationships with them. Researchers have provided decisive information enabling these institutions to develop better and more effective measures to strengthen these relationships, but more needs to be done especially in the field of European higher education research.

Whereas HEIs in the United States and United Kingdom have consolidated their strong alumni culture, the vast majority of European institutions are still struggling to build the foundations for this aspect of their organizational culture. Progress has been made toward developing more professionalized alumni management (Alves, et al., 2010). In addition, marketing strategies, that is, relationship marketing (RM), have been implemented to generate knowledge about alumni's needs and expectations (Al-Alak, 2006; Alves et al., 2010; Elliott & Shin, 2002; Helgesen, 2008; Hemsley-Brown & Oplatka, 2006) in order to sustain long-term relationships based on loyalty. HEIs realize student and alumni loyalty is important to these institutions' survival in an extremely competitive market (e.g., Helgesen & Nettet, 2007; Hennig-Thurau, et al., 2001; Iskhakova, et al., 2016; Snijders, et al., 2019) as this loyalty brings them various benefits.

Therefore, the present study sought to understand the drivers that explain alumni-alma mater commitment relationship (CR) in the context of a European HEI. The results obtained contribute to research on commitment because this is closely connected to loyalty and decisive to relationship enhancement (Morgan & Hunt, 1994; Sargeant & Woodliffe, 2005). According to Morgan and Hunt (1994, p. 23), "a committed partner wants the relationship to endure infinitely and is willing to work at maintaining it." Alumni-alma mater CR is an asset that HEIs recognize as crucial, so more information about these

relationships is needed. This gap in the literature led to the development of the current research's main goal: to achieve a deeper understanding of alumni-alma mater CR. This objective entailed the identification of drivers and indicators to address the following research questions:

*RQ1: What are the drivers of alumni-alma mater CR?*

*RQ2: What are the indicators of alumni-alma mater CR?*

The study took place in a young Portuguese university that has taken on the responsibility of fostering an alumni culture for a community of about 30,000 individuals. The first initiatives concerning alumni involvement achieved satisfactory results, but these also revealed an urgent need to overcome constraints caused by a lack of integrated policies toward alumni engagement. The development of internal and external marketing strategies based on more accurate information could be decisive in assuring greater success.

This research was conducted in two phases. First, a qualitative study encompassing 3 focus groups was done to capture alumni's opinions and perceptions of 4 main dimensions: academic experience (AE), commitment indicators, the HEI's commitment (HC), and specific features of the alumni's current situation. Second, quantitative research was carried out based on the findings of the first phase and a literature review in order to construct a theoretical model estimated with structural equation modeling (SEM). An online survey was conducted with a target population of 12,078 alumni.

The overall results of both phases were used to define a general framework characterizing alumni-alma mater CR and emphasizing elements such as the HEI's commitment, cognitive commitment (CC), affective commitment (AC), and social and academic integration as drivers. The indicators identified include a desire to provide help, share experiences, and participate in alumni meetings. This information was critical to formulating the valuable insights the study's findings offer HEI administrators. Furthermore, this research's results make a significant contribution to the development of theoretical frameworks related to alumni-alma mater CR.

The remainder of this paper is organized as follows. Section two discusses the theoretical background of the proposed conceptual model. An in-depth explanation of the methodology appears in section three. Next, the results and discussion are provided in section four, followed by the relevant conclusions and their implications. The study's limitations and suggestions for further research conclude the paper.

## 3.2 Theoretical background and hypotheses formulation

### 3.2.1 Theoretical background

Alumni affairs are currently a common issue for public and private HEIs worldwide. The benefits of maintaining closer relationships with their alumni is a compelling reality that guides their actions, strategies, and communication with their students and graduates. The growing research on alumni has consistently generated insights into the best measures to enhance student and alumni loyalty and meet these stakeholders' expectations.

RM frameworks have repeatedly been developed as part of studies in this field (e.g., Hennig-Thurau et al., 2001; Iskhakova et al., 2016; Wong & Wong, 2011). RM has caused a shift in perceptions of marketing's fundamentals (Grönroos, 1994), which are also essential in educational contexts because they underline the economic benefits of promoting long-term relationships with stakeholders (Grönroos, 1994; Kotler & Fox, 1994). When marketing is analyzed within the scope of customer retention as a central premise of RM, it offers HEIs a new perspective on how to deal with serious constraints. These include, among many others, a decreased number of students, reduced public funding, and extensive competition in the market.

HEIs deal with a large number of stakeholders, for example, students, alumni, governments, suppliers, academic and non-academic staff, local communities, and parents (Mainardes, et al., 2014). Each of these presents particularities that require specific strategies to deal with them (Alves & Raposo 2007). However, students and alumni are the main stakeholders who challenge HEIs to develop innovative and effective strategies to attract new students and establish long-term relationships with alumni (Kotler & Fox, 1995; McAlexander & Koenig, 2001; Schlesinger, et al., 2015).

HEIs are aware of all the benefits they can receive through their alumni's material and nonmaterial support (Iskhakova, et al., 2017), including what this represents in terms of competitive advantages (Schlesinger et al., 2015). The support graduates provide to their alma mater is of paramount importance because this support facilitates gains in revenue and reinforces HEIs' visibility and reputation. The benefits can be categorized into four areas. The first is the feedback alumni give their alma mater based on their academic and professional experience. The second is that they are their alma mater's best advertising channel, and, third, they actively contribute to HEIs' cooperative development of quality

and image. Fourth, alumni make financial contributions, and, last, they employ HEIs' graduates and invest in further academic education (Pedro, et al., 2018).

### 3.2.2 Hypotheses development. Direct and indirect determinants of CR

To sustain a long-term relationship, all parties must be committed to it, and they will work to maintain it if they perceive that it has inherent value and benefits (Morgan & Hunt, 1994). Commitment binds partners to the relationship, forming a solid basis for its maintenance (e.g., Geyskens, et al., 1996; Morgan & Hunt, 1994; Sargeant & Woodliffe, 2005).

HEIs have defined general goals and specific targets to strengthen relationships with their alumni, and these strategies have been incorporated into frameworks and used to leverage developments in research on alumni-alma mater CR. Commitment has been identified as a determinant of RM, as the following studies show. Alnawas and Phillips (2015) highlight the importance of HC to achieving a well-established alumni orientation (AO) program. Hennig-Thurau et al. (2001), in turn, report that a relationship quality model can be defined by three important elements: perceived quality, trust, and commitment. In addition, Holdford and White (1997) argue that students will continue their relationship with their alma mater if they recognize its commitment to offering them benefits such as quality education, lower tuition fees, better job placements, and networking opportunities. Finally, Adidam, et al., (2004) assert that high levels of commitment to relationships are an important way to prevent dropout intentions.

Although the literature reveals a lack of consensus on the nature of the commitment construct, two types of commitment appear to stand out in the existing research: AC and CC, which is also known as "calculative commitment" (e.g., Fullerton, 2003; Geyskens et al., 1996; Hennig-Thurau et al., 2001; Holdford & White, 1997; Iskhakova et al., 2017; Sargeant & Woodliffe, 2005). Both types relate to psychological states. AC reflects an emotional state, social sentiment, and emotional attachment to the organization in question, and AC is based on identification, shared values, belongingness, and dedication (Fullerton, 2003; Holdford & White, 1997), which appear to play a key role in CRs (e.g., Adidam et al., 2004; Hennig-Thurau et al., 2001; Holdford & White, 1997; Wong & Wong, 2011). These findings led to the present study's first hypothesis being formulated:

*H1: AC positively influences alumni-alma mater CR.*

CC has to do with economic evaluations of the relationship's costs and benefits, as well as whether significant anticipated termination or switching costs are associated with leaving the relationship (Fullerton, 2003; Geyskens et al., 1996; Iskhakova et al., 2016; Sargeant & Woodliffe, 2005). Alnawas and Phillips (2015) suggest that alumni who engage in CR with their alma mater may be motivated by personal intangible benefits. Alumni's perspective can be characterized by all the benefits and advantages they expect to receive from their alma mater through the relationship. These expectations' influence on CRs must be examined, which is why the second hypothesis was developed for the current research:

*H2: CC positively influences alumni-alma mater CR.*

The literature stresses that HC has a key role in the CR process (Alnawas & Phillips, 2015; Holdford & White, 1997). HC is probably where these relationships start. This assumption challenges HEIs to find the best marketing strategies for reaching alumni in two ways. HEIs first need to recognize that CRs begin when students enroll in the institution and continue to grow throughout their AE, which means continuous engagement via programs and activities is required (e.g., McAlexander & Koenig, 2001).

AE is a time of transition and experimentation that is transformational (McAlexander & Koenig, 2001). Students' assessment of services and relationships' overall quality and their satisfaction and perceived cooperative image of their HEI, among other factors, influence their engagement level (e.g., Aghaz, et al., 2015; Helgesen & Nettet, 2007; Jiewanto, et al., 2012; Pedro et al., 2018; Snijders et al., 2019). Therefore, HEIs' CR strategies at this stage must take these issues into account. Students' assessments will define their future relationship with the alma mater. After graduation, new interests and motivations appear and influence CRs in different ways.

In terms of the second challenge to HEIs' strategies, an in-depth understanding of AO is needed to ensure CRs' continuity, and HEIs need to make every effort to build AO, which represents their commitment to serve alumni. Moreover, to guarantee a successful AO, a set of assumptions must be emphasized. First, these institutions' communication and information dissemination should keep alumni aware of what is going on inside their HEI. Second, relationships should promote feelings of belongingness and loyalty. Last, networks and engagement can be used to attract alumni and encourage them to be involved (Alnawas & Phillips, 2015). The importance of HC in the literature led to the following hypotheses being formulated for the present study:

*H3: HC positively influences alumni-alma mater CR.*



*H4: HC positively influences alumni's AC.*

As stressed above, HEIs are responsible for fostering CR on different levels, namely, student's integration into their alma mater's social and academic life (SAI). SAI is thus an extremely broad concept that comprises different but complementary issues. According to McAlexander, et al., (2003, p. 2–3), brand community integration includes “the cumulative connections of consumers with the product, the brand, other consumers and the company.”

A parallel with students' experiences can be made. Students engage in a series of interactions with teachers, staff, and fellow classmates that can form strong and long-lasting bonds and emphasize organizational identification (Ashforth & Mael, 1989; McAlexander & Koenig, 2001). The research on this process contributed to the current study's next hypothesis:

*H5: HC positively influences student's SAI.*

In addition, engaging students in extracurricular activities and being active and regular members of student academic groups fosters a high degree of integration that bring out a sense of belonging (Hennig-Thurau et al., 2001). This also enhances perceived quality through students' co-creation behaviors (Elsharnouby, 2015). These findings resulted in the present research's next hypothesis:

*H6: SAI positively influences alumni's AC.*

After graduation, some drivers of alumni commitment arise from their family, professional, and demographic features (i.e., their current situation (CS)), including, among many others, place of residence, marital status, number of children, years since graduation, age, work demands, and income. These drivers play a key role in influencing alumni's engagement in HEI activities (e.g., Belfield & Beney, 2000; Clotfelter, 2001; Newman & Petrosko, 2011). The previous qualitative research's results indicate that alumni's CS may also influence how HEIs announce activities to alumni, namely, solicitations and communication, which indirectly influences CR afterwards. Based on the above findings, the follow hypothesis was proposed for the present study:

*H7: Alumni's CS positively influences HC.*

Satisfaction often appears in the literature as a determinant of students and alumni's behavioral intentions. Satisfaction has to do with the favorability of subjective evaluations of various outcomes related to students' AE (e.g., Brown & Mazzarol, 2008; Elliott & Shin, 2002; Helgesen & Nettet, 2007; Meštrović, 2017). Helgesen and Nettet (2007) refer to satisfaction as students' individual assessment of different outcomes and experiences

of education on campus. Student satisfaction, furthermore, is important to determining HEIs' perceived image so that favorable evaluations enhance this image because it is derived from positive experiences (Helgesen & Nettet, 2007). In the current research, satisfaction was assumed to be mediated by image because of Helgesen and Nettet's (2007) work, thereby leading to the next hypothesis's development:

*H8: Satisfaction positively influences HEIs' image.*

The literature supports the marked importance of HEIs' image because it influences prospective students' choices, alumni's commitment, and the public's general attitudes (Duarte, et al., 2010; Ivy, 2001; Pedro et al., 2018). However, image is a difficult dimension to deal with because of the complexity of many possible sources, individual perceptions, and different combinations of elements that build images (Sung & Yang, 2008). Since image is a set of attitudes or beliefs individuals have about organizations, then university image can be described as the sum of attitudes, beliefs, and emotions toward a specific university, which can play a key role in alumni's emotional attachment and behavioral responses (Alwi & Kitchen, 2014; Jiewanto et al., 2012; Sung & Yang, 2008). In line with these findings, the present study sought to assess the extent to which these responses have an impact on commitment, which resulted in the next two hypotheses:

*H9: HEIs' image positively influences alumni's AC.*

*H10: HEIs' image positively influences alumni-alma mater CR.*

Service quality is a decisive dimension resulting from students' assessments of their AE, which can constitute an essential competitive advantage for HEIs. Service quality commonly appears as a duality created by customers' expectations and their perceptions of service experiences (Grönroos, 1994; Kotler, Wong, Saunders, & Armstrong, 2005; Zeithaml & Bitner, 1996). HEIs must make an effort to improve students' perceptions of a set of features and attributes related to the services these institutions provide. Simultaneously, they need to evaluate service performance because this affects students' satisfaction and behavioral intentions, which has implications for the current research on the CR dimension (Cronin, et al., 2000; Lazibat, et al., 2014; Meštrović, 2017; Shah, 2009).

In the present study, the assumption was made that service quality indirectly influences CR through satisfaction. However, given that CC reflects alumni's evaluation of the benefits to be gained from CR, perceived quality may support alumni's willing to obtain those benefits. These findings contributed to the following hypotheses:

*H11: Service quality positively influences alumni satisfaction.*

*H12: Service quality positively influences alumni's CC.*

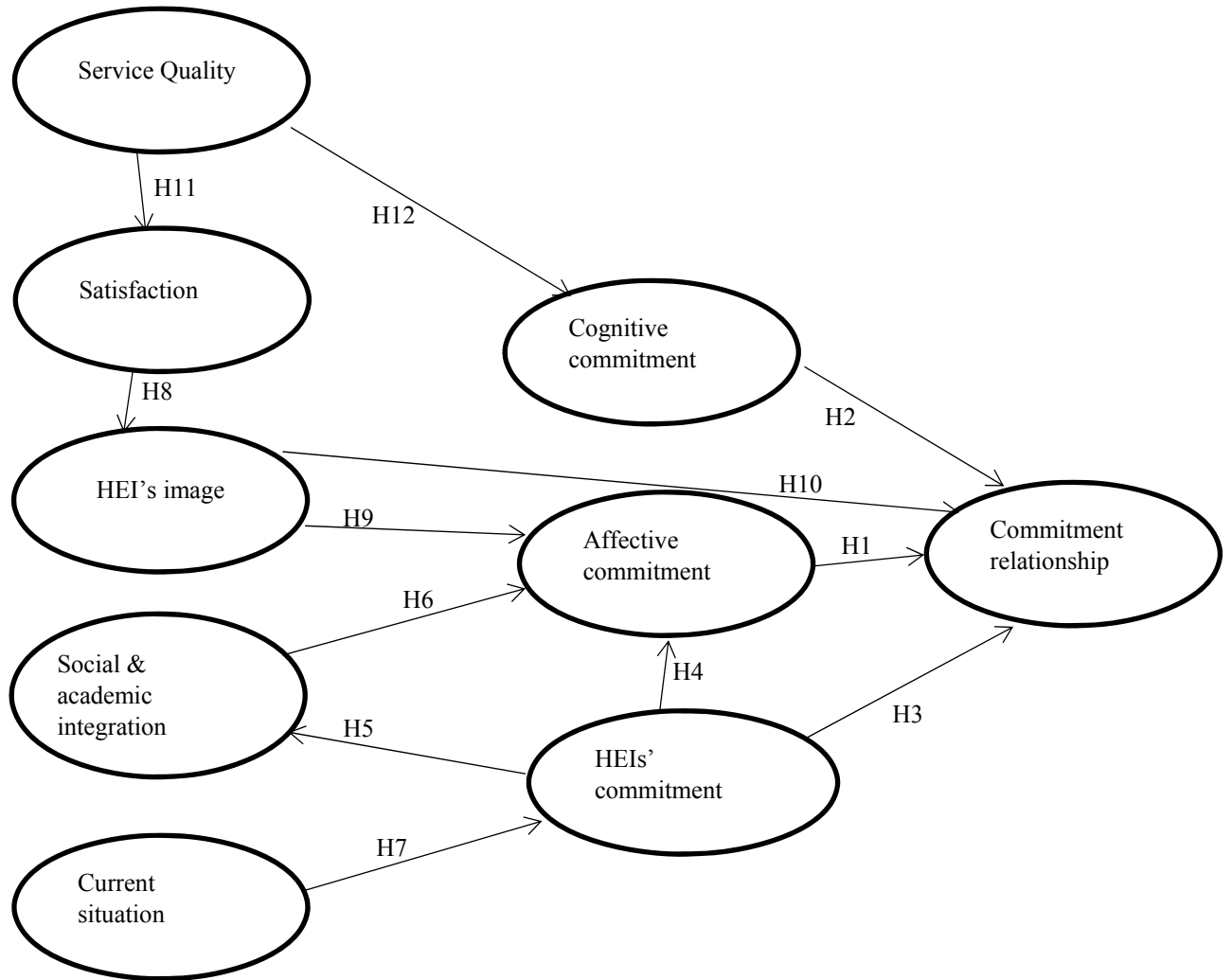
Bearing in mind this research's main objective of developing a deeper understanding of alumni-alma mater CR' drivers and indicators, the conceptual framework presented in Figure 3.1 was created. The theoretical model's constructs are presented in Table 3.1.

