Are university leaders always the same? A longitudinal analysis of Vice-chancellors' profile in English universities over the last twenty years

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Abstract

While the effects of new managerialism and the internationalization of higher education on university structures and functions have been widely examined, their impact on university leadership has been less investigated, although both phenomena suggest the need for different and more powerful leaders. This article aims to examine if the core features of university leaders' profiles have been affected by the two aforementioned phenomena, and whether differences can be identified according to different types of universities. To answer these questions, this article develops six hypotheses and tests them by using a unique dataset on several dimensions of the profiles of 324 Vice-chancellors from 98 English universities and covering a period of more than twenty years (2000–2020). The analysis highlights that the nature of the universities as professional organisations profoundly affects the characteristics of their leaders' profiles. Vice-chancellors are predominantly academics who have held academic leadership positions and whose appointment is also shaped by a rule of representativeness. Statistically significant differences among university types can be identified instead in terms of the research profile of Vice-chancellors and their recruitment patterns. Finally, this article shows that even decades after the emergence of both new managerialism and the increasing internationalization of HE, the profile of university leaders still resembles that of the last century with just minor changes that can be retrieved only in certain university types.

1. Introduction

Higher Education (HE) systems and institutions have been heavily affected by the emergence of new challenges and demands in recent decades. For example, universities have been increasingly asked to be more efficient, to contribute to the development of the economy/society, to act in an increasing globalized field, and are challenged by budgetary constraints and competition, to name several. Two phenomena that directly emerge from these contemporary challenges are the "New Managerialism" (NM) and the internationalization of HE.

While the literature has widely discussed how these phenomena started to affect the strategy and management of universities (Bleiklie and Kogan 2007; Deem et al. 2007; De Boer et al. 2010;

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Ayoubi and Massoud 2007; Agasisti et al. 2017), their influence on university leaders have been less investigated. This paper aims to examine if and how the "new managerialism" (NM) and the internationalization of HE, have pushed universities to select leaders with a different profile. Indeed, both NM and internationalization (more or less tacitly) imply the need of different and more capable leaders, who are expected to be pivotal in facing these challenges (Terry 1998; Engwall 2014; Ekman et al. 2018; Tran and Nghia 2020; Badillo-Vega et al. 2021).

First, the demand for universities to act more efficiently, effectively, and accountable has been ideologically driven by the reappraisal of a "new managerialism" (Deem, 2004). While 'managerialism' is the 'belief that managing and management are functionally/technically indispensable to the achievement of economic/social progress' (Deem et al. 2007, 6), the concept of NM is supplemented by the neoliberal assumption that business-oriented values/instruments can improve the operation of public sector organisations (Taberner 2018). At the level of the HE system the NM has promoted the introduction of performance-based funding systems and assessment/QA exercises, whereas at the corporate level, the NM advocated the strengthening of leadership and executive bodies' power through the introduction of hierarchical chains of command to increase the control/coordination on academic activities (Deem et al. 2007; Seeber et al. 2015). In this sense, the NM conflicts with traditional academic values as academic freedom and collegiality (Bleiklie and Kogan 2007; Blaschke et al. 2014). Several authors underline how the emergence of NM naturally and ultimately fosters an increasing need for "new" leaders in universities (Townley 1997; Terry 1998; Deem et al. 2007; Ekman et al. 2018). Engwall (2014, 335) underscores how universities started to receive the 'message that omnipotent leaders, preferably from the outside, would be necessary in order to shake up dormant and lethargic academic institutions'.

Second, the HE field has undeniably become more internationalized. The relevance of international competition and collaboration among universities has become increasingly significant, raising direct implications for university leaders, e.g. in terms of their role and needs (Middlehurst, 2008). Tran and Nghia (2020, 480) claim that 'the changing and complex landscape of

internationalisation has posed a pressing need for leaders, who are critical to driving and shaping institutional internationalisation, to develop new capacities, knowledge and skills beyond their traditional expertise' to drive their institutions into new paths.

Against this backdrop, the influence of NM and internationalization on university leaders has been mainly focused on the needs, role and style of academic leaders in top/middle management (Deem 2004; Middlehurst 2008; Meek et al. 2010; Tran and Nghia 2020; Badillo-Vega et al. 2021), while their profile has been less investigated. The term "profile" indicates a set of individual characteristics such as sociodemographic features, education background, type of working career/experiences (Sloper 1985; Bargh et al. 2000; Zarate 2007; Breakwell and Tytherleigh 2008; Liu et al. 2020), and research productivity (Goodall 2006, Karadag 2021).

This article aims to contribute to this literature by investigating, first, which are the most recurrent features of university leaders' profiles and whether these features have changed over time according to the expectations of both NM and internationalization of HE. Second, this paper seeks to examine whether the characteristics of leaders' profiles, and their changes over time, vary among university types.

To answer these questions, this article uses a unique dataset regarding several dimensions (education and working career, disciplinary background, research productivity,) related to the profiles of 324 Vice-chancellors (VC) from 98 English universities, covering a period of more than 20 years (2000–2020).

The English reality is an interesting context to answer the research questions for two main reasons. First, NM and internationalization of HE have been highly relevant in national policy discourses for decades (Ayoubi and Massoud 2007; Seeber et al. 2015). Second, the English HE system is characterized by a marked institutional diversity. There are indeed identifiable informal and formal groups of universities that vary in terms of their mission orientation and prestige (Shattock 2013). This allows us to verify whether leaders' profile vary across university types.

The paper is structured as follows: the next section develops hypotheses on the profiles of university leaders, accounting for the nature of universities as professional organizations and the potential impacts of NM and the internationalization of HE. The third section presents data on VCs' profiles, while the findings of the analysis are illustrated and discussed in Sections 4 and 5.

2. Hypotheses on the profile of university leaders

To understand how NM and internationalization of HE have potentially affected the profile of English VCs, it is relevant to first discuss which might be the attributes of university leaders based on the traditional organisational features of universities. Indeed, the NM specifically contrasts with these. For this purpose, Mintzberg's (1979) description of university as professional organisation will be the point of departure.