**Table 3.1 Theoretical model's constructs**

<b>Dimensions</b>	<b>Components</b>	<b>References</b>
<b>Satisfaction</b>	(Sat1) Program course content in general (Sat2) Program course content adequacy (Sat3) Teachers' pedagogical skills in general (Sat4) Teachers' scientific skills in general (Sat5) Teachers' empathy towards students (Sat6) Teachers' ability to motivate students (Sat7) Teachers' support (Sat 8) Relationships with teachers (Sat9) Buildings adequate for teaching purposes (Sat10) Buildings adequate for students' wellbeing (Sat11) Campuses and surrounding spaces adequate for students' wellbeing (Sat12) Campuses and surrounding spaces adequate for students' needs	e.g. Elliott & Healy, 2001; Elliott & Shin, 2002; García-Aracil, 2008; Hartman & Schmit, 1995; Helgesen & Nasset, 2007; McAlexander & Koenig, 2012; Meštrović, 2017
<b>HEI's Image</b>	(I1) Positive perceptions of course (I2) Positive perceptions of HEI (I3) Positive perception of support service performance (I4) Public's positive perception of the HEI	e.g. Duarte et al., 2010 ; Ivy, 2001 ; Pedro et al., 2018 ; Sung & Yang, 2008
<b>Service Quality</b>	(Q1) Overall quality of support services performance (Q2) Overall quality of teaching services (Q3) HEI's effective communication with students in general	e.g. Cronin, et al., 2000; Grönroos, 1994; Kotler, et al., 2005; Lazibat, et al., 2014; Meštrović, 2017; Zeithaml et al., 2006
<b>Social &amp; Academic Integration (SAI)</b>	(Sai 1) Participation in groups and/or associations (Sai 2) Active participation in extracurricular activities (Sai 3) Participation in new student integration activities (i.e., traditions) (Sai 4) Pleasant campus experience (Sai 5) Relationships with fellow classmates (Sai 6) Relationships with non-academic staff	e.g. Ashforth & Mael, 1989; Hennig-Thurau et al., 2001; McAlexander, et al, 2003; McAlexander & Koenig, 2001
<b>Current situation (CS)</b>	(Cs1) Place of residence's influence on relationship with the HEI (Cs2) Workplace's influence on relationship with the HEI (Cs3) Work demands' influence on relationship with the HEI (Cs4) Family demands' influence on relationship with the HEI	e.g. Belfield and Beney, 2000; Clotfelter, 2001; Newman and Petrosko, 2011

<b>Dimensions</b>	<b>Components</b>	<b>References</b>
<b>Cognitive commitment (CC)</b>		
	(Cc1) Advantages off collaboration with the HEI	e.g. Fullerton, 2003; Geyskens et al., 1996; Sargeant & Woodliffe, 2005
	(Cc2) Practical aspects of relationship with the HEI	
<b>Affective commitment (AC)</b>		
	(Ac1) A sense of belonging to the HEI	e.g. Adidam, et al., 2004; Fullerton, 2003;
	(Ac2) Pride in having been a student of the HEI	Holdford & White, 1997; Hennig-Thurau et al., 2001; Snijders et al., 2019; Wong and Wong, 2011
	(Ac3) Feeling part of the HEI's success	
	(Ac4) Compliments to the HEI equated with personal compliments	
	(Ac5) Criticism of the HEI produce embarrassment	
	(Ac6) Perception of the HEI as a trusted institution	
	(Ac7) HEI's logo brings pleasure	
<b>HEI's commitment (HC)</b>		
	(Hc1) HEI requests alumni collaboration whenever necessary	e.g. Aghaz et al., 2015; Helgesen & Nettet, 2007; Jiewanto et al., 2012;
	(Hc2) HEI maintains active communication with alumni	McAlexander and Koenig, 2001; Pedro et al., 2018
	(Hc3) HEI guarantees proper methods used to gather alumni's opinion	
	(Hc4) HEI ensures the quality of its services	
	(Hc5) HEI concerned about alumni	
<b>Commitment relationship (CR)</b>		
	(Cr1) HEI chosen for future training	e.g. Alnawas and Phillips, 2015;
	(Cr2) HEI recommended to family and friends	Geyskens et al., 1996; Hennig-Thurau et al., 2001; Morgan and Hunt, 1994;
	(Cr3) Desire to share experience with current students	Sargeant & Woodliffe, 2005
	(Cr4) Desire to provide help in through HEI activities	
	(Cr5) Desire to participate in fundraising campaigns	
	(Cr6) Desire to participate in alumni meetings	

**Figure 3.1 Proposed conceptual model**



### 3.3 Research methodology

#### 3.3.1 Research context

This research was conducted at a relatively new Portuguese public university, which was founded in 1979 and currently has two educational subsystems—a university and a polytechnic university—on three campuses. In the 2017–2018 academic year, during which the data collection took place, the university had 30,471 alumni according to the information provided by Academic Services. The Alumni Office restarted its activities in 2014, which contributed to the alumni’s growing interest in the university’s different activities. However, to develop more consistent initiatives and better marketing strategies,

more alumni research was needed, especially when severe budget constraints forced the HEI to find more cost-effective initiatives.

### 3.3.2 Research strategy and instrument development

A qualitative study was done first that involved three focus groups. A set of 21 alumni participated in a moderately structured interview conducted following the guidelines given in the literature. Participants' opinions were elicited on four main topics: AE, commitment indicators, HC, and features of alumni's current situation.

Prior to beginning each interview, the study's objective was explained, and assurances of anonymity were given. Audio recordings were made of the participants' responses, and a verbatim transcription was produced afterwards. First, transcripts were made of every perceptible sentence in the recordings, and blank spaces were left wherever the words were unclear. Then, the transcripts were revised to fill in the spaces, and, finally, a clear text version was written, with standard grammar and without irrelevant content (Guerra, 2002). NVivo Pro Version 11 software was used to process the data through content analysis. After a rigorous codification procedure based on the four previously mentioned dimensions, categories and subcategories emerged, and the underlying strong similarities were found based on the categories identified in the literature review. Table 3.2 presents a summary of this first study's results.

**Table 3.2 Summary of qualitative study’s results**

<b>Dimension</b>	<b>Category</b>	<b>Subcategory</b>
<b>Academic experience</b>	Teachers	Quality Empathy Motivation
	Extracurricular activities	Life in campus Extra activities related to course program
	Relationships	Teachers Fellow colleagues Nonacademic staff
	Initiation	
	Facilities and environment	
	<b>Commitment indicators</b>	To give back
	Further Training	
	Pride (Associated with the sense of belonging)	
<b>Current situation</b>	Constrains	
<b>HEI’s commitment</b>	Training development	
	Solicitations	
	Communication	Obligation to listen

The qualitative analysis’s main findings were used to develop the model’s multidimensional structure and ensure that the list of items accurately measured the constructs of interest (see Table 3.1 above). Next, a quantitative study was conducted to answer the research questions and test the hypotheses. This research had a cross-sectional design based on an online questionnaire that targeted the HEI’s alumni population.

The questionnaire included 10 sections: 9 sections with items assessing the constructs and 1 section with questions covering the respondents’ sociodemographic features. An 8-point Likert scale (i.e., 1 = “Extremely dissatisfied”; 8 = “Extremely satisfied”) was used to rate items about satisfaction, and another 8-point scale (i.e., 1 = “Strongly disagree”; 8 = “Strongly agree”) was used to measure items covering the remaining dimensions. The even number of points was selected to counteract the tendency to selected middle-scale answers. The measurement scale selected was a quantitative metric (i.e., an 8-point scale) to assure the results’ adjustment and robustness could be assessed.

A pretest was conducted with a convenience sample of 24 alumni who were not included in the survey’s target population. Some improvements were made based on the suggestions received.

### 3.3.3 Sampling procedure

The target population comprised all alumni who had completed their bachelor's degree at least 3 years previously at the time of the data collection, which was a total of 23,823 individuals, but, due to missing email addresses, the final list included 12,078 alumni. Only 11,719 received the invitation to participate in the survey because 357 emails were returned unopened due to delivery failures. Two reminders with a lag of two weeks were sent to the alumni who had received but had not responded to the email. The final response rate was 17.13%, which corresponded to 2,008 usable questionnaires.

### 3.3.4 Data analysis and software

The data were processed by using IBM SPSS Version 21 software to conduct descriptive analysis. The conceptual model was tested by means of IBM SPSS AMOS Version 25 software, based on a two-step modeling approach. This approach permitted a more complete validation of the measurement model (Anderson & Gerbing, 1988) through confirmatory factor analysis (CFA), which assessed the theoretical model's adjustment quality. Subsequently, the overall model was adjusted, and the structural model's plausibility was evaluated. Regarding fitness indices, construct reliability was measured via Cronbach's alpha and construct composite reliability (CCR). Convergent validity was verified by average variance extracted (AVE). Factorial and discriminant validity were also checked.

## 3.4 Results and discussion

### 3.4.1 Summary of findings

The general findings provided by the descriptive statistics gathered contributed to the development of an alumni profile. This information is shown in Table 3.3.



**Table 3.3 Alumni profile**

		<b>n=2008</b>	<b>%</b>
<b>Gender</b>			
	<b>Female</b>	1250	62.3
	<b>Male</b>	758	37.7
<b>Age</b>	<b>Mean=37.06; SD=8.377</b>		
	<b>20-29</b>	448	22.3
	<b>30-39</b>	854	42.5
	<b>40-49</b>	532	26.5
	<b>50-59</b>	155	7.7
	<b>60-69</b>	16	0.8
	<b>70-79</b>	3	0.2
<b>Marital status</b>			
	<b>Single</b>	852	42.4
	<b>Married</b>	694	34.6
	<b>Divorced</b>	91	4.5
	<b>Widow</b>	8	0.4
	<b>Union of fact</b>	363	18.1
<b>Number of children</b>	<b>Mean=0,74; SD=0,89</b>		
	<b>0</b>	1051	52.3
	<b>1</b>	499	24.9
	<b>2</b>	399	19.9
	<b>3</b>	50	2.5
	<b>4</b>	8	0.4
	<b>5</b>	1	0.0
<b>Residence</b>			
	<b>Same region as the HEI</b>	548	27.3
	<b>Region within the HEI's district</b>	772	38.4
	<b>Region within the HEI's country</b>	490	24.4
	<b>Abroad</b>	198	9.9
<b>Working place</b>			
	<b>Same region as the HEI</b>	556	27.7
	<b>Region within the HEI's district</b>	742	37.0
	<b>Region within the HEI's country</b>	503	25.0
	<b>Abroad</b>	207	10.3

The majority are women (62.3%). The alumni's mean age is 37.06 with a standard deviation (SD) of 8.377, and 42.4% are single, which may explain why 52.3% have no

children. Most alumni live (38.5%) and work (37%) in the same county as the HEI, which could be a favorable factor when initiatives requiring their involvement are developed.

The average values of each questionnaire item provided an initial overview based on the respondents' assessments. Regarding the alumni's satisfaction, the higher average values appeared in the items related to teachers, especially empathy (mean = 6.19; SD = 1.411), scientific skills (mean = 6.07; SD = 1.329), and relationships (mean = 6.35; SD = 1.367). Among the items related to the HEI's image, perceptions of university courses (mean = 6.09; SD = 1.468) and of the HEI (mean = 6.30; SD = 1.306) stood out as particularly favorable. Service quality items revealed that the overall quality of teaching services has the highest average value (mean = 6.09; SD = 1.317). In terms of social and academic integration, relationships with fellow classmates and non-academic staff also have a high average (mean = 7.03; SD = 1.149 and mean = 6.85; SD = 1.208, respectively). Campus experiences further appear to play an important role (mean = 6.65; SD = 1.371).

Regarding the alumni's CS, the item with the highest average value is the place of residence (mean = 5.26; SD = 2.489). Evaluations of CC gave higher values to the advantages of the collaborations with the HEI (mean = 5.40; SD = 2.079). According to the average values of the AC components, the alumni feel a sense of belonging (mean = 6.01; SD = 1.878) and pride (mean = 6.46; SD = 1.673), as well as seeing the HEI as a trustworthy institution (mean = 6.34; SD = 1.546). These items appear to play an important role in the assessment of the AC dimension. With regard to CRs, higher average values reveal that the alumni plan to recommend the HEI (mean = 6.35; SD = 1.654) and to choose the HEI for further education and training (mean = 5.75; SD = 1.964), which are the items with the highest overall scores.

### 3.4.2 Measurement model

The reflective measurement model's estimation was carried out by using the maximum likelihood method. The skewness and kurtosis values were near zero, thereby confirming an assumption of normality (Marôco, 2010). The squared Mahalanobis distances indicated the existence of multivariate outliers ( $p_1$  and  $p_2 < 0.001$ ) (Schumacker & Lomax, 2004). The fitness indices also suggested modifications were needed since their values were considered weak: chi-squared ( $\chi^2$ ) = 23647,981;  $\chi^2/\text{degrees of freedom (df)}$  = 21.6160; probability value ( $p$ -value)  $< 0.001$ ; GFI = 0.625; NFI = 0.731; CFI = 0.740; and RMSEA = 0.104 (Marôco, 2010).

Model adjustments were achieved by removing the outliers (98), adding trajectories because correlations between residues were identified, and removing saturated items (i.e., Sat1, Sat3, Sat6, Sat8, Sat9, Sat11, Sat12, I3, Q1, Ac5, Cr1, Cr2, CR5, Q1, Sai1, and Sai2) in different dimensions. The CFA model presented acceptable fitness indices afterwards, as can be confirmed in Table 3.4. The Cronbach's alpha values confirm each variable's reliability or internal consistency (see Table 3.4).

Various authors suggest, however, that alternative measures should be used, such as the CCR, which estimates the internal consistency of each variable's reflective items. These variables' values should be above 0.7 (Marôco, 2010), which proved to be the case for all the items in the present study. All the variables' factorial validity was also confirmed as  $\lambda$  values are above 0.5 (Marôco, 2010) (see Table 3.4).

**Table 3.4 Measurement model estimation**

Items	Services' Quality	HEI's Image	Satisfact.	Cognitive Commit.	Affect. commit.	Current situat.	Social Acade. Integ.	Commit. Relation.	Hei's Commit.
	$\lambda$	$\lambda$	$\lambda$	$\lambda$	$\lambda$	$\lambda$	$\lambda$	$\lambda$	$\lambda$
*Q 2	0.912								
Q 3	0.810								
I 1		0.787							
I 2		0.898							
I 4		0.720							
Sat 2			0.744						
Sat 4			0.798						
Sat 5			0.702						
Sat 7			0.699						
Sat 10			0.533						
Cc 1				0.922					
Cc 2				0.536					
Ac 1					0.849				
Ac 2					0.909				
Ac 3					0.845				
Ac 4					0.801				
Ac 6					0.844				
Ac 7					0.847				
Cs 1						0.656			
Cs 2						0.916			
Cs 3						0.862			
Cs 4						0.630			
Sai 3							0.431		
Sai 4							0.903		
Sai 5							0.768		
Sai 6							0.716		
Cr 3								0.880	
Cr 4								0.920	
Cr 6								0.764	
Hc 1									0.880
Hc 2									0.960
Hc 3									0.819
Hc 4									0.480
Hc 5									0.679
<b>Cronbach Alpha</b>	<b>0.867</b>	<b>0.862</b>	<b>0.849</b>	<b>0.729</b>	<b>0.947</b>	<b>0.850</b>	<b>0.811</b>	<b>0.892</b>	<b>0.883</b>
<b>CCR</b>	<b>0.914</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0.966</b>	<b>1</b>	<b>0.870</b>	<b>1</b>	<b>0.925</b>

$\chi^2 = 3165.325$ ;  $\chi^2/df = 6.47305$ ; *p-value* <0.001; GFI=0.907; PGFI=0.746; NFI=0.937; RFI=0.928; TLI=0.938; CFI=0.946; RMSEA= 0.054

Note: GFI= Goodness of fit index; PGFI= Parsimony GFI; NFI=Normed fit index; RFI= Relative fit index; TLI= Tucker-Lewis index; CFI= Comparative fit index; RMSEA= Root mean square of approximation

\*To see the meaning of the acronyms in each item please see Table 3.1.

Given that an AVE higher than or equal to 0.5 is considered a confirmation of adequate convergent validity (Fornell & Larcker, 1981), the current results demonstrate that the AVE is appropriate for all the variables since the values are all above 0.5. These range from 0.617 to 0.843, which can be seen on the diagonal in Table 3.5. In addition, discriminant validity was confirmed for most variables as their AVE value is greater than the square root of the coefficient of correlation ( $R^2$ ) between factors.

**Table 3.5 AVE values and squared correlation between factors**

Dimensions	1	2	3	4	5	6	7	8	9
Satisfaction (1)	<b>0.617</b>								
HEI's image (2)	0.762	<b>0.766</b>							
Services' quality (3)	0.799	0.925	<b>0.843</b>						
Cognitive commitment (4)	0.159	0.182	0.176	<b>0.677</b>					
Current situation (5)	0.032	0.036	0.031	0.171	<b>0.720</b>				
Commitment relationship (6)	0.118	0.162	0.124	0.201	0.065	<b>0.835</b>			
Hei's commitment (7)	0.130	0.176	0.151	0.189	0.065	0.458	<b>0.721</b>		
Affective commitment (8)	0.336	0.456	0.456	0.257	0.052	0.285	0.376	<b>0.827</b>	
Social & academic integration (9)	0.279	0.352	0.352	0.091	0.012	0.133	0.171	0.394	<b>0.640</b>

After the overall goodness of fit, validity, and reliability of the reflective measurement model was ascertained, the structural model representing each of 12 hypotheses was estimated and evaluated.

### 3.4.2 Structural model

The goodness of fit statistics indicated a poor fit, which implied the need to improve the model's adjustment:  $\chi^2 = 3610.702$ ;  $\chi^2/df = 7.079808$ ;  $p$ -value  $< 0.001$ ; GFI = 0.894; NFI = 0.928; CFI = 0.938; RMSEA = 0.056. According to the modification indices, item S2 was overloading in different dimensions, so, after its removal, the measures improved, as shown in Table 3.6

**Table 3.6 Hypotheses test**

Regression Weights			Estimate	S.E.	C.R.	P	
(H11) Satisfaction	<---	Services' quality	21.306	85.659	0.249	0.804	Rejected
(H8) HEI's image	<---	Satisfaction	0.041	0.163	0.249	0.803	Rejected
(H6) Affective commitment	<---	Social & academic integration	0.371	0.038	9.721	***	Accepted
(H4) Affective commitment	<---	HEI's commitment	0.574	0.033	17.217	***	Accepted
(H9) Affective commitment	<---	HEI's image	0.719	0.037	19.592	***	Accepted
(H1) Commitment relation.	<---	Affective commitment	0.100	0.028	3.608	***	Accepted
(H10) Commitment relation.	<---	HEI's image	0.020	0.038	0.519	0.604	Rejected
(H2) Commitment relation.	<---	Cognitive commitment	0.202	0.030	6.829	***	Accepted
(H3) Commitment relation.	<---	HEI's commitment	0.737	0.039	19.046	***	Accepted
(H12) Cognitive commit.	<---	Services' quality	0.420	0.026	16.065	***	Accepted
(H7) HEI's commitment	<---	Current situation	0.216	0.024	9.006	***	Accepted
(H5) Social & academic integ.	<---	HEI's commitment	0.477	0.029	16.749	***	Accepted
Standardized Regression Weights ( $\gamma$ )			Estimate				
Satisfaction	<---	Services' quality	0.999				
HEI's image	<---	Satisfaction	0.963				
Affective commitment	<---	Social & academic integration	0.234				
Affective commitment	<---	HEI's commitment	0.334				
Affective commitment	<---	HEI's image	0.469				
Commitment relationship	<---	Affective commitment	0.127				
Commitment relationship	<---	HEI's image	0.017				
Commitment relationship	<---	Cognitive commitment	0.166				
Commitment relationship	<---	HEI's commitment	0.547				
Cognitive commitment	<---	Services' quality	0.474				
HEI's commitment	<---	Current situation	0.232				
Social & academic integration	<---	HEI's commitment	0.441				
Squared Multiple Correlations		(R <sup>2</sup> )	Estimate				
Services' quality			0.000				
Social & academic integration			0.214				
HEI's commitment			0.078				
Current situation			0.000				
Cognitive commitment			0.244				
Satisfaction			0.999				
HEI's image			0.926				
Affective commitment			0.688				
Commitment relationship			0.492				
<b>Model Fit: <math>\chi^2= 3264.178</math>; <math>\chi^2/df= 5.818499</math>; *** <i>p-value</i> &lt;0.001; GFI=0.902; PGFI= 0.769; NFI= 0.933; RFI= 0.926; TLI= 0.936; CFI= 0.942; RMSEA=0.055</b>							

The statistics in Table 3.6 include regression coefficient weights, which reveal that 3 coefficients are statistically insignificant, so 3 hypotheses—H8, H10, and H11—were rejected. The remaining cases were confirmed at a 5% significance level. The model estimation indicated that H8 and H11 should be rejected. However, an analysis of the standardized regression coefficients ( $\gamma$ ) of these trajectories (i.e., H11  $\gamma_{11} = 0.999$ ; H8  $\gamma_8 = 0.963$ ) suggested that this information should be retained for further development concerning causal relationships between these factors (i.e., satisfaction, quality, and image). Regarding the analysis of the positive and direct effect on “commitment

relationship”, it appears: H3,  $\gamma_3=0.547$ ; H2,  $\gamma_2=0.166$ , and H1,  $\gamma_1=0.127$ .

### 3.4.3 Discussion of findings

The CR dimension has an explained variance of 49%, and the results reveal 3 direct, positive drivers and highlight the significance of HC (i.e., H3) with an effect of 0.545, which indicates HEIs play an important role in CR. The relevant literature points out that these institutions need to improve their alumni services continuously (Alnawas & Phillips, 2015; Holdford & White, 1997; McAlexander & Koenig, 2001). HC encompasses the following items: concern about alumni ( $\lambda = 0.686$ ), maintenance of quality ( $\lambda = 0.488$ ), requests for alumni’s opinion ( $\lambda = 0.825$ ), active communication ( $\lambda = 0.960$ ), and requests for alumni collaboration ( $\lambda = 0.884$ ). Regression coefficient weights are higher for communication, requests for alumni’s collaboration, and concern about their opinion, which parallels Alnawas and Phillips (2015) and Holdford and White’s (1997) results.

CC (H2) and AC (H1) explain CR, with a direct effect of 0.166. and 0.127, respectively. Hennig-Thurau et al. (2001) also assert that AC influences student loyalty. This construct’s items with the highest regression coefficient weights are those related to pride ( $\lambda = 0.913$ ), a sense of belonging ( $\lambda = 0.854$ ), the HEI’s logo ( $\lambda = 0.854$ ), and trust ( $\lambda = 0.852$ ). Regarding CC, the item with the highest regression coefficient weight is perceived advantages of collaboration ( $\lambda = 0.889$ ), which confirms to a certain extent Iskhakova et al.’s (2016) findings.

AC ( $R^2 = 69\%$ ) is explained by SAI ((H6  $\gamma = 0.234$ ), HC ((H4  $\gamma = 0.334$ ), and the HEI’s image ((H9  $\gamma = 0.469$ ), thereby confirming Alnawas and Phillips (2015), Alwi and Kitchen (2014), and Hennig-Thurau et al.’s (2001) results. As mentioned previously, AC reflects an emotional attachment to the HEI (Fullerton, 2003), so the present findings add significantly to the existing research.

Indirect influences on CR include the effects of service quality (0.184) through CC (H12), alumni’s CS (0.151) through HC (H7), and SAI (0.144) through AC (H6). These variables present the highest values, revealing clues to what needs to be taken into account when defining alumni strategies. Some similarities can be found to the extant literature. For example, Hennig-Thurau et al. (2001) and Iskhakova et al. (2016) confirmed the indirect influence on student loyalty of different aspects of service quality and SAI.

Given the strong relationship between HC and CR (H3  $\gamma = 0.545$ ) and the way that alumni's CS positively influences HC (H7  $\gamma = 0.232$ ), this situation's indirect influence is a key element determining CR. Similar findings have been reported by Belfield and Beney (2000), Clotfelter (2001), and Newman and Petrosko (2011). Table 3.7 shows the standardized total and indirect effects, and the Sobel test results for each indirect effect, confirming that they are statistically significance at the 0.1% level.

**Table 3.7 Standardized total and indirect effects**

<b>Indirect effects and significance</b>	Services' quality	CS	Sat.	HC.	SAI	HEI's image	CC	AC
<b>Services' quality</b>								
SAI		0.103***						
HC								
CS								
CC								
<b>Satisfaction</b>								
HEI's image	0.969***							
AC	0.469***	0.132***	0.446***					
CR	0.184***	0.151***	0.075***	0.105***	0.144***	0.058***		
<b>Total effects</b>								
<b>Services' quality</b>								
SAI		0.103		0.445				
HC		0.235						
CS								
CC	0.483							
Satisfaction	1.004							
HEI's image	0.969		0.965					
AC	0.469	0.132	0.446	0.568	0.530	0.463		
CR	0.184	0.151	0.075	0.652	0.144	0.078	0.230	0.125

Notes: \*\*\* $p < 0,001$ .

### 3.5 Conclusions and implications

#### 3.5.1 Main conclusions

The use of both qualitative and quantitative methods proved to be an advantage in terms of achieving consistent results and addressing the research questions. Based on an assessment of four dimensions: AE, commitment indicators, HC, and alumni's CS, the focus group participants identified various elements of each dimension. Together with the outputs identified in the literature review, these elements were considered during the proposed theoretical model's construction. A model estimation through SEM was



conducted to answer the first research question, confirming that the direct determinants of CR are HC, CC, and AC. In addition, information about CR' indirect drivers permitted other important conclusions such as the key role of service quality, alumni's CS, and SAI.

The findings further include that HC is directly influenced by alumni's CS, whereas service quality appears to be a direct driver of CC. AC's drivers, in turn, are the HEI's image, HC, and SAI. The following conclusions were reached with regard to the second research question: alumni assert that they plan to provide help, share experiences, and participate in alumni meetings. The second order factors' total effects include service quality, satisfaction, and the HEI's image, especially in terms of AC and CR. The results confirm these variables' positive impact on alumni's attitudes and behaviors.

### 3.5.2 Implications

This kind of research is motivated by specific scientific and managerial goals, which in this case were achieved. From a scientific point of view, the qualitative and quantitative results add information to the literature on effective approaches to fostering alumni commitment. This includes tapping into their desire to give feedback to their alma mater and contribute to enhancing service quality based on their experiences, which relies on the alumni's implicit recognition of their HEI's responsibility in the CR process. The alumni surveyed confirmed the decisive role of HEI's solicitation efforts with regard to leveraging CR.

In addition, SAI plays an important role in determining on-going relationships as this variable comprises feelings and perceptions that influence AC, which, together with CC, constitutes a consistent approach to binding alumni to CR. Since this study's findings shed light on the antecedents of CC, AC, and HC, the present investigation contributes to the stream of research that focuses on alumni-alma mater CR, incorporating new constructs and extending the contexts under study to include a Portuguese university.

Regarding managerial implications, a set of clues were identified with reference to various practical aspects of alumni relationship management. First, communication with alumni is of the utmost importance. They expect active communication channels will be maintained in order to allow these individuals to give their feedback because the alumni surveyed stressed that they want to be heard. Second, solicitations are highlighted as a determinant of getting alumni involved. The present respondents stressed their desire to be involved, so their university just has to ask them.

Third, AC and CC offer a framework to be taken into consideration when defining strategies. HEI administrators must bear in mind that alumni's pride, a sense of belonging, and trust reflect an emotional attachment to their alma mater (Fullerton, 2003; Holdford & White, 1997). If students feel attached to their HEI from the very beginning, they will remain so after graduation. Communication strategies, therefore, must emphasize the students' importance and the key role they play in the institution as co-creators (Elsharnouby, 2015).

Furthermore, HEIs must keep in mind that, in CR, alumni are also motivated by the benefits they can receive (Alnawas & Phillips, 2015), so an effort needs to be made to respond to their demands appropriately with quality services. SAI is also a way to enhance alumni's sense of belonging, which confirms the need to motivate students to engage in extracurricular activities. The final important implication is that quality, satisfaction, and image can be used to define strategies to improve HEIs' overall performance, which means management policies must sustain these attributes.

### 3.5.3 Limitations and suggestions for further research

As is the case with all research, several limitations were present in this study that need to be addressed in future research. The population under study comprised alumni from all educational programs and the years they graduated until 2015, which may have restricted the possibility of defining cohorts' distinctive features. Further studies could compare samples of alumni from different study programs and the years they graduated, allowing clustering that would provide more accurate findings and help define better strategies (Clotfelter, 2003; Le Blanc & Conway, 2009).

The present research was based on data from one HEI, but the findings are helpful and give clues to how to improve alumni management, which may also be useful to other HEIs. However, capturing the distinctive features of different HEIs would certainly offer benefits to this kind of study, thus future research that considers alumni samples from other institutions is recommended (Belfield & Beney, 2000; Hennig-Thurau et al., 2001; Iskhakova et al., 2016).

In addition, other constructs can be incorporated, namely, trust, brand, prestige, and reputation, which have already been discussed in the literature (e.g., Chapleo, 2004; Holmes, 2009; McAlexander & Koenig, 2012; Nora & Cabrera, 1993; Sampaio, et al., 2012; Sung & Yang, 2008), but new studies could bring fresh insights to this field. Finally,

an important further step would be to refine the alumni profile presented above in order to facilitate segmentation and permit more effective initiatives and campaigns directed at specific alumni targets.

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### 3.6 References

- Adidam, P. T., Prasad, R & Sindhav, B. (2004). Building Relationships Between Business Schools And Students: An Empirical Investigation Into Student Retention. *Journal of College Teaching & Learning*, 1(11), 37-48.
- Aghaz, A. Hashemi, A. Sharifi A. & Maryam S. (2015). Factors contributing to university image: the postgraduate students' points of view. *Journal of Marketing for Higher Education*, 25(1), 104-126.
- Al-Alak, B. A. M. (2006). The impact of marketing actions on relationship quality in the higher education sector in Jordan. *Journal of Marketing for Higher Education*, 16(2), 1-23.
- Alnawas, I., & Phillips, C. (2015). Alumni orientation: Development of the construct. *Journal of Nonprofit & Public Sector Marketing*, 27(2), 183-215.
- Alves, H., Mainardes, E.W., & Raposo, M. (2010). A relationship approach to higher education institution stakeholder management. *Tertiary Education and Management*, 16(3), 159-181.
- Alves, H., & Raposo, M. (2007). Conceptual model of student satisfaction in higher education. *Total Quality Management*, 18(5), 571–588.
- Anderson, J. & Gerbing, D. (1988). Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin*. 103(3), 411-423.
- Ashforth, B. E. & Mael, F. (1989). Social Identity Theory and the Organization. *The Academy of Management Review*, 14(1), 20-39.
- Alwi, S. F., & Kitchen, P. J. (2014). Projecting corporate brand image and behavioral response in business schools: Cognitive or affective brand attributes? *Journal of Business Research*, 67(11), 2324-2336.
- Belfield, C. R., & Beney, A. P. (2000). What Determines Alumni Generosity? Evidence for the UK the UK. *Education Economics*, 8(1), 65-80.

- Brown, R. M., & Mazzarol, T. W. (2008). The importance of institutional image to student satisfaction and loyalty within higher education. *Higher Education*, 58(1), 81-95.
- Chapleo, C. (2004). Interpretation and Implementation of Reputation/Brand Management by UK University Leaders. *International Journal of Educational Advancement*, 5(1), 7-23.
- Clotfelter, C.T. (2003). Alumni giving to elite private colleges and universities. *Economics of Education Review*, 22(2), 109-120.
- Cronin, J.J., Brady, M. K., & Hult, T.M. (2000). Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments. *Journal of Retailing*, 2, 193-218.
- Duarte, P. O., Alves, H. B., & Raposo, M. B. (2010). Understanding university image: A structural equation model approach. *International Review on Public and Nonprofit Marketing*, 7(1), 21-36.
- Elliott, K. M., & Healy, M. A. (2001). Key factors influencing student satisfaction related to recruitment and retention. *Journal of Marketing for Higher Education*, 10(4), 1-11.
- Elliott, K. M., & Shin, D. (2002). Student satisfaction: An alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management*, 24(2), 197-209.
- Elsharnouby, T. H. (2015). Student co-creation behavior in higher education: the role of satisfaction with the university experience. *Journal of Marketing for Higher Education*, 1241, 1-25.
- Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Fullerton, G. (2003). When does commitment Lead to Loyalty? *Journal of Service Research*, 5(4), 333-344.
- García-Aracil, A. (2008). European graduates' level of satisfaction with higher education. *Higher Education*, 57, 1-21.
- Geyskens, I., SteeKamp, J.B., Scheer, L., & Kumar, N. (1996). The Effects of Trust and Interdependence on Relationship Commitment: A Trans- Atlantic Study. *International Journal of Research in Marketing*, 13, 303-317.
- Grönroos, C. (1994). From marketing mix to relationship marketing: Towards a paradigm shift in marketing. *Management Decision*, 32(2), 1-27.
- Guerra, I.C. (2006). *Pesquisa Qualitativa e Análise de Conteúdo- Sentidos e formas de uso* [Qualitative Research and Content Analysis- purposes and ways of use]. Cascais. Princípia Editora.