Members of a professional organisation display a high degree of expertise to carry out complex tasks, which derives from socialization into the profession. In universities, these processes occur within discipline-based communities, to which academics give their primary loyalty (Musselin 2007). Decision-making occurs mainly within collegial bodies, which represent the interests of all internal communities, while leadership positions are occupied by other reputable professionals (academics) and are conceived as 'primus inter pares' (Bleiklie and Kogan 2007). Based on this conceptualization, university leaders' profiles should present three main characteristics.

First, it can be expected that university leaders are academics who have reached the apex of their academic careers. A solid expertise in teaching and research activities is the core competence needed to coordinate unstandardized tasks as academic ones whereas managerial competences usually come from having previously hold positions in top/middle leadership of a university. For example, Sloper (1985) and O' Meara (2002) show that over 80% of Australian VCs are full/associate professors prior to being appointed VCs, and over 50% previously held other leadership positions. Similarly, the American College and President Study (2017) shows that 85% of universities/colleges presidents' previous position was a senior executive role in HE. Previous studies generally support

this expectation for the UK context (Smith et al. 1999; Bargh et al. 2000; Breakwell and Tytherleigh 2008) but not only (Zarate 2007; Engwall 2014; Huang 2017; Liu et al. 2020; Karadag 2021). A first hypothesis can thus be formulated as follows:

Hypothesis 1: VCs will predominantly be academics who have reached the apex of their careers and have held leadership positions in other universities.

Second, the equal representation of disciplinary communities in collegial bodies, known as the 'rule of representativeness', is a key principle of academic decision-making (Bleiklie and Kogan 2007). This has been demonstrably relevant in the composition of internal bodies (De Boer et al. 2010; Agasisti et al. 2019), and it might inform the appointment of leaders too. In particular, university leaders' disciplinary background may vary over time to represent each time a different disciplinary community, following the aforementioned logic, as reported in Hypothesis 2:

Hypothesis 2: VCs' disciplinary backgrounds will shift from one VC to the next, according to the logic of representativeness.

Third, reputation is the core of legitimacy in professional organizations and comes from peer recognition. In academia, prestige has been increasingly identified in research excellence. Therefore, it might be expected that university leaders will also be excellent researchers. In this regard, it has been shown that this occurs predominantly in older and more prestigious universities (Goodall 2006, 2009; Karadag, 2021). Furthermore, Goodall (2009) shows that having a top scholar as leader positively affects the long-term quality of the organization, supporting the claim that universities should be run by academics (Bargh et al. 2000). The third hypothesis is thus as follows:

Hypothesis 3: Older universities will tend to recruit VCs with more prestigious research profiles than younger universities.

Differences among university types have also been underlined in terms of VCs' recruitment patterns. For example, Engwall (2014) finds that younger Swedish universities recruit more leaders externally compared with older universities while Smith et al. (1999) and Breakwell and Tytherleigh (2008) identify evidence for distinct 'recruitment strata' between British older and younger universities. They illustrate how universities with a higher prestige/reputation tend to select VCs from a specific niche while disregarding people coming from less prestigious institutions. A fourth hypotheses can thus be developed:

Hypothesis 4: Universities will predominantly recruit VCs who have held leadership positions in universities with similar characteristics.

So far, we have claimed that the nature of university as professional organisation leads to a specific conceptualization of university leaders, which may vary based on the institutional diversity of a HE system. However, as aforementioned, the ideas and instruments of NM clash with some of the core values of universities stemming from their professional nature (Bleiklie and Kogan 2007; Seeber et al. 2015).

Regarding leadership and leaders, the NM fosters the idea that the introduction of competences/skills from the business world, especially at the level of top-executive roles (Terry 1998) are beneficial for university management (Deem et al. 2007). The recommendations of influent public inquiries into the English HE system, as the Jarratt report, seem to be clearly informed by this narrative (CVCP and Jarratt 1985, 26): 'The tradition of VCs being scholars first […] is changing. The shift to the style of chief executive, bearing the responsibility for leadership and effective

management of the institution, is emerging and is likely to be all the more necessary for the future. Given such a task, the process of selection of VCs is vital. This being so it is important in our view that senior academics across the university system, from whom the next generation of VCs will be chosen, should be given the opportunity to improve their managerial skills through appropriate training and to gain some experience outside the university system […]'. VCs have thus been increasingly called to adopt the role of chief executive officer, and therefore, managerial capabilities and training should be prioritized over the academic career (Townley 1997; Shattock 2013). This is also translated into the need of appointing leaders coming from the business sector (Engwall 2014). The recommendations of the Jarratt report (and subsequent inquiries as the Dearing [1997] and Lambert [2003] reviews) have claimed to be particularly influential especially for younger universities (Deem et al. 2007; Shattock 2013) which have inherited a "more managerial" model of governance as previous HE corporations.

In this regard, studies on the UK context (but not only, see ACE [2017]) find very limited changes in VCs' profile over time (Bargh et al. 2000; Breakwell and Tytherleigh 2008). However, these works do not cover the last 15 years, during which the increasing marketization of the English HE (Shattock 2013; Taberner 2018), could have fostered the selection of leaders with more solid managerial capabilities/training to address a growing environmental uncertainty and competition. The fifth hypothesis is thus as follows:

Hypothesis 5: Younger universities will increasingly select VCs with stronger managerial competences, namely, a career from the business sector and a training in management disciplines.

Finally, another phenomenon that could have influenced VCs' profile over time is the increasing internationalization of HE (Tran and Nghia 2020). As claimed by Middlehurst (2008, 16) 'the growing significance of internationalisation for institutional reputation and positioning has had a number of consequences for institution-level leadership'. These might be reflected in university

leaders' profiles in different ways. For example, universities could appoint a VC of a different nationality or that have worked or held leadership positions in a foreign institution. Having leaders with such a profile would enrich the strategic direction of a university with new perspectives, potentially favouring institutional collaborations (Middlehurst, 2008). In this regard, previous studies have illustrated how the impact of internationalization on VC's profile has predominantly occurred among more prestigious universities (Karadag 2021; Liu et al. 2020). A final hypothesis can be formulated as follows:

Hypothesis 6: Older universities will increasingly select VCs with a more international profile, (i.e. presenting a different nationality or with working experiences in foreign universities) than younger institutions.