- Hartman, D. E., & Schmidt, S. L. (1995). Understanding student/alumni satisfaction from a consumer's perspective: The effects of institutional performance and program outcomes. *Research in Higher Education*, 36(2), 197-217.
- Helgesen, Ø. (2008). Marketing for higher education: A relationship marketing approach. *Journal of Marketing for Higher Education*, 18(1), 50-78.
- Helgesen, Ø., & Nettet, E. (2007). Images, satisfaction and antecedents: Drivers of student loyalty? A case study of a Norwegian university college. *Corporate Reputation Review*, 10(1), 38-59.
- Hemsley-Brown, J., & Oplatka, I. (2006). Universities in a competitive global marketplace: A systematic review of the literature on higher education marketing. *International Journal of Public Sector Management*, 19(4), 316-338.
- Hennig-Thurau, T., Langer, M. F., & Hansen, U. (2001). Modeling and managing student loyalty: An approach based on the concept of relationship quality. *Journal of Service Research*, 3(4), 331-344.
- Holdford, D. & White, S. (1997). Testing Commitment-Trust Theory in Relationships Between Pharmacy Schools and Students. *American Journal of Pharmaceutical Education*, 61, 249-256.
- Holmes, J. (2009). Prestige, charitable deductions and other determinants of alumni giving: Evidence from a highly selective liberal arts college. *Economics of Education Review*, 28(1), 18-28.
- Iskhakova, L., Hilbert, A., & Hoffmann, S. (2016). An Integrative Model of Alumni Loyalty—an Empirical Validation Among Graduates from German and Russian Universities. *Journal of Nonprofit & Public Sector Marketing*, 28(2), 129-163.
- Iskhakova, L., Hoffmann, S., & Hilbert, A. (2017). Alumni Loyalty: Systematic Literature Review. *Journal of Nonprofit and Public Sector Marketing*, 29(3), 274-316.
- Ivy, J. (2001). Higher education institution image: a correspondence analysis approach. *The International Journal of Educational Management*, 15(6), 276- 282.
- Jiewanto, A., Laurens, C., & Nelloh, L. (2012). Influence of Service Quality, University Image, and Student Satisfaction toward WOM Intention: A Case Study on Universitas Pelita Harapan Surabaya. *Procedia - Social and Behavioral Sciences*, 40, 16-23.
- Kotler, P. Wong, V. Saunders, J. & Armstrong, G. (2005). *Principles of Marketing*. Essex: Prentice Hall.
- Kotler, P., & Fox, K. F. A. (1994). *Marketing estratégico para instituições educacionais* [Strategic marketing for educational institutions]. São Paulo: Editora Atlas.

- Lazibat, T., Bakovic, T., & Duzevic, I. (2014). How perceived service quality influences students' satisfaction? Teachers' and students' perspectives. *Total Quality Management*, 25(8), 923-934.
- Le Blanc, L.A. & Rucks, C. T. (2009). Data mining of university philanthropic giving: Cluster-discriminant analysis and Pareto effects. *International Journal of Educational Advancement*, 9(2), 64-82.
- Mainardes, E. W., Raposo, M. & Alves, H. (2014). Universities Need a Market Orientation to Attract Non-Traditional Stakeholders as New Financing Sources. *Public Organization Review*. 14(2), 159-171.
- Marôco, J. (2010). Análise de Equações Estruturais: Fundamentos teóricos, Software & Aplicações. [Structural equations analysis: theoretical foundations, software & applications]. Pêro Pinheiro: Report Number.
- McAlexander, J. H., & Koenig, H. F. (2012). Building communities of philanthropy in higher education: contextual influences. *International Journal of Nonprofit and Voluntary Sector Marketing*, 17, 122-131.
- McAlexander, J.H., & Koenig, H. F. (2001). University Experiences, the Student-College Relationship, and Alumni Support. *Journal of Marketing for Higher Education*, 10(3), 21-44.
- McAlexander, J.H., Kim, S.K., & Roberts, S.D. (2003). Loyalty: the influences of satisfaction and brand community integration. *Journal of Marketing of Theory and Practice*, 11(4), 1-11.
- Meštrović, D. (2017). Service quality, students' satisfaction and behavioural intentions in STEM and IC higher education institutions. *Interdisciplinary Description of Complex Systems*, 15(1), 66-77.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(July), 20-38.
- Newman, M. D., & Petrosko, J. M. (2011). Predictors of Alumni Association Membership. *Research in Higher Education*, 52(7), 738-759.
- Nora, A., & Cabrera, A. F. (1993). The construct validity of Institutional Commitment: A Confirmatory Factor Analysis. *Research in Higher Education*, 34(2), 243-262.
- Pedro, I., Pereira, L. & Carrasqueira, H. (2018). Determinants for the commitment relationship between Alumni and the Alma Mater. *Journal of Marketing for Higher Education*, 28(1), 128-152.
- Sampaio, C. H., Perin, M. G. Simões, C. & Kleinowski, H. (2012). Students' trust, value and loyalty: evidence from higher education in Brazil. *Journal of Marketing for Higher Education*, 22(1), 83-100.

- Sargeant, A., & Woodliffe, L. (2005). The antecedents of donor commitment to voluntary organizations. *Nonprofit Management & Leadership*, 16(1), 61-78.
- Schlesinger, W., Cervera, A., & Iniesta, M. A. (2015). Key elements in building relationships in the higher education services context. *Journal of Promotion Management*, 21(4), 475-491.
- Schumacher, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling* (2<sup>nd</sup> ed.). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Shah, A. (2009). The Impact of Quality on Satisfaction, Revenue, and Cost as Perceived by Providers of Higher Education. *Journal of Marketing for Higher Education*, 19(2), 125-141.
- Snijders, I., Wijnia, L., Rikers, R., & Loyens, S. (2019). Alumni loyalty drivers in higher education. *Social Psychology of Education*, <https://doi.org/10.1007/s11218-019-09488-4>.
- Sung, M., & Yang, S. (2008). Toward the model of university image: The influence of brand personality, external prestige, and reputation. *Journal of Public Relations Research*, 20(4), 357-376.
- Wong, H., & Wong, H. (2011). Building Relationship between Education Institutions and Students: Student Loyalty in Self-Financed Tertiary Education. *IBIMA Business Review Journal*, 2011, 1-22.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2006). *Services marketing integrating customer focus across the firm* (4<sup>th</sup> ed.). Singapore: McGraw-Hill.





## **CHAPTER 4**

### **STUDY 3- IDENTIFYING PATTERNS OF ALUMNI COMMITMENT IN KEY STRATEGIC RELATIONSHIP PROGRAMMES<sup>11</sup>**

#### **Abstract**

Higher education institutions (HEIs) need to understand their alumni when drawing strategic relationship programmes. This paper's purpose is to clarify the acquisition of accurate information, allowing the efficient use of scarce resources through alumni segmentation and identification of patterns in commitment relationship. The study took place at a Portuguese university, considering a dataset of 2,008 and targeting 1,075 of these alumni, who asserted intention to collaborate. Commitment-relationship based segmentation was conducted and a logistic regression model was run to identify determinants of intention to collaborate. Both techniques revealed the decisive role HEI commitment in the process. Relationship advantages and positive feelings towards the HEI were also pointed out as important. Alumni asserted recommendations, further training, sharing experiences and giving help as ways to collaborate with HEI. To predict collaboration, a logit model showed sociodemographic items like gender, marital status and volunteering work as significant. Concerning academic experience, the predictable variables were affiliation in sororities/fraternities and participation in extracurricular activities. The findings provide clues to support strategic relationship programmes based on consistent marketing campaigns, while bringing value to the literature in the European context, where alumni culture requires real insights to evolve.

**Keywords:** Relationship marketing; HEI; alumni; commitment-relationship; clustering; binomial logit

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## 4.1 Introduction

The alumni–alma mater relationship represents a challenging paradigm for higher education institutions (HEIs), particularly in the European context where alumni culture is now taking its first steps (Pérez-Esparrells & Torre, 2012; Snijders, Wijnia, Rikers, & Loyens, 2019). HEIs have already realised what this long-term relationship represents and that a deeper understanding of their alumni is critical for its success. This is the premise for this paper, in which the clustering and logistic regression techniques are used to shed light onto alumni research in the European context. We sought to determine which alumni declare intention to collaborate in an alma mater’s activities and what predicts that intention. This study prioritises understanding alumni commitment through voluntary behaviour as an important way to give back, although a monetary sense is usually applied to “alumni giving” in literature. The data do provide insight that allows understanding the alumni position relative to fundraising.

This paper is part of a broader investigation in a Portuguese public HEI, and accomplishes complementary objectives. The main goal of this investigation is to identify the determinants of the alumni–alma mater long-term relationship, in which commitment relationship (CR) expresses voluntary behaviour through actions like recommending, sharing experiences and helping others. Among other determinants, affective commitment (AC), cognitive commitment (CC), HEI commitment (HC) and academic experience (AE) are considered. According to the theoretical background and the results already achieved, the authors believe that the dimensions considered in this study will provide a consistent characterisation of alumni segments and are significant for predicting intention to collaborate.

From a managerial perspective, this paper provides findings that give HEI valuable clues to support communication strategies with alumni, to strengthen relationships and to encourage alumni engagement in the alma mater’s life. The resources spent in such campaigns are always an issue, so every help to minimise them is very welcome. Understanding alumni and knowing the predictors of their intention to collaborate enables the HEI to better define strategies and apply them to the right segments at the right time. The results also add value to the literature, as they concern a context in which alumni culture is still weak. Some interesting clues provide support for further research.

Commitment determinants to explain further relationships with alumni are highlighted, justifying new developments.

This paper has the following structure. The next section presents the theoretical background that frames the work. This is followed by methodological settings, with an in-depth characterisation of the dimensions and research strategy in the methodology section. The subsequent section presents and discusses the clustering and econometric results. In the final section, the main conclusions, implications for HEI management and suggestions for future research are presented.

## 4.2 Theoretical background

The higher education market is a field of fierce competition in which permanent changes and challenges require renewed and keen strategies to keep HEIs on the rail. In the European context, problems such as demographic decline, budgetary constraints, internationalisation and pressure caused by rankings have forced HEIs to be proactive and reinvent themselves. As a consequence, a shift in higher education management is taking place, replacing traditional and inefficient forms of academic management with new practices based on criteria of rationality and efficiency common in the private sector (Mainardes, Raposo, & Alves, 2014; Pérez-Esparrells & Torre, 2012; Santiago, Carvalho, Amaral, & Meek, 2006; Schlesinger, Cervera, & Iniesta, 2015). Portuguese HEIs are following this trend, and although in a slower way when compared with HEIs in other European countries, progress has been noticed for some measures involving institutional stakeholders framed by a clear market orientation (Alves, Mainardes, & Raposo, 2010; Helgesen, 2008).

Relationship marketing has guided policies towards HEI stakeholders, especially when students and alumni are concerned. Initiatives have been developed to enhance relationships to meet the expectations of these stakeholders to reinforce competitiveness in a context where above-mentioned problems are particularly sharp (Alves & Raposo, 2007; Santiago et al., 2006). HEIs are aware of the benefits resulting from long-term relationships with their alumni (Helgesen & Nettet, 2007; Hennig-Thurau et al., 2001; Schlesinger, Cervera, & Pérez-Cabañero, 2016), and an alumni orientation (Alnawas &

Phillips, 2015) perspective is growing within management and expressed in a growing set of activities to engage alumni and gain their participation.

When HEIs face scarce resources and tight budgets, which is the case of the majority of Portuguese HEIs, effective segmentation strategies are needed to achieve successful measures (Durango-Cohen & Balasubramanian, 2015; Le Blanc & Rucks, 2009). Segmentation thus allows optimisation of resources and greater effectiveness of activities such as solicitation and communication campaigns. Clustering leads to a better understanding of alumni characteristics, and once they have been gathered into similar groups, every communication and solicitation campaign can be tailored accordingly (Durango-Cohen & Balasubramanian, 2015; Le Blanc & Rucks, 2009; Rattanamethawong, Sinthupinyo, & Chandrachai, 2018).

Given that the primary goal of relationship marketing is to build and maintain a committed customer base (Grönroos, 1994), commitment is a strong determinant for relationship quality, which leads to successful relational exchanges (Morgan & Hunt, 1994). Immediately after graduation is a stage that may represent a break in the relationship between alumni and the HEI, or on the contrary, a desire to remain attached to the HEI may emerge, through, for example, willingly engaging in HEI activities, sharing their experiences with current students, recommending the HEI, participating in fundraising campaigns and choosing the HEI for further training, among other possibilities (Alnawas & Phillips, 2015; Hennig-Thurau et al., 2001; Morgan & Hunt, 1994; Sargeant & Woodliffe, 2005; Weerts & Ronca, 2007). These behavioural intentions to sustain the relationship encompass CR, and it makes sense to segment alumni according to their perception about this dimension, which leads to this study's first research question (RQ):

*RQ 1. How many commitment-relationship based segments are in the HEI?*

The other two RQs are likely legitimated concerning segment characterisation, bearing in mind that the ultimate objective is to get an accurate understanding of the alumni who assert an intention to collaborate with HEI:

*RQ 2. What are the main attributes distinguishing alumni segments?*

*RQ 3. What are the main characteristics of each segment?*

The literature regarding alumni commitment to a long-term relationship points out different sorts of features permitting alumni characterisation, especially those systematising demographic and academic issues. Clotfelter (2001) refers to, among many other aspects, social and economic characteristics, academic preparation, state of residence, gender, household income, political philosophy, legacy status and

extracurricular activities. Lara and Johnson (2014) add other items like varsity, honours received, Greek activities, relatives who have attended the same HEI and marital status, while Wunnava and Lauze (2001) include activity in volunteer programmes and courses. To achieve a deeper understanding of the different identified cohorts and define predictive models of commitment, three more dimensions of commitment are worthy of consideration regarding previous research's results.

As Hennig-Thurau et al. (2001) assert, AC is of major importance in traditional educational research on student loyalty. Iskhakova, Hilbert and Hoffmann (2016) also emphasise the influence of AC in alumni loyalty. AC reflects a psychological attachment to the partner (Geyskens et al., 1996), and has a key role in the development of customer relationship loyalty (Amani, 2015). According to Fullerton (2003), understanding the nature of the commitment present in the relationship is important for perceiving the role of the customer's commitment and, Morgan and Hunt (1994) add, that commitment reflects an identification and attachment to the organisation, allowing the conclusion that AC is a consistent basis to sustain differentiation between individuals.

CC likewise plays a key role in understanding the nature of CR, as it is related to the perceptions of the likely advantages and benefits resulting from the relationship (Fullerton, 2003; Geyskens et al., 1996; Hennig-Thurau et al., 2001; Sargeant & Woodliffe, 2005). Alumni may be motivated to be involved when they perceive its intangible advantages (Alnawas & Phillips, 2015).

HC is important in assessing the relationship, because it expresses the responsibility and responsiveness of the HEI in the process (Alnawas & Phillips, 2015; Holdford & White, 1997), which in turn may influence alumni commitment, particularly if the HEI stresses communication and asks for collaboration. If alumni are aware of the HEI's needs, they are more likely to make efforts to help (Alnawas & Phillips, 2015; Bekkers & Wiepking, 2007).

Finally, there is a set of variables based upon either AE and sociodemographic issues that facilitate group characterisation and may establish patterns of alumni commitment. Both dimensions stress predictive variables such as, for AE, honours received, involvement in extra curricular activities, sororities or fraternities, degree of satisfaction in alumni's undergraduate experience, number of years in institution, degree and course, or, among sociodemographic characteristics, age, gender, residence, household income, job position, number and age of children, marital status and volunteer activities (Belfield & Beney, 2000; Clotfelter, 2001; Lara & Johnson, 2014; Stephenson & Bell, 2014;

Wunnava & Lauze, 2001). These dimensions raised the following RQs:

*RQ 4. Do commitment, AE and sociodemographic variables predict the intention to collaborate with the HEI?*

*RQ 5. How do these variables influence the intention to collaborate with the HEI?*

Determinants of success referring to alma mater CR depend on both the efficacy of the above-mentioned characterisation and effective marketing campaigns, and especially on the communication and solicitations concerned. Knowing *whom to ask for what* is of paramount importance, as it brings twofold advantages: first, a profile of the committed alumni is provided, and second, it permits identification of the predictable variables of effective commitment that certainly contribute to sustain the institutional leaders' decisions. Studies such as those by Belfield and Beney (2000), Clotfelter (2003), Nesbit and Gazley (2012) and Weerts and Ronca (2007, 2008) have shed light on this matter by stressing the predictive elements for giving. All of the effort to structure the methods, means and timing of how solicitations are delivered may influence the results of the campaigns (Baade & Sundberg, 1996; Belfield & Beney, 2000; Hunter, Jones, & Boger, 1999).

## 4.3 Methodology

### 4.3.1 Research context

This paper is part of a broader investigation, and the present study took place at a Portuguese HEI, motivated by the need to find consistent tools to develop better long-term relationships with alumni. Understanding alumni is a good starting point, as in the Portuguese higher educational context key information about alumni is still limited. Concerns about the identification of stakeholders and their correspondent needs and expectations are present in relationship strategies, so the definition of integrated measures is necessary to sustain competitiveness (Alves, Mainardes, & Raposo, 2010; Alves & Raposo, 2007; Schlesinger et al., 2015).