3. Data

This study collected data on VC profiles from online sources, particularly biographical databases. Information on the educational and disciplinary background and career path of VCs was retrieved from the *Who's Who* website. This contains pieces of information on the biography of British VCs and has been used in prior studies (Sloper 1985; Smith et al. 1999; Breakwell and Tytherleigh 2008). *Who's Who* was supplemented by other sources (e.g., university webpages), when it did not contain enough information about a VC. However, this occurred for less than 10% of the cases.

Additionally, the Scopus database was used to acquire information about the VC's research profile in terms of the volume of publications and citations. The data collected are summarized in Table 1.

Table 1. Dimensions of and data on VC profiles

The data cover the period from 2000 to 2020 and the dataset consists of 324 VCs from 98 English universities. The dataset covers 90% of the English university population. Twelve universities were excluded due to issues with data completeness.

Universities have been classified according to the common tripartition of "pre-1992 universities", "post-1992 universities" and "new universities" (Breakwell and Tytherleigh 2008). Pre-1992 universities obtained their university title before 1992, whereas post-1992 universities obtained their title because of the 1992's Further and Higher Education Act, which granted it to 41 ex-polytechnics. Finally, new universities have gained their university title from 1993 onwards.

Older universities (pre-1992) are claimed to be more research-oriented and prestigious universities, whereas younger universities (post-1992 and new universities) are rather teaching-oriented (Shattock 2013). This tripartition has been enriched by a further distinction between Russell group universities, which are all pre-1992 universities but with the highest values of research orientation and international prestige, and the other pre-1992 universities, which are not affiliated with this mission group.

Consequently, the 98 English universities considered here were classified as follows: 20 universities as Russell group (73 VCs), 28 universities as pre-1992 university (98 VCs), 32 universities as post-1992 university (104 VCs) and 18 as new university (49 VCs).

4. Findings

The analysis of the aforementioned data are presented for each university type and for three periods of time (2000–2006; 2007–2013; 2014–2020), given that 7 years is, on average, the length of VCs' mandates. Hypothesis tests were computed to examine whether the differences among the university types were statistically significant.

4.1 Type of working career

Figure 1 shows the predominant career path of VCs during the last 20 years is still the academic one. Over all three periods, the percentage of VCs who are also academics is above 80% among Russell group, pre-1992 and post-1992 universities and above 60% for new universities.

However, it is undeniable that the share of VCs presenting an academic career is much lower among new universities than among other classes. This percentage decreases over time (from 79% to 65%) in favour of the business (from 4% to 12%) and university administration (from 8% to 12%) career path. Although the difference among the university classes seems to relevantly increase, this is never statistically significant.

Figure 2 provides information about VCs' academic title. Approximately 90% of VCs from older institutions present the title of associate or full professor, while this share is smaller among younger universities, although it is still around 60%. In this case, hypothesis tests are statistically significant ([2000-2006: χ^2=27.45; df=3; p<0.000]; [2007-2013: χ^2=23.58; df=3; p<0.000]; [2014-2020: χ^2=12.26; df=3; p<0.007]). Consequently, figures 2 and 3 clearly support the first hypothesis according to which VCs will predominantly be academics who have reached the apex of their academic careers.

Figure 1. VCs' type of working career before being appointed by university type and period

Figure 2. VCs' academic title by university type and period

4.2 Previous experience in leadership positions

Hypothesis 1 also states that VCs' managerial competences usually stem from their having already held other leadership positions within universities. The analysis clearly supports this expectation. First, only 10% of the 324 VCs considered here did not hold any leadership position before being appointed VC. Second, Figure 3 highlights how this trend has increased over time. The percentage of VCs who have also been Deputy-VC, Pro-VC or Dean of a faculty/school increases across all four university classes. For example, the share of VCs that have previously been a Deputy-

VC moves from 10% to 40% for Russell group universities and from 12% to approximately 50% for pre-1992 institutions. The percentages related to the position of Pro-VC and Dean of faculty/school grows even more. Lower values can be found instead for previous positions as Head of department. To this regard, it is relevant to underline that only 13 individuals have been appointed as VC having previously held only the role of Head of department.

Interestingly, Figure 3 highlights how previous experiences as a VC are the least common. The share of VCs that have already been VCs is over 30% only for Russell group universities, whereas this percentage is much lower for the other classes. Therefore, this finding suggests that appointment as a VC is generally a one-time event. Differences among university classes are statistically significant for all three periods only for previous experience as a Pro-VC ([2000-2006: χ^2=6.26; df=3; p<0.009]; [2007-2013: χ^2=13.06; df=6; p<0.042]; [2014-2020: χ^2=15.62; df=6; p<0.016]), while for those as Deputy-VC ([2000-2006: χ^2=23.27; df=3; p<0.000]) and VC ([2014-2020: χ^2=25.49; df=9; p<0.002]) only for specific periods. Hypothesis tests are never significant for previous experiences as Dean and Head of department.

Figure 3. VCs' former leadership positions (VC, Deputy-VC, Pro-VC, Dean, Head of department) by university type and period

Figures 4 and 5 provide instead information as to where VCs held former leadership positions, particularly their experience as VC (Figure 4) or Deputy-VC (Figure 5). This allows us to verify whether older universities tend to recruit people who have worked in similar universities (Hypothesis 4). Both figures clearly show that Russell group universities largely select VCs from either similar older universities or from foreign universities. Pre-1992 universities behave similarly, though less markedly. For example, no VC from a Russell group university was a Deputy-VC in a post-1992 or new university during the last 20 years (Figure 5), while only one VC had experience as a VC in a

post-1992 university (Figure 4). In contrast, both post-1992 and new universities almost exclusively appoint VCs with leadership experiences in younger universities. This trend emerges in Figure 5, where the share of VCs who were previously a Deputy-VC in post-1992/new universities almost never fall below 80%, as well as in Figure 4, where post-1992 universities appointed only one VC from a Russell group university. However, while the hypothesis tests are not significant for Figure 4, they are statistically significant for Figure 5 ([2000-2006: χ^2=39.73; df=9; p<0.000]; [2007-2013: χ^2=27.60; df=9; p<0.001]; [2014-2020: χ^2=56.30; df=12; p<0.000]), providing evidence of distinct recruitment strata among the older universities, especially Russell group universities, and younger universities (Hypothesis 4).