#### 4.3.2 Data and instrument development

An online survey questionnaire was applied to a dataset of undergraduate alumni who graduated between 1987 and 2015, and a sample of 2,008 usable questionnaires was collected. Of a population of 23,823 alumni, only 12,078 questionnaires were sent due to lack of contact email addresses, and of these 357 emails were undeliverable, achieving a response rate of 17%.

This survey had three main parts. The first part was intended to capture alumni perceptions of the following dimensions: satisfaction, quality, image, social and academic integration, current situation, HEI commitment, affective commitment, cognitive commitment and commitment relationship. Part two consisted of sociodemographic features essential for drawing an alumni profile. Part three included two groups of three questions each. The first group of questions sought to capture information on aspects like participation in groups or associations (sororities/fraternities) during their time as students, and the second group of questions sought to assess their giving behaviours (the intention to participate in fundraising campaigns, to collaborate with HEI's initiatives and if they usually participated in volunteering activities). Information supplied by the HEI's academic services was also added to the final dataset.

For the variables used in this paper, an eight-point Likert scale defined by the extremes 1=Strongly disagree and 8=Strongly agree was used to rate items of commitment and for two items encompassed in AE (Active participation in extracurricular activities and Affiliation in student groups and/or sororities/fraternities).

The findings already achieved in the overall investigation provided insight into the drivers of CR, namely CC, HC and AC. As such, for the purposes of this study, these dimensions were considered. CR was the base for segmentation and the remaining commitment dimensions, sociodemographic variables and some AE variables were used to make the characterisation of clusters and to estimate the regression model. Details of these dimensions are given in Table 4.1.

**Table 4.1 Dimensions in the study**

<b>Dimensions</b>	<b>Components</b>	<b>References</b>
<b>Commitment relationship (CR)</b>	(CR1) HEI chosen for future training (CR2) HEI recommended to family and friends (CR3) Desire to share experience with current students (CR4) Desire to provide help in through HEI activities (CR5) Desire to participate in fundraising campaigns (Cr6) Desire to participate in alumni meetings	e.g. Alnawas and Phillips (2015), Geyskens et al. (1996), Hennig-Thurau et al. (2001), Morgan and Hunt (1994), Sargeant and Woodliffe (2005)
<b>Affective commitment (AC)</b>	(AC1) A sense of belonging to the HEI (AC2) Pride in having been a student of the HEI (AC3) Feeling part of the HEI's success; (AC4) Compliments to the HEI equated with personal compliments (AC5) Criticism of the HEI produce embarrassment (AC6) Perception of the HEI as a trusted institution (AC7) HEI's logo brings pleasure	e.g. Adidam, et al. (2004); Fullerton (2003), Holdford & White (1997), Hennig-Thurau et al. (2001), Snijders et al. (2019), Stephenson and Bell (2014), Wong and Wong (2011)
<b>Cognitive commitment (CC)</b>	(CC1) Advantages of collaboration with the HEI (CC2) Practical aspects of relationship with the HEI	e.g. Fullerton (2003), Geyskens et al. (1996), Sargeant and Woodliffe (2005)
<b>HEI's Commitment (HC)</b>	(HC1) HEI requests alumni collaboration whenever necessary (HC2) HEI maintains active communication with alumni (HC3) HEI guarantees proper methods used to gather alumni's opinion (HC4) HEI ensures the quality of its services (HC5) HEI concerned about alumni	e.g. Baade and Sundberg (1996), Belfield and Beney (2000), Hunter, et al. (1999), Weerts and Ronca (2007), Weerts and Ronca (2008)
<b>Academic experience (AE)</b>	(AE1) Affiliation in student groups and/or sororities/fraternities (AE2) Active participation in extracurricular activities (AE3) Year of graduation (AE4) Scientific area of the course	e.g. Ashforth and Mael (1989), Baade & Sundberg (1996), Hennig-Thurau et al. (2001), Lara and Johnson (2014), McAlexander and Koenig (2001), Wunnava and Lauze (2001)
<b>Sociodemographic</b>	Age; gender; place of residence; place of work; number of children; marital status; volunteer activities; fundraising	Belfield and Beney (2000), Clotfelter (2001), Lara and Johnson (2014) Wunnava and Lauze (2001)



#### 4.3.3 Research strategy and data analysis

Because the main objective was to conduct segmentation based on commitment and the ability to identify alumni who are willing to collaborate with the HEI (1,075), it was decided to consider this group for segmentation in order to gain insight into further developments.

Different statistical analysis techniques were used supported by IBM SPSS version 21. First, descriptive models for the segmentation purposes were conducted. A hierarchical cluster analysis was applied to capture the similarities between individuals given the set of CR variables displayed in Table 4.1, using the squared Euclidean distance as the similarity measure. The following algorithms were used: within-group linkage, furthest neighbour and ward. The results of these three methods were analysed and then compared to choose an adequate number of segments, which was then determined taking into account the R-square statistic and analysis of the dendrogram. A solution of five clusters was considered. The R-square indicated a total variability of 0.546 for this solution. The profile of each cluster was created by cross-tabulating the cluster's membership variable with three sets of variables: sociodemographic, commitment and AE-related variables. We tested for differences between the clusters, regarding these sets of variables using both the Chi-square test and one-way ANOVA (followed by the Games–Howell post-hoc test).

Afterwards, a binary logistic model was run. Intention to collaborate was the dependent variable, coded as 1 for “Yes” and 0 for “No”. Independent variables regarding commitment were chosen from among the ones that better characterised segments: AC1, AC2, AC6, HC1, HC2, HC3, HC4 and CC1. Dummy variables were used for multinomial variables, taking a value 1 when the alumnus belonged to the named class, and 0 when not. Table 4.2 displays the remaining independent AE and sociodemographic variables. In this dimension, the factor year of graduation was recalculated to time since graduation.

**Table 4.2 Variables description and coding- Academic experience and sociodemographic**

Variable	Description	Parameter coding
<b>Intention to collaborate</b>	Dependent variable	No=0, Yes=1
<b>Sororities/fraternities</b>	Affiliation in student groups and/or sororities/fraternities	No=0, Yes=1
<b>Time since graduation</b>	Number of years after graduation	2019-year of graduation (scale)
<b>Extracurricular</b>	Participation in extracurricular activities	1-8 (scale)
<b>Age</b>	Age	Scale
<b>Gender</b>	Gender	Female=0, Male=1
<b>Place of residence</b>	Distance between the place of residence and the HEI	< 100 kms=0, ≥100 Kms=1, abroad=2
<b>Place of work</b>	Distance between the place of work and the HEI	< 100 kms=0, ≥100 Kms=1, abroad=2
<b>Children</b>	Number of children	Scale
<b>Marital status</b>	Marital status	Single=0, Married= 1, Other=2
<b>Volunteering</b>	Usually does volunteer work	No=0, Yes=1

## 4.4 Results and discussion

### 4.4.1 Summary of findings

#### 4.4.1.1 Alumni profile

A brief characterisation of both cohorts can be seen in Table 4.3, which shows that most of the alumni are women (59.6%/65.3%) within the age range of 31–40 years (43.4%/41.4%) and married (51.6%/53.2%). More than half of the alumni do not have children (52.5%/52.2%) and live and work quite near the HEI (less than 100 kilometres, 68.4%/62.7%) and finished their studies in the last decade (70.0%/71.4%). Economy, management and tourism were the fields with the highest percentage of alumni (32.7%/31.2%).

**Table 4.3 Alumni profile of both groups**

		<b>Intention to collaborate</b>	
		Yes (n=1,075) %	No (n= 933) %
<b>Gender</b>	Female	59.6	65.3
	Male	40.4	34.7
<b>Age group</b>	20-25	3.7	5.3
	26-30	20.3	23.7
	31-35	19.7	20.7
	36-40	23.7	20.7
	41-45	17.1	13.2
	46-50	13.1	13.9
	51-55	4.8	5.3
	≥56	2.3	2.6
<b>Marital status</b>	Single	42.0	42.9
	Married	51.6	53.2
	Other	6.3	3.9
<b>Children</b>	0	52.5	52.2
	1	23.6	26.3
	2	20.7	19.0
	3	2.7	2.3
	4	0.5	0.3
	5	0.1	
<b>Place of Residence</b>	< 100 kms	68.4	62.7
	≥100 Kms	22.2	26.9
<b>Place of work</b>	Abroad	9.4	10.4
	< 100 kms	67.2	61.7
	≥100 Kms	22.8	27.7
<b>Year of graduation</b>	Abroad	10.0	10.6
	1987-1995	4.0	3.4
	1996-2000	7.6	5.6
	2001-2005	18.4	19.6
	2006-2010	33.7	32.0
<b>Scientific area of the course*</b>	2011-2015	36.3	39.4
	HST	11.0	12.1
	EMT	32.7	31.2
	ET	16.4	17.0
	ENS	11.6	11.4
	SES	20.6	16.1
	ACH	7.7	12.2

Note: \*HST: health sciences and technologies; EMT: economy, management and tourism; ET: engineering and technologies; ENS: exact and natural sciences; SES: social and education sciences; ACH: arts, communication and heritage.

#### 4.4.1.2 Cluster analysis findings

The cluster analysis generated five clusters based on CR. Each cluster was labelled regarding the levels of the four dimensions of commitment used in their characterisation compared with the overall means of these dimensions in the group (Table 4.4).

**Table 4.4 ANOVA and Games-Howell test results of differences between clusters**

	Total N=107 5 (100%) )	Cluster 1 n=485 45.1%	Cluster 2 n=250 23.3%	Cluster 3 n=133 12.4%	Cluster 4 n=126 11.7%	Cluster 5 n= 81 7.5%	One-way ANOVA F (p-value)	Games- Howell test results
		Enthusiastic	Shy but curious	Awake committed	Sheepish committed	Need a little push group		
<b>CR</b>	<b>6.09</b>	<b>7.20</b>	<b>5.66</b>	<b>5.68</b>	<b>4.05</b>	<b>4.59</b>		
CR1	6.30	7.16	5.78	6.63	3.43	6.70	272.27 (0.000)	3=5
CR2	6.73	7.43	6.24	6.92	4.70	6.88	172.83 (0.000)	3=5
CR3	6.28	7.40	5.63	6.74	4.79	3.19	413.45 (0.000)	
CR4	6.24	7.37	5.57	6.22	4.67	4.06	313.84 (0.000)	4=5
CR5	5.38	6.88	5.22	3.72	3.06	3.22	386.32 (0.000)	5=4,3
CR6	5.60	6.99	5.51	3.86	3.67	3.47	354.41 (0.000)	4=3,5; 3=5
<b>AC</b>	<b>6.46</b>	<b>7.10</b>	<b>6.09</b>	<b>6.46</b>	<b>4.79</b>	<b>6.15</b>		
AC1	6.54	7.19	6.10	6.68	4.89	6.42	79.78 (0.000)	2=3,5
AC2	6.86	7.49	6.44	6.90	5.24	6.86	98.34 (0.000)	2=3,5; 3=5
AC3	6.56	7.28	6.14	6.50	4.89	6.21	77.74 (0.000)	2=3,5; 3=5
AC4	6.27	7.05	5.92	6.10	4.45	5.77	74.90 (0.000)	2=3,5; 3=5
AC5	5.65	6.36	5.42	5.44	4.06	4.86	45.43 (0.000)	5=2,3,4
AC6	6.67	7.24	6.30	6.83	5.10	6.59	90.26 (0.000)	2=3,5
AC7	6.68	7.35	6.34	6.75	4.89	6.36	97.21 (0.000)	2=3,5
<b>CC</b>	<b>5.52</b>	<b>6.11</b>	<b>5.96</b>	<b>5.67</b>	<b>4.33</b>	<b>4.96</b>		
CC1	5.90	6.62	5.35	6.12	4.42	5.21	52.69 (0.000)	5=2,3,4
CC2	5.13	5.60	4.78	5.21	4.23	4.72	18.04 (0.000)	3=1,2,5
<b>HC</b>	<b>6.86</b>	<b>7.44</b>	<b>6.40</b>	<b>6.86</b>	<b>5.90</b>	<b>6.32</b>		
HC1	6.84	7.52	6.22	6.84	5.83	6.16	83.40 (0.000)	4=2,5; 5=2,3
HC2	6.87	7.54	6.34	6.99	5.72	6.11	97.44 (0.000)	5=2,4
HC3	7.05	7.62	6.61	7.01	6.18	6.49	74.84 (0.000)	2=3,5; 5=3
HC4	7.47	7.78	7.10	7.52	6.97	7.47	39.95 (0.000)	5=2,3,4
HC5	6.09	6.76	5.75	5.92	4.81	5.37	45.21 (0.000)	5=2,3,4
AE1	<b>4.68</b>	5.21	4.68	4.26	4.05	3.17	19.91 (0.000)	4=2,3,5; 2=3
Children	<b>0.75</b>	0.81	0.78	0.81	0.44	0.70	4.63 (0.001)	ns

Note: Games-Howell results represent the non-statistically significant cases. All the remaining cases are statistically significant.

The overall findings show good levels of commitment when compared with the mean values of the four dimensions, which can be explained by the fact that the segmentation was conducted within a group willing to collaborate. Table 4.4 shows the profile of the five alumni clusters. There are significant differences between clusters given by the results of one-way ANOVA and Games-Howell post-hoc tests when applied to the items of the commitment dimensions and the remaining quantitative variables (AE1 and number of

children). The same can be concluded according to Table 4.5, which contains the Chi-squared tests results for the sociodemographic and remaining qualitative variables.

**Table 4.5 Chi-squared tests results of differences between clusters**

	Total N=1075 (100%)	Cluster 1 n=485 45.1%	Cluster 2 n=250 23.3%	Cluster 3 n=133 12.4%	Cluster 4 n=126 11.7%	Cluster 5 n= 81 7.5%	Chi square (p-value)
		Enthusiastic	Shy but curious	Awake committed	Sheepish committed	Need a little push group	*p-value (0.000)
<b>Gender</b>							39.860*
<b>Female</b>	59.6	59.2	58.0	54.9	57.9	77.8	
<b>Male</b>	40.4	40.8	42.0	45.1	42.1	22.2	
<b>Age group</b>							17.225*
20-25	3.7	3.9	2.4	3.0	4.8	6.2	
26-30	20.3	17.9	18.0	17.3	32.5	27.2	
31-35	19.7	19.6	20.4	20.3	24.6	9.9	
36-40	23.7	25.6	24.4	24.8	14.3	23.5	
41-45	17.1	16.3	22.0	17.3	9.5	18.5	
46-55	13.1	14.0	10.8	16.5	13.5	8.6	
≥56	2.3	2.7	2.0	0.8	0.8	6.2	
<b>Marital status</b>							1036.570*
Single	42.0	38.1	42.0	43.6	51.6	48.1	
Married	51.6	54.8	49.6	51.9	45.2	48.1	
Other	6.3	7.0	8.4	4.5	3.2	3.7	
<b>Place of residence</b>							194.012*
< 100 kms	68.4	71.8	66.4	69.2	54.0	75.3	
≥ 100 kms	22.2	19.6	26.4	19.5	28.6	19.8	
Abroad	9.4	8.7	7.2	11.3	17.5	4.9	
<b>Place of work</b>							178.020*
< 100 kms	67.2	70.7	66.0	64.7	53.2	75.3	
≥ 100 kms	22.8	20.0	25.6	23.3	29.4	19.8	
Abroad	10.0	9.3	8.4	12.0	17.5	4.9	
<b>Year of graduation</b>							966.938*
1987-1995	4.0	4.3	2.8	3.0	6.4	3.7	
1996-2000	7.6	8.2	8.0	6.0	6.3	7.4	
2001-2005	18.4	18.8	23.6	14.3	12.7	16.0	
2006-2010	33.7	32.6	35.6	36.1	29.4	37.0	
2011-2015	36.3	36.1	30.0	40.6	45.2	35.8	
<b>Scientific area of the course</b>							265.422*
HST	11.0	10.1	10.8	11.3	13.5	12.3	
EMT	32.7	35.1	36.0	28.6	23.8	29.6	
ET	16.4	15.3	19.2	17.3	15.1	14.8	
ENS	11.6	9.7	9.2	16.5	18.3	12.3	
SES	20.6	21.9	16.0	19.5	21.4	27.2	
ACH	7.7	8.0	8.8	6.8	7.9	3.7	
<b>Sororities/fraternities</b>							
Yes	37.9	41.6	37.6	33.1	39.7	21.0	
No	62.1	58.4	62.4	66.9	60.3	79.0	
<b>Volunteering</b>							16.455*
Yes	43.8	50.1	38.4	36.1	42.1	38.3	
No	56.2	49.9	61.6	63.9	57.9	61.7	
<b>Fundraising</b>							296.953*
Yes	76.3	87.0	85.2	55.6	53.2	54.3	
No	23.7	13.0	14.8	44.4	46.8	55.7	

According to segmentation, the HEI is given a clear overview of the willingness of their alumni to commit and possible strategies according to the following groups. Cluster 1 is

the biggest (45.1%) and the most outstanding group concerning commitment, so it was labelled “Enthusiastic”. Members of this group were particularly concerned with HC (Mean=7.44), especially on measures referring to quality of services (HC4) and the HEI gathering their opinion (HC3). They feel proud in having been a student of the HEI (AC2), and CC presents relatively low mean values, which refers to the evaluation of the advantages that the relationship may bring (CC1). In terms of collaboration, alumni of this group assert that they recommend the institution (CR2) and share their experience (CR3). Concerning sociodemographic aspects, like the other groups, women are the majority and members of this group tend to be between 31 and 40 years of age, are married and have one child. Most alumni of this group live and work less than 100 km from the HEI. More than a half usually volunteers and 87% assert a willingness to participate in fundraising. Most members of this group completed their course between 2001 and 2015 and were in the following scientific areas: EMT, SES and ET. Among members of this group, 41.6% were affiliated with sororities/fraternities and a mean of 5.21 extracurricular activities was achieved, which indicates a reasonable rate of involvement.