Figure 4. University class of previous leadership experience as VC by university type and period

Figure 5. University class of previous leadership experience as Deputy-VC by university type and period

4.3 Research profile

To examine whether VCs are also excellent scholars (Hypothesis 3), we consider the possession of a PhD (Figure 6) and the number of publications and citations from Scopus (Table 2).

The attainment of a PhD can be considered a sign of a research orientation for academics since the doctorate predominantly train students how to carry out a research project rather than how to teach. Figure 6 reveals that the possession of a PhD is more common among VCs from Russell group and pre-1992 universities (around 85% in 2007), while it is less common among VCs from younger universities (approximately 65% for post-1992 universities and 60% for new universities). This difference is constant over time, and it is statistically significant from the second period ([2007-2013: χ^2=13.04; df=3; p<0.005]; [2014-2020: χ^2=12.62; df = 3; p<0.006]). Interestingly, Figure 6 highlights that VCs have predominantly gained their PhD in the more prestigious British universities.

Figure 6. VCs' possession and university class of the PhD title by university type and period

The research orientation of older universities' VCs is even more relevant when considering the amount of Scopus publications/citations (Table 2). These were computed only for the second and third periods (2006–2013 and 2014–2020) due to reliability issues of Scopus.

The second and fourth rows of Table 2 display the value of the differences in publications and citations from the median of the sample for each university type. The higher the value is from 0 (the median of the sample), the stronger the research quality of the VCs. As Table 2 illustrates, VCs of Russell group universities present (a median) value of 57 publications more than the median of the sample during the second period (2007–2013) and 38.5 in the third period. In contrast, this value is negative, and thus below the median value of the sample for VCs of post-1992 (-18 and -31) and new universities (-22.5 and -42) for both periods. Furthermore, the hypothesis tests (Tab. I, Appendix) highlight how the differences among the four university classes are all highly statistically significant. Similar conclusions can be drawn in relation to citations and their variance from the median value.

Table 2. VCs' Scopus publications and citations and their difference from the sample median by university type and period

Therefore, Table 2 clearly illustrate how Russell group universities and, to a lesser extent, pre-1992 universities tend to appoint more top scholars as VCs than younger and less prestigious universities do, confirming the third hypothesis. However, the values of publications and citations of VCs from pre-1992 universities increase over time, while those for VCs from Russell group universities slightly decrease. While future analyses will establish whether this trend is steady, this finding may be interpreted as a reflection of pre-1992 universities efforts to become top research universities.

4.4 Disciplinary background

In contrast to previous studies, Table 3 shows that the social and natural sciences are not the most common disciplinary backgrounds in absolute terms since others have progressively become equally relevant. Social science has progressively become the most widespread discipline for VCs of Russell group universities (from 13% to 34%), but this has slightly decreased for pre-1992 universities, where the VCs from engineering has increased significantly (from 13% to 19%), whereas Humanities is now the most common backgrounds for new universities' VCs (38%).

Table 3. VC's disciplinary background (ISCED_2013 fields) of study by university type and period

Furthermore, Russell group and pre-1992 universities have the highest concentration of VCs with a health-based background (30% and 15% in 2014–2020).

The disciplinary backgrounds vary according to the university class and longitudinally, and the differences are statistically significant for the first and third period ([2000-2006: χ^2=37.88; df=24; p<0.036]; [2014-2020: χ^2=50.30; df=27; p<0.004]).

Hypothesis 5 states that the influence of NM on leaders' profile entails a growth in the share of VCs with business administration training. This trend is visible exclusively, and to a limited extent, among younger institutions, where the percentage grows from 10% to 23% in post-1992 universities and from 17% to 20%, among new universities.

By contrast, Hypothesis 2 claimed that VCs' disciplinary backgrounds will shift from one VC to the next, according to the logic of representativeness. To empirically verify this expectation, the percentage of VCs with the same consecutive disciplinary background was computed for each university. Moreover, to obtain more meaningful information, 12 'specialist' universities (e.g.,

universities of the arts) were excluded because these naturally tend to repetitively appoint VCs from one discipline.

The lowest percentage of VCs with the same consecutive disciplinary background over time is showed by Russell group and pre-1992 universities (on average, 7% and 16%). Only 2 Russell group universities out of 19 present a majority of VCs from the health discipline and 4 out of 22 pre-1992 universities maintain a continuity in VC disciplinary background. Younger institutions present instead higher shares of VCs that come from the same discipline (on average, 34% for post-1992 universities and 42% for new universities). Regarding new universities, the higher percentages of VCs coming from the same discipline might be explained by considering that these usually represent only few disciplines. This interpretation, however, does not hold for post-1992 universities, which are instead much more generalist.

Therefore, the low percentages of VCs with business administration training (Table 3) and the tendency of most universities to appoint a VC that come from a different discipline compared with his/her predecessor (even in younger universities), tend to confirm Hypothesis 2 rather than Hypothesis 5.

4.5. Internationalization

Three pieces of information were considered to examine whether English universities started to appoint university leaders with more international profiles. First, Figure 7 provides the nationality of the VCs. It can be noted that the large majority of VCs are British, and this is constant over time (always over 80%). The only exception is the growth of the share of non-British VCs within Russell universities during 2014–2020, which has increased by up to approximately 30%. The hypothesis tests become statistically significant only for the third period (χ^2=26.52; df=15; p<0.033).

Figure 7. VCs' nationality by university type and period

Figure 8. VCs' teaching/research experiences in foreign universities by university type and period

Second, Figure 8 shows the share of VCs that present teaching/research experience as lecturer/senior lecturer or (associate/full) professor at foreign universities. For younger universities, the percentages are always approximately or below 20% while these are higher for older universities. This difference becomes statistically significant for the third period (χ^2=15.81; df=3; p<0.001).

As similarly illustrated in Figure 7, the main relevant change over time is the rapid increase among Russell group universities, where the percentage of VCs with former leadership positions in foreign universities increases from 11% to 46%.

Figure 9. VCs' former leadership experiences in foreign universities by university type and period

Finally, Figure 9 provides the percentage of VCs who have held previous leadership positions (VC/Deputy-VC/Pro-VC/Dean) in foreign universities. In general, only a minority of VCs have made such experiences in foreign universities. This occurs almost exclusively in older universities, most often for the VC and Deputy-VC positions. Hypothesis tests are here statistically significant mainly for the first period except for that on Pro-VC that results exactly the opposite (Appendix, Table II).

In conclusion, the three figures do not allow to fully confirm Hypothesis 6 since just few Russell group universities have start selecting VCs with a more international profile and only to a limited extent.

5. Discussion and conclusion

This article aimed to investigate the core features of VCs' profile and whether these have changed over time as a result of NM and the internationalization of HE, considering the heterogeneity among university types. To answer these questions, some hypotheses were developed and verified through the empirical analysis.

First, it can be stated that the nature of university as professional organization (Mintzberg, 1979) profoundly affects the profiles of their leaders. The analysis supports the expectation that VCs are predominantly academics at the apex of their academic career and whose managerial competences come from previous leadership positions in academia (Hypothesis 1), confirming previous studies (Sloper 1985; Smith et al. 1999; Breakwell and Tytherleigh 2008; ACE 2017; Liu et al. 2020).

Similarly, the findings on the VCs' disciplinary backgrounds tend to support the existence of a logic of representativeness in their appointment (Hypothesis 2), which stems from the collegial nature of academic decision-making (De Boer et al. 2010). Moreover, the findings on the disciplinary backgrounds are only partially aligned with previous studies, which have identified either social sciences (Breakwell and Tytherleigh 2008; Liu et al. 2020) or natural/life sciences (Sloper 1985; Engwall 2014; Huang 2017; Karadag 2021) as the most increasingly common backgrounds of VCs, since that these trends have been found only within older universities.

However, the two most relevant findings are the presence of statistically significant differences among university types and the limited impact of both NM and the internationalization of HE on VCs' profile.

First, regarding the differences among university types, there is a clear divergence in terms of the research profile of their VCs and their recruitment patterns. The analysis reveals that VCs who run older universities, especially Russell group universities, are also top scholars, whereas those leading younger universities are usually less research-engaged individuals, supporting Hypothesis 3. This confirms Goodall's (2006, 2009) and Karadag's (2021) studies.

Regarding the presence of different recruitment patterns, it has been shown that both younger and older universities tend to almost exclusively select VCs who have worked in similar universities, confirming Hypothesis 4 (Bargh et al. 2000; Breakwell and Tytherleigh 2008). The analysis suggests that VCs intrinsically reflect the status and mission of the institutions they run. University leaders emerge as mirrors of their organizations, as the management literature argues (Finkelstein and Hambrick 1996; Kraatz and Moore 2002). Indeed, older institutions give 'close attention to their

research reputation and excellence. They belong to an elite that serves as the academic model' (Paradeise and Thoenig 2013, 199) and their leadership can be expected to embody such values. Appointing a VC who comes from prestigious universities, with a high-quality and international research profile, appears to be a way to reaffirm a specific identity and strengthen institutional positioning. By contrast, younger institutions may give less attention to the research profiles of their leaders and value more other competences, such as managerial capabilities and training (Paradeise and Thoenig 2013), which they need to secure a stable market position in a competitive environment, such as the English one. Nevertheless, it should also be considered that younger universities may simply not be attractive enough to VCs coming from institutions with a higher prestige though they could prefer them to enhance their image.

A second relevant result is that VCs' profile has changed only to a limited extent over the last 20 years, despite the pressures exerted by both NM and internationalization of HE. Indeed, the scarce presence of both VCs coming from the business sector (Fig. 1) and/or with a business administration training (Tab. 3), as well as the tendency of universities to appoint VCs from a different disciplinary background compared to their predecessors (logic of representativeness), also in the final period (2014-2020), points to a weak effect of NM on VC's profiles. This trend is only partially different for new and post-1992 universities, where it could have been expected a stronger impact. Similarly, it has been also illustrated how only few Russell group and pre-1992 universities appointed VCs with more internationalized profiles. Therefore, even decades after the emergence of NM and the growing internationalization of HE, the current profile of university leaders still largely resembles that of the beginning of the century or of even earlier (Bargh et al. 2000; Breakwell and Tytherleigh 2008). Therefore, it is not possible to confirm Hypothesis 5 and 6. Hence, a twofold explanation might be considered.

First, it could be claimed that the major impact of NM and the internationalization of HE might have been more on the role of university leaders rather than their profile. This last might be more subject to universities' need to appear as legitimate actors because the VC has the task of representing

their organisations externally. VC profile directly reflect the positioning and prestige of the university they are running. This may lead universities to be more conservative when choosing their leaders. By contrast, the role/tasks of leaders might be considered more a matter of internal operation and negotiation among the internal scientific communities, which do not necessarily affect the external image of a university. This is supported by studies that have investigated how exogeneous pressures, as NM, have relevantly affected the role/tasks of middle-management positions (Deem 2004; Meek et al. 2010).

Second, although the timeframe covered by this study is significant compared to similar works, twenty years might not be enough to fully catch potential changes in how universities select their leaders. Universities are traditionally claimed to be slow and defensive in responding to external influences (Mintzberg, 1979; Shattock 2013).

However, it might be also underlined that the number of VCs who have run an English university during the last twenty years is equal to three (on average). This might suggest that it may be more useful to conceptualize the rate of change as related to the change between three individuals (the average number of VCs per university during the last two decades), rather than the change over twenty years, since that individuals generally change slowly. This would contribute to interpret the lack of changes in VC's profiles over time.

Finally, the data used presents some limitations. First, although the NM predominantly stressed the strengthening of individual executive roles, some authors underline how the effect of NM on leadership should be observed at the level of senior management teams (the VC's office) because of their progressively recognized role. (Deem et al. 2007; Shattock 2013). Future research could integrate this work by collecting information on these teams (size, members' competencies, representativeness of intermediate structures).