Cluster 2 was the second largest group (23.3%) and presented medium overall levels of commitment, with a greater stress on the perception about HC. Like cluster 1, HC4 and HC3 presented the highest mean values. They also expressed pride in having been a student and, CC was not expressive when compared with the overall mean of this dimension. Regarding CR, mean values indicated their willingness to recommend the institution, engage in further training and share their experiences. This group contained a wider age group, mostly between 31 and 45 years old, and balanced between single and married. Of this group, 38.4% participate in volunteer activities, and 89.2% completed their courses between 2001 and 2015, but with a significant number between 2006 and 2010 (35.6%). The same concentration of fields of study was found as for cluster 1. During their times as students, 37.6% were affiliated with sororities/fraternities, and this group had a mean value of 4.68 for extracurricular activity participation, similar to that of the total group (n=1,075). This cluster presents a significant percentage of alumni asserting the willingness to participate in fundraising campaigns (85.2%) and, due to this value and according to their perception about overall commitment dimensions, this group was labelled “shy but curious”.

Cluster 3 represented 12.4% of respondents and is a segment that presents the second-best levels in all commitment dimensions, suggesting “awake committed” for the

group's title. It also presents significant mean levels concerning HC (6.86), highlighting HC4 (7.52), HC3 (7.01) and HC2 (6.99). Like HC, AC also presents the same mean value as the total group (6.46), underlining once again AC2 (6.90) as the highest mean value, followed by AC6 (6.83), where trust in the HEI is evaluated. Moreover, CC (5.67) shows that the benefits resulting from the relationship are also highly valued by this segment. Intention to give back is embodied specially by CR2 (6.92) and CR3 (6.74). This group consists mostly of married women aged between 31 and 40 years, with 0.81 children. Although the majority lives and works less than 100 km from the HEI, a significant percentage of alumni in this group live and work abroad. They graduated between 2006 and 2015, and although the tendency is similar to clusters 1 and 2 for areas of study, there is a more significant balance between them, except for ACH. The majority asserted no participation in a sorority/fraternity or volunteering. However, 55.6% asserted their intention to participate in fundraising campaigns.

Individuals in cluster 4 presented the lowest mean values for commitment, which suggested a label of "sheepish committed". This cluster represents 11.7% of the alumni, and HC (6.32) maintains the tendency of the highest mean value, with HC4 being the variable that stands out (6.97), followed by HC3 (6.18). AC (4.79) appears with second highest mean value, highlighting AC2 (5.24) and AC6 (5.10) and emphasising the strong feelings of pride and trust. Concerning CR, sharing experiences presents the highest value (4.79), followed by recommending (4.70). This is mostly a group of young single women. Although 54% of them live and work less than 100 km from the HEI, this group presents the highest number of alumni living and working abroad (17.5%). Nearly half (45%) are recent graduates from 2011–2015. There is a homogeneous spread of subjects studied, and HST presents the highest level for all of the segments (13.5%). While 39.7% of alumni in this segment belonged to sororities/fraternities, there was a mean value of 4.05 for extracurricular activities and 42.1% of them usually volunteer and 53.2% asserted a willingness to participate in fundraising.

Cluster 5 represents a small group (7.5%), with interesting levels of commitment, leading to the label "need a little push group". For this group, HC plays an important role, with a mean value of 6.32, with HC4 being once again the most valorised variable (7.47) followed by HC3 (6.49). Regarding AC (6.15), pride and trust appear with the two highest mean values (AC2, 6.86; AC6, 6.59). CC seems to be important, particularly in terms of the perception of advantages (5.21). In terms of CR, collaboration is given through recommending (6.88) and further training (6.70). This is a predominantly female group

(77.8%), in the age range of 26–30 (27.2%) and 36–45 (42.0%), and with the same percentage of single and married (48.1%). Most members of this group live and work less than 100 km from the HEI and graduated between 2006 and 2015. There was a relative balance in terms of subjects studied, and this group presented the lowest rate in terms of participation in sororities/fraternities (21.0%) and extracurricular activities (3.17). In this cluster, 38.3% usually participate in volunteering activities and 54.3% claim to collaborate in fundraising.

#### 4.4.1.3 Analysing the binary logistic regression model

The logit model was applied to the dataset of 2,008 alumni, revealing a model with 12 predictors of collaboration among the 24 variables considered. The results presented in Table 4.6 show that the null hypothesis of the test of overall model significance (Lagrange multiplier test) is rejected, but the null hypothesis of the Hosmer–Lemeshow test is not rejected and shows that the fitted model is correct. Both pseudo- $R^2$  indicate satisfactory model quality.



**Table 4.6 Estimation results**

	Coefficient	Standard Error	p-value	Exp(coefficient)
(AE1) Sororities/fraternities	-0.509***	0.132	0.000	0.601
(AE2) Extracurricular	0.053**	0.026	0.040	1.054
(AE3) Time since graduation	-0.003	0.011	0.823	0.997
(CC1) Advantages	0.043	0.030	0.154	1.044
(AC1) Sense of belonging	0.214***	0.050	0.000	1.238
(AC2) Pride	-0.066	0.062	0.289	0.936
(AC6) Trust	-0.039	0.053	0.460	0.962
(HC1) Request collaboration	0.244***	0.054	0.000	1.276
(HC2) Communication	0.234***	0.065	0.000	1.264
(HC3) Opinion	0.168**	0.065	0.010	1.184
(HC4) Quality	-0.200***	0.064	0.002	0.819
Age	0.003	0.008	0.730	1003
Children	-0.081	0.078	0.301	0.922
Male	-0.242**	0.111	0.030	0.785
Volunteering	-0.857***	0.116	0.000	0.424
Place of residence			0.650	
≥ 100 kms	0.784	0.934	0.401	2.191
Abroad	0.630	0.957	0.510	1.877
Place of work			0.490	
≥ 100 kms	-0.547	0.920	0.552	0.579
Abroad	-0.857	0.942	0.363	0.425
Marital status			0.073	
Married	-0.498*	0.268	0.063	0.608
Other	-0.567**	0.249	0.023	0.567
Constant	-3.439***	0.584	0.000	0.032
Test	$\chi^2$	<i>df</i>	<i>p value</i>	
Score test (LM test)	584.584	21	0.000	
Hosmer and Lemeshow test	3.755	8	0.879	
Cox and Snell $R^2=0.253$		Nagelkerke's $R^2=0.337$		

Note: \* p-value<0.10; \*\* p-value<0.05; \*\*\* p-value<0.01

After testing, an improvement in the model was noteworthy, and the constant-only model predicted collaboration intention of 53.5%, the predictor model presented a rate of 72.1% and a good model adjustment can be concluded according to the area under the ROC curve presenting 0.796, as shown in Table 4.7, with a sensitivity of 78.0% and a specificity of 65.3% for a cut value of 0.50.

**Table 4.7 Classification table (N=2,008)**

Observed		Predicted Intention to collaborate		
		No	Yes	% correct
Intention to collaborate	No	609	324	65.3
	Yes	237	838	78.0
Overall percentage				72.1
<b>Area under the Roc curve</b>		0.796		

Analysing Table 4.6, the results partially meet the authors' expectations regarding dimensions in the model as predictors of collaboration. It is noteworthy that HC is a strong predictor of intention to collaborate. As to the other commitment dimensions (AC and CC), only the "sense of belonging" predicted intention to collaborate. Concerning AE, "active participation in extracurricular activities" and "affiliation in sororities/fraternities" predicted intention to collaborate, but surprisingly, the last item presented a negative coefficient (-0.509), which reveals that this kind of involvement during AE does not necessary result in future engagement. In terms of sociodemographic variables, the predictors are gender, marital status and volunteer work. Married alumni or those with "other" marital status are less likely to collaborate than single alumni, and the fact that they usually do volunteer work does not mean they have a higher probability to collaborate, because this factor presents a negative coefficient of -0.857.

#### 4.5 Main conclusions

HEIs need to know their alumni if they want to maintain permanent and strong bonds with them. In this context, developments are being made pretty much everywhere, and this study aims to contribute to those developments.

#### 4.5.1 Segmentation of supportive alumni

The first strategy used in this study suggested five committed alumni clusters, answering RQ1. The identification of cluster features answers RQ2 and RQ3. In terms of commitment dimensions, HC seems to play a key role. The responsibility of the HEI in the commitment relationship is underlined. Alumni expect that the HEI ensures the overall quality of its services and maintains communication with them particularly by guaranteeing proper methods of gathering their opinions. CC also establishes differences between clusters, particularly concerning the perception of the advantages that alumni may get from the relationship, which is extremely valorised in all clusters with a slight difference in cluster 4.

Concerning AC, “pride in having been a student of the HEI” (AC2) stands out with the highest average values, followed by “perception of the HEI as a trusted institution” (AC6), which demonstrates strong and positive feelings regarding the HEI and is in line with the related literature (e.g. Adidam, et al., 2004; Hennig-Thurau et al., 2001; Holdford & White, 1997; Snijders et al., 2019; Wong & Wong, 2011).

Divergences among the five clusters are mainly identified through CR. “HEI recommended to family and friends” (CR2) is common to all of them, but for higher average values, there is a similarity between CR1, CR3 and CR4. Information given by the remaining CR variables is equally valid regarding the needs and strategies of the HEI, which is in line with the literature, which asserts the importance of knowing how alumni intend to be involved in the HEI (e.g. Alnawas & Phillips, 2015; Helgesen & Nettet, 2007; Hennig-Thurau et al., 2001; McAlexander & Koenig, 2001; Sargeant & Woodliffe, 2005).

Concerning AE and sociodemographic characteristics, there appears at first sight to be general convergences between clusters, but each cluster presents specific features different from the others, as described in the previous section. Regarding AE, the findings suggest that segments 3 and 4 present, on average, a shorter period since graduation (9.77 and 9.99 years). The other groups present a period between 10.10 and 10.78 years. In terms of subjects of study areas, there is a noteworthy concentration in EMT in every group, but certain uniform distributions of the areas between the five clusters are visible. Concerning affiliation with sororities/fraternities, the rates show most alumni were not affiliated, which is particularly underlined in segments 3 and 5.

Equally relevant, when explaining the intention to collaborate, is the involvement in extracurricular activities (AE1), because the findings show higher averages in segments 1, 2 and 3.

Noteworthy are the relatively balanced figures between clusters in terms of gender – except for cluster 5 – and of marital status – except for cluster 4. The age average is between 36.99 and 37.72, except for cluster 4, which is 35.13. Cluster 4 is the youngest cohort, with more single people, fewer children and a higher percentage of alumni living and working abroad; it also presents the lowest rate of commitment, which is in line with the conclusions of Lara and Johnson (2013) and Weerts and Ronca (2007, 2008), but contradicts Wunnava and Lauze (2001). A certain sense of independence seems to influence the willingness to collaborate.

#### 4.5.2 Modelling the intention to collaborate

The econometric results shed light on RQ4 and RQ5. The estimated logit model shows that 12 predictors are statistically significant, and in general, all of them meet our previous expectations. In terms of commitment there's a strong influence of HC over intention to collaborate, through all of its variables included in the model. Alumni assert that the HEI should ask for their collaboration, because the results show that when there is a one-unit change in this variable increases the probability of collaboration by 27.6%, which is supported by the literature (e.g. Belfield & Beney, 2000; Skari, 2013). The logit model indicates that the odds of collaborating increases 1.264 times when there is an one-unit increment change in the perception of communication (between 1 and 8) and 1.184 times when that increment happens in the perception about the HEI's developing means to gather their opinion. This is supported in the related literature (e.g. Alnawas & Phillips, 2015; Baade & Sundberg, 1996; Belfield & Beney, 2000). In terms of the HEI's concerns about overall quality perception, a peculiar contradiction seems to appear, and a one-unit increase in this variable decreases the odds of collaboration 0.819 times. The literature usually presents overall quality as a relevant attribute influencing behavioral intentions (e.g. Alves & Raposo, 2007; Baade & Sundberg, 1996; Hennig-Thurau et al., 2001; Snijders et al., 2019), but there is a slight parallel between our results and those of Jiewanto, Laurens and Nelloh (2012), who found that service quality had a negative impact on word-of-mouth intention, as well as with the conclusions of Rojas-Méndez et al. (2009), who assert that service quality does not directly influence student loyalty.

AC predicts intention to collaborate through the sense of belonging, when an increase of one unit in this variable occurs, there is a 23.8% greater probability of collaboration. Indeed, strong positive feelings are predictive of alumni engagement, which is supported in the literature (e.g. Fullerton, 2003; Hennig-Thurau et al., 2001; Holdford & White, 1997). CC is the exception in predicting collaboration, as it is statistically non-significant, contradicting the conclusions of, for example, Iskhakova et al. (2016).

The literature recognises that involvement in extracurricular activities and affiliation in sororities/fraternities represents effective ways of building positive feelings (e.g. Holmes, 2009; Hunter et al., 1999; Skari, 2013). Both variables are indeed statistically significant, so they are predictors of intention to collaborate. When extracurricular participation increases by one unit, the probability of collaboration rises 1.054 times. However, regarding sororities/fraternities, alumni who were affiliated show a probability of intention to collaborate 39.9% lower than those who were not, so this variable may not be related with further engagement.

In terms of sociodemographic variables, predictors are gender, marital status and volunteering. The results show that men are 21.5% less likely to collaborate than women, confirming the conclusions of Belfield and Beney (2000), Lara and Johnson (2014) and Weerts and Ronca (2007). In terms of marital status, single alumni are more collaborative than married or alumni in “other” marital situations, as the probability that those with these characteristics will collaborate are, respectively, 39.2% and 43.3% lower than single alumni, which contradicts the conclusions of Lara and Johnson (2014) and Monks (2003).

Finally, concerning volunteering, the probability of alumni collaboration is 57.6% lower among those who assert that they usually do volunteer work than among those who usually do not volunteer, so this variable may not be connected with further engagement. These results differ from the conclusions of Hunter et al. (1999), Weerts and Ronca (2007) and Wunnava and Lauze (2001).

As previously stated, the dimensions considered in the study were supported by the literature, and the authors expected them to influence the intention to collaborate. Model estimation showed that years after graduation is non-statistically significant, which does not agree with the conclusions of McAlexander and Koenig (2001) and Okunade and Berl (2000). Age, number of children, place of residence and work are non-statistically significant to predict intention to collaborate, which differs from the conclusions of studies such Lara and Johnson (2014) for place of residence and age, Okunade and Berl (1997) for children, Skari (2013) and Stephenson and Bell (2014) for age and Weerts and

Ronca (2007) for residence. As such, it seems that potential constraints that could occur are not sufficient reason to deny collaboration. In short, alumni just want to give back what they once received. According to our results, we may conclude that beliefs, attachments and positive feelings towards the alma mater are far more relevant to explain intention to collaborate than sociodemographic dimensions. These findings are consistent with previous studies (Hunter et al., 1999; Monks, 2003) that assert satisfaction with the undergraduate experience is more significant to alumni giving than sociodemographic variables. Weerts and Ronca (2007) also justify alumni voluntary support as a response to benefits received.

#### 4.5.3 Implications and suggestions for further studies

From a managerial point of view, the combination of both strategies gives an overall characterisation of the alumni most likely to collaborate. Based on information given by the sociodemographic, AE and commitment dimensions, a suitable segmentation of alumni database was achieved allowing the application of differentiated strategies.

The AE elements give practitioners useful information to define strategies towards students aiming to maintain further relationships, namely reinforcing and improving measures addressing extracurricular activities, due to its influence in building positive feelings and consequent willingness to be involved with the HEI. Commitment dimensions are likewise relevant in defining the alumni relationship with the alma mater. HEI commitment is underlined as crucial, so management must take responsibility in the process, assuring effective two-way communication with both students and alumni, and actively seeking their opinions and suggestions for helping the HEI's efforts to sustain continuous overall quality. The findings also show that the HEI should drive solicitations when alumni involvement is necessary, meaning that a focused message with a clear and sincere purpose will certainly receive an enthusiastic response. Such HEI accomplishments may reinforce affective commitment, enhancing trust in the institution and pride in being involved. This should guide communication and overall marketing strategies. Segmentation also gives clues about the aspects in which alumni are most likely to collaborate, allowing the HEI to solicit the right things from the right people to enhance positive responses. The findings obtained in the binomial logit model complement the information for management, because the predictors of the intention to collaborate were identified. Defining the "committed" profile allows for better strategies and better

targeting. Although, the “giving back” segment was assumed in this research as a way to give mostly intangibles, it was noteworthy that alumni perceived fundraising as a positive thing, which should guide measures for conducting fundraising campaigns.