Second, VCs' research profile was operationalised using bibliometric data from Scopus. While we recognize its limitation, Scopus remains one of the few databases that provide public data at the individual level (Karadag 2021). Future works might complement bibliometric information by

considering, e.g., participation in supranational research projects/groups, which may also help to

enrich the understanding of the internationalization of VC's profile.

References

ACE. 2017. *The American College President, 2017 Edition*. Washington: American Council on Education.

Agasisti, T., G. Barbato, M. Dal Molin, and M. Turri. 2019. "Internal Quality Assurance in Universities: Does NPM Matter?" *Studies in Higher Education* 44 (6): 960-977. doi:https://doi.org/10.1080/03075079.2017.1405252.

Ayoubi, R. M., and H. Massoud. 2007. "The Strategy of Internationalization in Universities: A Quantitative Evaluation of the Intent and Implementation in UK Universities." *International Journal of educational Management* 21(4): 329-349. doi:https://doi.org/10.1108/09513540710749546.

Badillo-Vega, R., G. Krücken, and P. Pineda. 2021. "Changing Analytical Levels and Methods of Leadership Research on University Presidents." *Studies in Higher Education* 46 (4): 677-689. doi:https://doi.org/10.1080/03075079.2019.1647417.

Bargh, C., J. Bocock, P. Scott, and D. Smith. 2000. *University leadership: The Role of the Chief Executive*. Buckingham: SHRE and Open University Press.

Blaschke, S., J. Frost, and F. Hattke. 2014. "Towards a Micro Foundation of Leadership, Governance, and Management in Universities." *Higher Education* 68, 711–732. doi:https://doi.org/10.1007/s10734-014-9740-2

Bleiklie, I., and M. Kogan. 2007. "Organization and Governance of Universities." *Higher Education Policy* 20 (4): 477–93. doi:https://doi.org/10.1057/palgrave.hep.8300167.

Breakwell, G. M., and M. Tytherleigh. 2008. "UK University Leaders at the turn of the 21st Century: Changing Patterns in their Socio-demographic Characteristics." *Higher Education* 56 (1): 109–127. doi:https://doi.org/10.1007/s10734-007-9092-2.

Committee of Vice-Chancellors and Principals of the Universities of the UK: Steering Committee for Efficiency Studies, and S. A. Jarratt. 1985. *Report to the Committee of Vice-Chancellors and Principals Steering Committee for Efficiency Studies*. http://www.educationengland.org.uk/documents/jarratt1985/index.html.

De Boer, H., J. Huisman, and C. Meister-Scheytt. 2010. "Supervision in 'Modern' University Governance: Boards under Scrutiny." *Studies in Higher Education* 35 (3): 317-333. doi:https://doi.org/10.1080/03075070903062849.

Deem, R. 2004. "The Knowledge Worker, the Manager-academic and the Contemporary UK University: New and Old Forms of Public Management?." *Financial Accountability & Management* 20 (2): 107-128. doi:https://doi.org/10.1111/j.1468-0408.2004.00189.x.

Deem, R., S. Hillyard, and M. Reid. 2007. *Knowledge, Higher Education and the New Managerialism*. Oxford: Oxford University Press.

Engwall, L. 2014. "The Recruitment of University Top Leaders: Politics, Communities and Markets in Interaction." *Scandinavian Journal of Management* 30 (3): 332-343. doi:10.1016/j.scaman.2013.12.005.

Ekman, M., M. Lindgren, and J. Packendorff. 2018. "Universities Need Leadership, Academics Need Management: Discursive Tensions and Voids in the Deregulation of Swedish Higher Education Legislation." *Higher Education* 75 (2): 299-321. doi:https://doi.org/10.1007/s10734-017-0140-2.

Finkelstein, S., and D. Hambrick. 1996. *Strategic Leadership: Top Executives and their Effects on Organizations*. Minneapolis: West Publishing Company.

Goodall, A. 2006. "Should Top Universities be Led by Top Researchers and are They?" *Journal of Documentation* 62 (3): 388–411. doi:https://doi.org/10.1108/00220410610666529.

Goodall, A. 2009. *Socrates in the Boardroom: Why Research Universities should be Led by Top Scholars*. Princeton: Princeton University Press.

Huang, F. 2017. "Who leads China's Leading Universities?" *Studies in Higher Education* 42 (1): 79-96. doi:https://doi.org/10.1080/03075079.2015.1034265.

Karadag, E. 2021. "Academic (dis)qualifications of Turkish Rectors: Their Career Paths, H-index, and the Number of Articles and Citations." *Higher Education* 81 (2): 301–323. doi:https://doi.org/10.1007/s10734-020-00542-1.

Kraatz, M., and J. Moore. 2002. "Executive Migration and Institutional Change." *Academy of Management Journal* 45 (1): 120–43. doi:https://doi.org/10.2307/3069288.

Liu, L., X. Hong, W. Wen, Z. Xie, and H. Coates. 2020. "Global University President Leadership Characteristics and Dynamics." *Studies in Higher Education* 45 (10): 2036-2044. doi:https://doi.org/10.1080/03075079.2020.1823639.

Meek, V. L., L. Goedegebuure, R. Santiago, and T. Carvalho. 2010. *The Changing Dynamics of Higher Education Middle Management*. Dordrecht: Springer.

Middlehurst, R. 2008. "Leadership and internationalisation." In *The Global University: The role of senior managers*, edited by C. Shiel and A. McKenzie, 15-19. Bournemouth: BU/DEA

Mintzberg, H. 1979. *The Structuring of Organizations*. Englewood Cliffs, NJ: Prentice-Hall.

O'Meara, B. 2002. *The Recruitment and Selection for Vice-Chancellors for Australian Universities*. Geelong Victoria: Deakin University.

Seeber, M., et al. (2015) "European Universities as Complete Organizations? Understanding Identity, Hierarchy and Rationality in Public Organizations." *Public Management Review* 17 (10): 1444-1474, doi:10.1080/14719037.2014.943268.

Shattock, M. 2013. "University Governance, Leadership and Management in a Decade of Diversification and Uncertainty." *Higher Education Quarterly* 67 (3): 217-233. doi:https://doi.org/10.1111/hequ.12017.