The present results also develop the literature on this topic. To the best of our knowledge, this is the first study of this sort done in Portugal, and we believe that these findings begin to fill the research gap concerning alumni segmentation in the European context and Portugal in particular. The present findings also reinforce the understanding of the determinants of commitment, especially regarding non-monetary collaboration, and present a set of predictors that may help other HEIs enhance commitment relationship with their alumni. This study also raises questions. It was undertaken in a relatively young and medium-sized public university. If the study had been conducted in an older and bigger institution, would the results be the same? Further research should be undertaken to compare different contexts. It should also be interesting to compare similar institutions from different countries.

This investigation was based on alumni opinions and perceptions about a set of dimensions. Given that their time as students generated determinants for the future relationship with the alma mater, what kind of conclusions could be achieved if the study, after the necessary adaptations, was applied to a dataset of students? Future research taking this strategy would be useful for relationship marketing domains in HEIs, and could be further enhanced if the same studies were later applied to the same individuals as alumni. The focus of the present study was on alumni who asserted intention to collaborate. The main reasons for the non-intention to collaborate should be investigated, as these would certainly clarify some of the daily constraints HEIs have to face.

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#### 4.6 References

- Adidam, P. T., Prasad, R & Sindhav, B. (2004). Building Relationships Between Business Schools and Students: An empirical investigation into student retention. *Journal of College Teaching & Learning*, 1(11), 37-48.
- Alnawas, I., & Phillips, C. (2015). Alumni orientation: Development of the construct. *Journal of Nonprofit & Public Sector Marketing*, 27(2), 183-215.

- Alves, H., Mainardes, E.W., & Raposo, M. (2010). A relationship approach to higher education institution stakeholder management. *Tertiary Education and Management*, 16(3), 159-181.
- Alves, H., & Raposo, M. (2007). Conceptual model of student satisfaction in higher education. *Total Quality Management*, 18(5), 571–588.
- Amani, Z. (2015). Commitment as a mediator of the relationship between trust and relationship loyalty to retailer. *Journal of Business Studies Quarterly*, 6(3).
- Ashforth, B. E. & Mael, F. (1989). Social Identity Theory and the Organization. *The Academy of Management Review*, 14(1), 20-39.
- Baade, R. & Sundberg, J. O. (1996). What determines alumni generosity? *Economics of Education Review*, 15(1), 75-81.
- Bekkers, R. & Wiepking, P. (2011). A Literature Review of Empirical Studies of Philanthropy: Eight Mechanisms That Drive Charitable Giving. *Nonprofit and Voluntary Sector Quarterly*, 40(5), 924-973.
- Belfield, C. R., & Beney, A. P. (2000). What Determines Alumni Generosity? Evidence for the UK the UK. *Education Economics*, 8(1), 65-80.
- Clotfelter, C.T. (2003). Alumni giving to elite private colleges and universities. *Economics of Education Review*, 22(2), 109-120.
- Durango-Cohen, E. J. & Balasubramanian, S. K. (2015). Effective Segmentation of University Alumni: Mining Contribution Data with Finite-Mixture Models. *Research in Higher Education*, 56(1), 78-104.
- Fullerton, G. (2003). When does commitment Lead to Loyalty? *Journal of Service Research*, 5(4), 333-344.
- Geyskens, I., SteeKamp, J.B., Scheer, L., & Kumar, N. (1996). The Effects of Trust and Interdependence on Relationship Commitment: A Trans- Atlantic Study. *International Journal of Research in Marketing*, 13, 303-317.
- Grönroos, C. (1994). From marketing mix to relationship marketing: Towards a paradigm shift in marketing. *Management Decision*, 32(2), 1-27.
- Helgesen, Ø. (2008). Marketing for higher education: A relationship marketing approach. *Journal of Marketing for Higher Education*, 18(1), 50-78.
- Helgesen, Ø., & Nettet, E. (2007). Images, Satisfaction and Antecedents: Drivers of Student Loyalty? A Case Study of a Norwegian University College. *Corporate Reputation Review*, 10(1), 38-59.



- Hennig-Thurau, T., Langer, M. F., & Hansen, U. (2001). Modeling and Managing Student Loyalty: An Approach Based on the Concept of Relationship Quality. *Journal of Service Research*, 3(4), 331-344.
- Holdford, D. & White, S. (1997). Testing Commitment-Trust Theory in Relationships Between Pharmacy Schools and Students. *American Journal of Pharmaceutical Education*, 61, 249-256.
- Holmes, J. (2009). Prestige, charitable deductions and other determinants of alumni giving: Evidence from a highly selective liberal arts college. *Economics of Education Review*, 28(1), 18-28.
- Hunter, C. S., Jones, E. B. & Boger, C. (1999). A Study of the Relationship between Alumni Giving and Selected Characteristics of Alumni Donors of Livingstone College, NC. *Journal of Black Studies*, 29(4), 523-539.
- Iskhakova, L., Hilbert, A., & Hoffmann, S. (2016). An Integrative Model of Alumni Loyalty—an Empirical Validation Among Graduates from German and Russian Universities. *Journal of Nonprofit & Public Sector Marketing*, 28(2), 129-163.
- Jiewanto, A., Laurens, C., & Nelloh, L. (2012). Influence of Service Quality, University Image, and Student Satisfaction toward WOM Intention: A Case Study on Universitas Pelita Harapan Surabaya. *Procedia - Social and Behavioral Sciences*, 40, 16-23.
- Lara, C., & Johnson, D. (2014). The anatomy of a likely donor: econometric evidence on philanthropy to higher education. *Education Economics*, 22(3), 293-304.
- Le Blanc, L. A. & Rucks, C. T. (2009). Data mining of university philanthropic giving: Cluster-discriminant analysis and Pareto effects. *International Journal of Educational Advancement*, 9(2), 64-82.
- McAlexander, J.H., & Koenig, H. F. (2001). University Experiences, the Student-College Relationship, and Alumni Support. *Journal of Marketing for Higher Education*, 10(3), 21-44.
- Mainardes, E. W., Raposo, M., & Alves, H. (2014). Universities Need a Market Orientation to Attract Non-Traditional Stakeholders as New Financing Sources. *Public Organization Review*, 14(2), 159-171.
- Miles, J. & Shevlin, M. (2001). *Applying regression & Correlation*. London: SAGE Publications.
- Monks, J. (2003). Patterns of giving to one's alma mater among young graduates from selective institutions. *Economics of Education Review*, 22(2), 121-130.
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(July), 20-38.
- Nesbit, R. & Gazley, B. (2012). Patterns of Volunteer Activity in Professional Associations and Societies. *Voluntas*, 23(3), 558-583.

- Okunade, A.A. & Berl, R. L. (1997). Determinants of charitable giving of business school alumni. *Research in Higher Education*, 38(2), 201-214.
- Pérez-Esparrells, C., & Torre, E.M. (2012). The Challenge of Fundraising in Universities in Europe. *International Journal of Higher Education*, 1(2), 55-66.
- Rattanamethawong, V., Sinthupinyo, S. & Achara, E. (2015). An Innovation System that Can Quickly Responses to the Needs of Students and Alumni. *Procedia - Social and Behavioral Sciences*, 182, 645-652.
- Rojas-Méndez, J., Vasquez-Parraga, A. Z., Kara, A. & Cerda-Urrutia, A. (2009). Determinants of student loyalty in higher education: A tested relationship approach in latin America. *Latin American Business Review*, 10(1), 21-39.
- Santiago, R., Carvalho, T., Amaral, A., & Meek, V. L. (2006). Changing patterns in the middle management of higher education institutions: The case of Portugal. *Higher Education*, 52(2), 215-250.
- Sargeant, A., & Woodliffe, L. (2005). The Antecedents of Donor. *Nonprofit Management & Leadership*, 16(1), 61-78.
- Schlesinger, W., Cervera, A., & Iniesta, M. A. (2015). Key elements in building relationships in the higher education services context. *Journal of Promotion Management*, 21(4), 475-491.
- Schlesinger, W., Cervera, A., & Pérez-Cabañero, C. (2016). Sticking with your university: The importance of satisfaction, trust, image, and shared values. *Studies in Higher Education*, 5079, 1-17.
- Skari, L. (2014). Community College Alumni: Predicting Who Gives. *Community College Review*, 42(1), 23-40.
- Snijders, I., Wijnia, L., Rikers, R., & Loyens, S. (2019). Alumni loyalty drivers in higher education. *Social Psychology of Education*, <https://doi.org/10.1007/s11218-019-09488-4>.
- Stephenson, A.L., & Bell, N. (2014). Motivation for alumni donations: a social identity perspective on the role of branding in higher education. *International Journal of Nonprofit and Voluntary Sector Marketing*, 186(aug.), 176-186.
- Weerts, D. J., & Ronca, J. M. (2007). Profiles of Supportive Alumni: Donors, Volunteers, and Those Who “Do It All”. *International Journal of Educational Advancement*, 7(1), 20-34.
- Weerts, D. J., & Ronca, J. M. (2007). Characteristics of Alumni Donors Who Volunteer at their Alma Mater. 49(3), *Research in Higher Education*, 274-292.
- Wong, H., & Wong, H. (2011). Building Relationship between Education Institutions and Students: Student Loyalty in Self-Financed Tertiary Education. *IBIMA Business Review Journal*, 2011, 1-22.

Wunnava, P. V., & Lauze, M. A. (2001). Alumni giving at a small liberal arts college: evidence from consistent and occasional donors. *Economics of Education Review*. 20(6), 533-543



## **CHAPTER 5**

### **GENERAL CONCLUSION**

For any relationship to endure, it is of paramount importance that partners understand each other. This frames the scope of this thesis by bringing information to light for HEIs to better understand their alumni in order to enhance commitment relationships through efficient alumni management measures and marketing strategies.

The development work accomplished in the three studies, met the three formulated objectives:

1. To identify the drivers and indicators of commitment,
2. To characterise the alumni commitment,
3. To describe overall patterns in alumni commitment.

First, a theoretical basis to sustain the first study's development was defined after the literature review, through the following four main dimensions: academic experience, current situation, commitment indicators, and the HEI's commitment. Focus groups participants' responses concerning each dimension revealed useful information, and simultaneously additional findings arose which helped further developments and facilitated an interesting approach to objective one. Secondly, considering the first study's findings together with the theoretical framework, a conceptual model to explain the commitment relationship was drawn and estimated in study two. The findings of which fulfilled objectives one and two. Finally, in the third study, empirical work was conducted based on previous findings and according to the literature review. The aim to identify alumni segments and obtain profiles of the ones who assert intention to be involved was accomplished, thus providing elements to meet objective three.

The fulfillment of the proposed objectives sheds light on the literature and helps in the management of the alumni-alma mater relationship in the context of the Portuguese higher education, where solid developments are necessary.

## 5.1 Theoretical contributions

This thesis adds value to theory from a twofold perspective. First, the empirical work was conducted in an educational context where alumni culture has a weak expression, and secondly, the thesis emphasises commitment as a determinant in relationship marketing.

Despite the fact that alumni-*alma mater* relationship is known in a myriad of works, the majority were developed in well contextualised alumni culture environments, such as those in higher educational fields in the USA and UK, as the following examples demonstrate: Elliott and Healy (2001), Hartman and Schmidt (1995), Larry and Garey (1988), Mael and Ashforth (1992), McAlexander and Koenig (2001), Willemain, Goyal, Van Deven, and Thukral (1994) from the USA, and Belfield and Benney (2000), Clotfelter (2001, 2003), Schofield and Fallon (2012) from UK.

In a way, these findings minimise the lack of investigation in terms of knowledge concerning alumni-*alma mater* relationships in the European context, particularly in Portugal. When addressing alumni perceptions concerning the various dimensions influencing their engagement with the HEI, there is a set of information that potentially differentiates patterns in counterpoint with other alumni contexts. Given study one's findings, certain aspects stand out as the most relevant when appealing to alumni's memories. Such is the case of freshmen initiation activities, extracurricular activities, and interaction with professors. Moreover, it is noticed that transverse to the three studies, the HEI's commitment is revealed as a key element in the relationship process, namely the fact that alumni look forward to HEI soliciting their involvement.

Determinants of future relationships, in the scope of alumni loyalty, have been widely explored such as, for example, the work of Iskhakova et al. (2017) underlines. Some European contributions appear, but in terms of Portuguese works, there are only the contributions of Alves and Raposo (2007, 2010). Consequently, all valid research results collected in the field of Portuguese HE will enrich the knowledge base.

Still, the sequence of techniques used to develop the research allows for canvassing for the fundamentals of the alumni-*alma mater* commitment relationship: as such, the opinions and perceptions of alumni were collected, and guidelines were gathered for the next steps. The model estimation through SEM gives information about direct and indirect drivers of commitment relationship which in turn is conducted to define the third study, identifying alumni segments and a model to predict intention to collaborate.

Findings in both studies underline commitment dimensions which we further develop, along with some other relevant dimensions to explain the commitment relationship. These are aspects related to academic experience, social and academic integration, and sociodemographic elements included in the alumni's current situation; thus, they contribute to enhancing knowledge.

Commitment is deeply explored in the three studies as a key determinant to sustain the alumni-*alma mater* relationship and as a determinant to cooperative behavior. Findings stress the positive feelings encompassed in affective commitment, the perception of benefits deriving from the relationship included in cognitive commitment, and HEIs' responsibilities with respect to HEIs' commitment. From a scientific point of view, these results add information to the literature on effective approaches to fostering alumni commitment and complement the studies of Adidam et al. (2004), Hennig-Thurau et al. (2001), Holdford and White (1997), and Wong and Wong (2011), among others.

## 5.2 Managerial implications

Assuming similarities amongst the alumni culture at Portuguese HEIs, this thesis' findings underline a set of challenges and opportunities for improvement, that can be replicated in the Portuguese HE context. Dimensions determining alumni's future involvement were explored throughout the development of the three studies, and respective outcomes provide guidelines to management.

The first study highlights how meaningful it is to get alumni opinions and perceptions whether concerning their academic experience or the future of HEIs. Alumni are aware that the HEI's prestige and reputation are theirs too. Their statements reveal concern and give clues regarding improvement, namely, the ones related to *academic experience*, *social and academic integration*, and *HEI's commitment*. Aspects like the relationships fostered while a student, extracurricular activities, and sororities/fraternities in which they were involved reveal the need to implement measures aimed at enhancing student engagement. As such, practices to encourage enrolment in non-academic activities must be an issue to be considered when planning all yearly academic activities. This, in turn, will guarantee engaged alumni in the future, thus establishing a parallel with other studies, such as the ones of Clotfelter (2001), Gaier (2005), Newman and Petrosko (2011), and

Skari (2013), among others. Still, the role HEI plays in the entire process, with emphasis on effective communication as a task to undertake, is recognised as the most important.

The above-stated is confirmed through quantitative data in study two. Practical aspects, in terms of alumni relationship management, mean that communication with alumni is of utmost importance. Alumni expect active communication channels will be maintained in order to give feedback. The alumni surveyed stressed that they want to be heard. Second, solicitations are highlighted as a determinant of getting alumni involved. Respondents stress their desire to be involved, so their university simply has to ask them whenever alumni help is needed.

Third, affective and cognitive commitment offer a framework to be considered when defining strategies. Alumni pride, their sense of belonging, and trust reflect an emotional attachment to their alma mater, a fact that HEIs administrators must bear in mind. If students feel attached to their HEI from the very beginning, they will remain so after graduation. To strengthen this sense of belonging, all activities included in the social and academic integration require accurate planning in order to motivate students to be involved. Communication strategies, therefore, must emphasise the students' importance and the key role they play in the institution as co-creators (Elsharnouby, 2015). Alumni are also motivated by the benefits they can receive (Alnawas & Phillips, 2015), so an effort needs to be made to respond to their demands appropriately with quality services. The final important implication is that quality, satisfaction, and image can be used to define strategies to improve HEIs' overall performance, which means management policies must sustain these attributes.

Communication campaigns addressed to alumni will get positive outcomes if HEIs possess enough information about them. Knowing who its alumni are, and particularly the ones HEI can count on, brings managerial benefits. Given the results of study three, an overall characterisation of the alumni most likely to collaborate was achieved through segmentation, thereby allowing strategies to be directed accordingly, as for each segment the findings show the types of giving back alumni are willing to offer. This way, when activities are defined and alumni help is needed, it becomes easier to direct invitations, and answers are most likely to be positive.

HEIs are also given a tool to explain and predict the pattern of alumni commitment via an econometric model that complements previous findings through ten predictors of intention to collaborate, thereby giving management a keen instrument to optimise efforts concerning alumni most likely to collaborate. Amongst other predictors, variables in HEIs'



commitment highlight the role of communication strategies, efforts to request alumni collaboration and collect their opinions. This is particularly significant as these predictors can be controlled by the HEI and can lead to permanent alumni relationship management, ideally supported by adequate software.

### 5.3 Limitations and suggestions for future work

Given the importance of studies of this nature for HEIs in a European context and particularly in Portugal, every identified limitation is a fertile field for future investigation. This thesis has been undertaken in a specific institution, presenting specific features in terms of age, size, and locale; consequently, it takes into consideration one specific alumni sample. Still, the sample size may constitute a limitation too. Time and financial constraints limit the opportunity to obtain a larger sample size by applying methods to get more email addresses. Measures to update contacts are necessary to assure consistency, not only in responding to the investigation needs but also in communicating during alumni campaigns themselves.