Sloper, D. W. 1985. "A Social characteristics Profile of Australian Vice-chancellors." *Higher Education* 14 (4): 355-386.

Smith, D., C. Bargh, J. Bocock, and P. Scott. 1999. "New Leaders at the Top? The Educational and Career paths of UK University Vice-chancellors (1960–1996)." *Higher Education Management* 11 (2): 113–135.

Taberner, A. M. 2018. "The Marketisation of the English Higher Education Sector and its Impact on Academic Staff and the Nature of their Work". *International Journal of Organizational Analysis*, 26 (1): 129-152. https://doi.org/10.1108/IJOA-07-2017-1198.

Terry, L. 1998. "Administrative Leadership, Neo-managerialism, and the Public Management Movement." *Public Administration Review* 58 (3): 194-200. doi:https://doi.org/10.2307/976559.

Townley, B. 1997. "The Institutional Logic of Performance Appraisal." *Organization studies* 18 (2): 261-285. doi:https://doi.org/10.1177/017084069701800204.

Tran, L. T., and T. L. H. Nghia. 2020. "Leadership in International Education: Leaders' Professional Development Needs and Tensions." *Higher Education* 80 479–495. doi:https://doi.org/10.1007/s10734-019-00494-1.

Zarate, R. L. 2007. "Four Trajectories of Rectors in Mexican Public Universities." *Higher Education* 54 (6): 795-817. doi:https://doi.org/10.1007/s10734-006-9025-5.

Appendix

Table I. Hypothesis tests Table 2

Scopus_Publications	2007-2013	2014-2020
F*	6.19	7.07
df**	3	3
P-value	0.000	0.000
Scopus_Publications: difference from sample median	**2007-2013**	**2014-2020**
F	6.91	7.07
df	3	3
P-value	0.000	0.000
Scopus_Citations	**2007-2013**	**2014-2020**
F	9.18	5.08
df	3	3
P-value	0.000	0.002
Scopus_Citations: difference from sample median	**2007-2013**	**2014-2020**
F	9.18	5.08
df	3	3
P-value	0.000	0.002

*Fisher's test

**Degree of freedom

Table II. Hypothesis tests Figure 9

VC in foreign university	2000-2006	2007-2013	2014-2020
χ^2*	7.22	7.19	2.51
df	3	3	3
P-value	0.065	0.066	0.172
Deputy-VC in foreign university	**2000-2006**	**2007-2013**	**2014-2020**
χ^2	18.88	7.97	5.73
df	3	3	3
P-value	0.000	0.047	0.125
Pro-VC in foreign university	**2000-2006**	**2007-2013**	**2014-2020**
χ^2	4.56	7.08	8.04
df	3	3	3
P-value	0.206	0.069	0.045
Dean in foreign university	**2000-2006**	**2007-2013**	**2014-2020**
χ^2	7.75	3.02	3.83
df	3	3	3
P-value	0.051	0.387	0.280

*Pearson Chi-square

**Degree of freedom

Table 1. Dimensions of and data on VCs' profiles

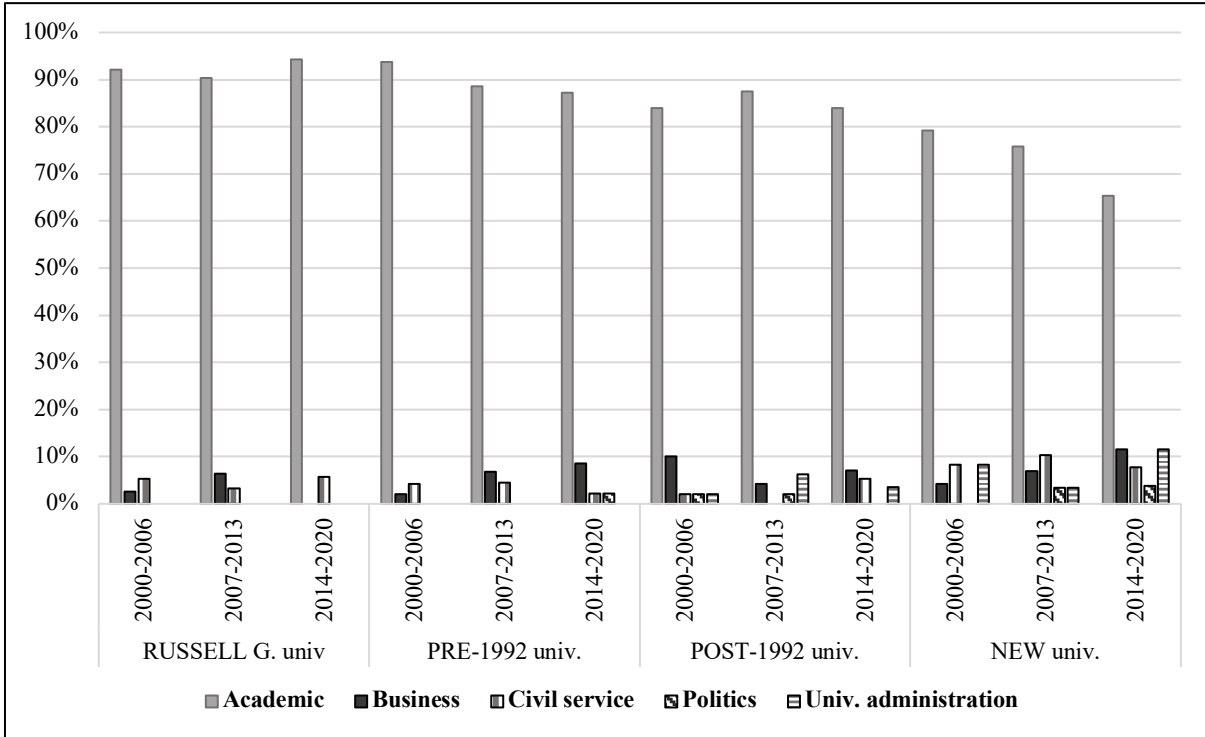| Dimension of VC profile	Data
Educational background	University/discipline of undergraduate degree
	University/discipline of postgraduate degree
	University/discipline of doctorate degree
Disciplinary background	Teaching/research disciplinary background (10 ISCED_2013 fields of study)
Type of working career	Academic: Full Professor/Associate Professor/Lecturer/Reader
	Business
	Civil service
	Political
	University administration
Experience in leadership positions	University/experience as 'Head of department'
	University/experience as 'Dean/Head of school/faculty'
	University/experience as 'Pro-Vice-chancellor'
	University/experience as 'Deputy-Vice-chancellor'
	University/experience as 'Vice-chancellor'
International background	Nationality
	Bachelor/Master/Doctoral degree in a foreign university
	Reader/Lecturer/Professor in a foreign university
	Experience as VC/Deputy-VC/Pro-VC/Dean in foreign universities
Research orientation	Scopus publications
	Scopus citations