Applying the research in similar Portuguese institutions would bring strong advantages by comparing different samples, and in this way results would provide complementary insights and also allow validity of the reported findings to be tested. Nonetheless, conducting the research in institutions presenting different characteristics, such as age, size, and locale would certainly add value to the knowledge concerning alumni-alma mater relationships (Belfield & Beney, 2000; Hennig-Thurau et al., 2001; Iskhakova et al., 2016)

Another interesting and equally valid approach would be to conduct the research in HEIs in a wider European context. Having the opportunity to compare different higher education fields and different alumni cultures would provide a greater opportunity to reinforce that knowledge.

Alumni culture constitutes an important base from which to define some research strategies, namely, to determine the dimensions under study. Given this thesis' central concept to understand the alumni-alma mater commitment relationship, the guideline views commitment as the decisive factor in determining future alumni involvement in a collaborative manner rather than in a monetary fashion. Monetary giving underlies most alumni cultures such as that in the USA. Deepening the understanding of the role of other

dimensions to explain and predict the maintenance of the alumni-alma mater relationship and the commitment itself would be of great value as the roles can differ according to the alumni culture levels. Aspects like satisfaction with academic experience, relationship quality, image, branding, trust, prestige, and perception of benefits resulting from the relationship could be considered for future research. Although they have already been addressed by other authors, e.g. Chapleo (2004), Holmes (2009), McAlexander and Koenig (2012), Nora and Cabrera (1993), Sampaio et al. (2012), Sung and Yang (2008), new studies could bring fresh insights to this field.

Despite the importance of understanding the drivers of the alumni-alma mater commitment relationship, future investigation should also be developed to understand prospective alumni who won't be committed to a future relationship. Findings would certainly bring clues to HEIs' management in order to deal with some daily constraints, namely the drop-off behaviour and dissatisfaction of students, which would be helpful to define strategies aimed at reversing the decisions of alumni.

Finally, this thesis evaluates alumni opinions and perceptions at a particular moment. We believe that employing longitudinal surveys, first during their studies and then as alumni, would give consistent information to evaluate the motivation to commit.

#### 5.4 References

- Adidam, P. T., Prasad, R & Sindhav, B. (2004). Building Relationships Between Business Schools And Students: An Empirical Investigation Into Student Retention. *Journal of College Teaching & Learning*, 1(11), 37-48.
- Alnawas, I., & Phillips, C. (2015). Alumni orientation: Development of the construct. *Journal of Nonprofit & Public Sector Marketing*, 27(2), 183-215.
- Alves, H., & Raposo, M. (2007). Conceptual model of student satisfaction in higher education. *Total Quality Management*, 18(5), 571–588.
- Alves, H., & Raposo, M. (2010). The influence of university image on student behaviour. *International Journal of Educational Management*, 24(1), 73–85.
- Belfield, C. R., & Beney, A. P. (2000). What Determines Alumni Generosity? Evidence for the UK the UK. *Education Economics*, 8(1), 65-80.
- Chapleo, C. (2004). Interpretation and Implementation of Reputation/Brand Management by UK University Leaders. *International Journal of Educational Advancement*, 5(1), 7-23.

- Clotfelter, C.T. (2003). Alumni giving to elite private colleges and universities. *Economics of Education Review*, 22(2), 109-120.
- Elliott, K. M., & Healy, M. A. (2001). Key factors influencing student satisfaction related to recruitment and retention. *Journal of Marketing for Higher Education*, 10(4), 1-11.
- Elsharnouby, T. H. (2015). Student co-creation behavior in higher education: the role of satisfaction with the university experience. *Journal of Marketing for Higher Education*, 1241, 1-25.
- Gaier, S. (2005). Alumni Satisfaction with Their Undergraduate Academic Experience and the Impact on Alumni Giving and Participation. *International Journal of Educational Advancement*, 5(4), 279-288.
- Hartman, D. E., & Schmidt, S. L. (1995). Understanding student/alumni satisfaction from a consumer's perspective: The effects of institutional performance and program outcomes. *Research in Higher Education*, 36(2), 197-217.
- Hennig-Thurau, T., Langer, M. F., & Hansen, U. (2001). Modeling and Managing Student Loyalty: An Approach Based on the Concept of Relationship Quality. *Journal of Service Research*, 3(4), 331-344.
- Holdford, D. & White, S. (1997). Testing Commitment-Trust Theory in Relationships Between Pharmacy Schools and Students. *American Journal of Pharmaceutical Education*, 61, 249-256.
- Holmes, J. (2009). Prestige, charitable deductions and other determinants of alumni giving: Evidence from a highly selective liberal arts college. *Economics of Education Review*, 28(1), 18-28.
- Iskhakova, L., Hilbert, A., & Hoffmann, S. (2016). An Integrative Model of Alumni Loyalty—an Empirical Validation Among Graduates from German and Russian Universities. *Journal of Nonprofit & Public Sector Marketing*, 28(2), 129-163.
- Iskhakova, L., Hoffmann, S. & Hilbert, A. (2017). Alumni Loyalty: Systematic Literature Review. *Journal of Nonprofit and Public Sector Marketing*, 29(3), 274-316.
- Larry L. L. & Garey R. (1988) Donor Behavior and Voluntary Support for Higher Education Institutions, *The Journal of Higher Education*, 59:2, 115-132.
- Mael, F. & Ashforth, B. E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, 13, 103-123.
- McAlexander, J. H., & Koenig, H. F. (2001). University Experiences, the Student-College Relationship, and Alumni Support. *Journal of Marketing for Higher Education*, 10(3), 21-44.

- McAlexander, J. H., & Koenig, H. F. (2012). Building communities of philanthropy in higher education: contextual influences. *International Journal of Nonprofit and Voluntary Sector Marketing*, 17, 122-131.
- Newman, M. D., & Petrosko, J. M. (2011). Predictors of Alumni Association Membership. *Research in Higher Education*, 52(7), 738-759.
- Nora, A., & Cabrera, A. F. (1993). The construct validity of Institutional Commitment: A Confirmatory Factor Analysis. *Research in Higher Education*, 34(2), 243-262.
- Sampaio, C. H., Perin, M. G. Simões, C. & Kleinowski, H. (2012). Students' trust, value and loyalty: evidence from higher education in Brazil. *Journal of Marketing for Higher Education*, 22(1), 83-100.
- Schofield, P. & Fallon, P. (2012). Assessing the viability of university alumni as a repeat visitor market. *Tourism Management*, 33(6), 1373-1384.
- Skari, L. (2014). Community College Alumni: Predicting Who Gives. *Community College Review*, 42(1), 23-40.
- Sung, M., & Yang, S. (2008). Toward the model of university image: The influence of brand personality, external prestige, and reputation. *Journal of Public Relations Research*, 20(4), 357-376.
- Willemain, T. R., Goyal, A., Van Deven, M. & Thukral, I. S. (1994). Alumni giving: The influences of reunion, class, and year. *Research in Higher Education*, 35(5), 609-629.
- Wong, H., & Wong, H. (2011). Building Relationship between Education Institutions and Students: Student Loyalty in Self-Financed Tertiary Education. *IBIMA Business Review Journal*, 1-22.

**APPENDIX**  
**QUESTIONNAIRE**



## Os Alumni numa perspetiva de marketing relacional: a relação de compromisso entre os alumni e a alma mater

Inquérito aos diplomados da Universidade do Algarve no âmbito da tese de doutoramento em Ciências Económicas e Empresariais, com o título: Alumni in a relationship marketing perspective: the alumni-alma mater commitment relationship, a realizar na Faculdade de Economia

Caro(a) diplomado(a) da Universidade do Algarve (UAlg)

O questionário que se segue é parte integrante de um estudo empírico no âmbito de uma tese de doutoramento intitulada: *Os alumni numa perspetiva de marketing relacional: a relação de compromisso entre os alumni e a alma-mater*. (Nota: alumni= antigos alunos de uma instituição de ensino superior; alma mater= a instituição de ensino superior).

Através deste questionário, composto por quatro partes, pretendemos recolher a sua opinião em relação a diversos aspetos no âmbito da sua experiência enquanto estudante bem como da sua situação presente, que são suscetíveis de influenciar o seu relacionamento com a UAlg.

A sua opinião é muito importante porque, trabalhos desta natureza exigem um conjunto significativo de respostas e além disso ajuda-nos a identificar questões fundamentais numa perspetiva de melhoria organizacional contínua.

O tempo de resposta ronda os 8 minutos. Todas as perguntas são de resposta obrigatória. As suas respostas são confidenciais e anónimas.

Agradecemos a colaboração!

Existem 22 perguntas neste inquérito

## Avaliação da experiência académica- Satisfação

Tendo em consideração a sua experiência enquanto estudante da UAlg, por favor indique qual é o seu grau de satisfação com os seguintes fatores, utilizando uma escala de 1 = Extremamente insatisfeito(a) a 8 = Extremamente satisfeito(a)

1 [Satisfação]Curso \*

Por favor, selecione uma resposta apropriada para cada item:

	Extremamente insatisfeito(a) 1	2	3	4	5	6	7	Extremamente satisfeito(a) 8
Conteúdo programático	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Extremamente insatisfeito(a) 1 2 3 4 5 6 7 8 Extremamente satisfeito(a)

do curso no geral

Adequação do conteúdo programático aos objetivos do curso

### 2 [Satisfação] Competências dos professores (pedagógicas e científicas) \*

Por favor, selecione uma resposta apropriada para cada item:

Extremamente insatisfeito(a) 1 2 3 4 5 6 7 8 Extremamente satisfeito(a)

Competências pedagógicas no geral

Competências científicas no geral

### 3 [1 Satisfação]

Relacionamento com os professores

\*

Por favor, selecione uma resposta apropriada para cada item:

Extremamente insatisfeito(a) 1 2 3 4 5 6 7 8 Extremamente satisfeito(a)

Empatia dos professores para com os estudantes

Capacidade dos professores



	Extremamente insatisfeito(a)	2	3	4	5	6	7	Extremamente satisfeito(a)
	1							8
para motivar os estudantes								
Disponibilidade dos professores para apoiar os estudantes	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O meu relacionamento com os professores no geral	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### 4 [1 Satisfação]

##### Edifícios e espaços externos

\*

Por favor, selecione uma resposta apropriada para cada item:

	Extremamente insatisfeito(a)	2	3	4	5	6	7	Extremamente satisfeito(a)
	1							8
Adequação dos edifícios à atividade letiva	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adequação dos edifícios ao bem-estar dos estudantes	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adequação dos campi e espaços circundantes ao bem-estar	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Extremamente insatisfeito(a) 1 2 3 4 5 6 7 8 Extremamente satisfeito(a)

dos estudantes

Adequação dos campi e espaços circundantes às necessidades dos estudantes

## Avaliação da experiência acadêmica- Percepções

As questões seguintes destinam-se a avaliar a sua percepção acerca de um conjunto de aspetos também relacionados com a sua experiência académica. Por favor indique qual o seu grau de concordância utilizando uma escala que vai de 1 = Discordo totalmente a 8 = Concordo totalmente

5 [Percepções]

Imagem\*

Por favor, selecione uma resposta apropriada para cada item:

Discordo totalmente 1 2 3 4 5 6 7 8 Concordo totalmente

A minha percepção relativamente ao meu curso é positiva

A minha percepção relativamente à UAlg em geral é positiva

	Discordo totalmente	2	3	4	5	6	7	Concordo totalmente
	1							8
A minha percepção em relação ao desempenho dos serviços de apoio em geral é positiva	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Considero que a percepção do público relativamente à UAlg em geral é positiva	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### 6 [Perceções]Qualidade \*

Por favor, selecione uma resposta apropriada para cada item:

	Discordo totalmente	2	3	4	5	6	7	Concordo totalmente
	1							8
O desempenho geral dos serviços de apoio tem qualidade	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O ensino no geral tem qualidade	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A comunicação da UAlg com os estudantes numa maneira geral é eficaz	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### 7 [Perceções]

##### Integração no meio académico\*

Por favor, selecione uma resposta apropriada para cada item:

	Discordo totalmente	2	3	4	5	6	7	Concordo totalmente
	1							8
Participei ativamente em grupos/associação de estudantes (atividades lúdicas)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participei ativamente em Atividades extracurriculares	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participei ativamente nas atividades da praxe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A minha vivência no campus foi agradável	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O meu relacionamento com os meus colegas no geral foi positivo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O meu relacionamento com o pessoal não docente no geral foi positivo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Avaliação do relacionamento com a UAlg no tempo presente.

Nesta seção pretende-se caracterizar a sua perceção no que diz respeito ao seu relacionamento com a UAlg no tempo presente. Por favor indique qual o seu grau de concordância utilizando uma escala que vai de 1 = Discordo totalmente a 8 = Concordo totalmente

8 [Perceções]Determinantes do relacionamento \*

Por favor, selecione uma resposta apropriada para cada item:

	Discordo totalmente	2	3	4	5	6	7	Concordo totalmente
	1							8
O meu local de residência influencia o relacionamento com a UAlg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O meu local de trabalho influencia o relacionamento com a UAlg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As exigências do meu trabalho influenciam o relacionamento com a UAlg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As exigências da minha família (e.g. ter de cuidar de filhos, de idosos, de familiares doentes) influenciam o contacto com a UAlg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9 [Perceções]

Compromisso cognitivo\*

Por favor, selecione uma resposta apropriada para cada item:

	Discordo totalmente	2	3	4	5	6	7	Concordo totalmente
	1							8
Considero que a minha colaboração com a UAlg traz-me vantagens (pessoais, sociais, profissionais)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O meu relacionamento com a UAlg visa sobretudo aspetos práticos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### 10 [Perceções]

#### Compromisso afetivo\*

Por favor, seleccione uma resposta apropriada para cada item:

	Discordo totalmente	2	3	4	5	6	7	Concordo totalmente
	1							8
Quando penso na UAlg é com um sentimento de pertença	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto orgulho em ter sido estudante da UAlg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto que o sucesso da UAlg é o meu também	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Discordo totalmente 1	2	3	4	5	6	7	Concordo totalmente 8
Quando alguém elogia a UAlg sinto como se fosse um elogio pessoal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Se vejo uma crítica à UAlg sinto-me constrangido (a)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sei que a UAlg é uma instituição de confiança	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fico feliz quando vejo o logotipo da UAlg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11 [Perceções]

Compromisso da UAlg

\*

Por favor, seleccione uma resposta apropriada para cada item:

	Discordo totalmente 1	2	3	4	5	6	7	Concordo totalmente 8
A UAlg deve pedir a minha colaboração sempre que necessário	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Discordo totalmente	2	3	4	5	6	7	Concordo totalmente
	1							8
A UAlg deve manter comunicação ativa comigo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A UAlg deve garantir meios para recolher a opinião dos seus alumni	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A UAlg deve manter esforços para garantir a qualidade dos seus serviços	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A UAlg deve preocupar-se comigo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 12 [Perceções]

### Relação de Compromisso para com a UAlg\*

Por favor, selecione uma resposta apropriada para cada item:

	Discordo totalmente	2	3	4	5	6	7	Concordo totalmente
	1							8
Escolho a UAlg para formação(ões) futura(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recomendo a UAlg à família e amigos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quero partilhar a minha experiência com os estudantes atuais	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



	Discordo totalmente	2	3	4	5	6	7	Concordo totalmente
	1							8
Quero dar a minha ajuda em atividades da UAlg	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quero participar em campanhas de angariação de fundos que visam apoio em áreas importantes da UAlg	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quero participar em encontros/convívios com alumni	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Informação sociodemográfica

Esta seção destina-se a recolher informação sociodemográfica destinada à definição de perfis dos alumni.

### 13 [Atividades]

Enquanto estudante participou nalgum(a) grupo/organização/associação?\*

Por favor, selecione apenas uma das seguintes opções:

Sim

Não

### 14 [Atividades] Se sim, qual ou quais?

Por favor, selecione todas as que se aplicam:

Tuna

Associação académica

Grupos de voluntariado

Outro:

### 15 [Informação] Idade \*

Por favor, escreva aqui a sua resposta:

16 [Informação]

Residencia: (Concelho; país no caso de residir no estrangeiro)\*

Por favor, escreva aqui a sua resposta:

17 [Informação]

Local de trabalho (Concelho/país)\*

Por favor, escreva aqui a sua resposta:

18 [Informação]

Estado civil:\*

Por favor, selecione uma das seguintes opções:

Solteiro(a)

Casado(a)

Divorciado(a)

Viúvo(a)

União de facto

Outro

19 [Informações]

Número de filhos\*

Por favor, escreva aqui a sua resposta:

20 [Informações]

Colabora normalmente em ações de voluntariado?

\*

Por favor, selecione uma das seguintes opções:

Sim

Não

21 [Informações] Tem intenção de colaborar ativamente com a UA|g? \*

Por favor, selecione uma das seguintes opções:

Sim

Não

22 [Informações] Se a UAIG desenvolver uma ação de angariação de fundos para uma causa interna, considera dar o seu contributo? \*

Por favor, selecione uma das seguintes opções:

Sim

Não