Table 2. VCs' Scopus publications and citations and their difference from the sample median by university type and period

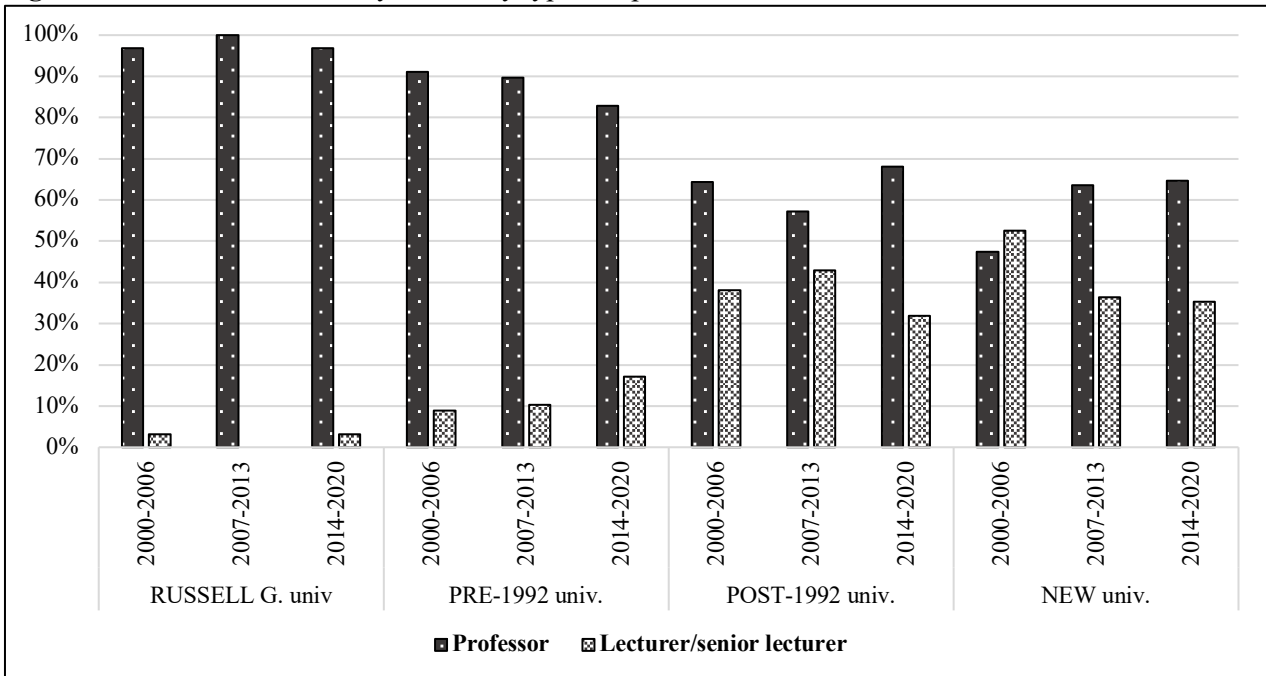|	RUSSELL G. univ.		PRE-1992 univ.		POST-1992 univ.		NEW univ.	
	2007-2013	**2014-2020**	**2007-2013**	**2014-2020**	**2007-2013**	**2014-2020**	**2007-2013**	**2014-2020**
Scopus *publications*: mean (median)	144 (92)	131 (91.5)	121.27 (53)	158.92 (78)	40.26 (17)	44.29 (22)	37.87 (12.5)	24.53 (11)
Scopus *publications*: mean (median) difference from the sample median	109.18 (57)	78 (38.5)	86.27 (18)	105.92 (25)	5.26 (-18)	-8.70 (-31)	2.87 (-22.5)	28,4 (-42)
Scopus *citation*: mean (median)	9424 (6271)	7186 (2851)	7418 (998)	5949 (2193)	2162 (68)	1183 (286)	1107 (125)	769 (219)
Scopus *citation*: mean (median) difference from the sample median	8869 (5716)	6167 (1832)	3646 (443)	4930 (1174)	480 (-486)	164 (-732)	553 (-429)	-248 (-799)

Table 3. VC's disciplinary background (ISCED_2013 fields) of study by university type and period

Field of study	RUSSELL G. univ.			PRE-1992 univ.			POST-1992 univ.			NEW univ.		
	2000-2006	2007-2013	2014-2020	2000-2006	2007-2013	2014-2020	2000-2006	2007-2013	2014-2020	2000-2006	2007-2013	2014-2020
Education	0%	0%	0%	0%	5%	4%	10%	8%	4%	21%	14%	4%
Arts/Humanities	21%	16%	9%	13%	16%	13%	18%	19%	16%	25%	34%	38%
Social sciences	13%	19%	34%	33%	32%	26%	24%	21%	11%	17%	14%	11%
Business Administration and law	8%	6%	3%	6%	7%	4%	10%	13%	23%	17%	17%	20%
Natural sciences and mathematics	29%	26%	17%	19%	14%	17%	22%	19%	16%	13%	14%	15%
Information and technologies	3%	3%	0%	4%	2%	2%	2%	2%	2%	0%	0%	4%
Engineering	16%	6%	9%	13%	9%	19%	8%	10%	13%	0%	0%	0%
Agriculture/Veterinary	0%	0%	0%	0%	0%	0%	4%	4%	2%	4%	3%	0%
Health	11%	23%	29%	13%	16%	15%	2%	4%	9%	4%	3%	4%
Services	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	4%

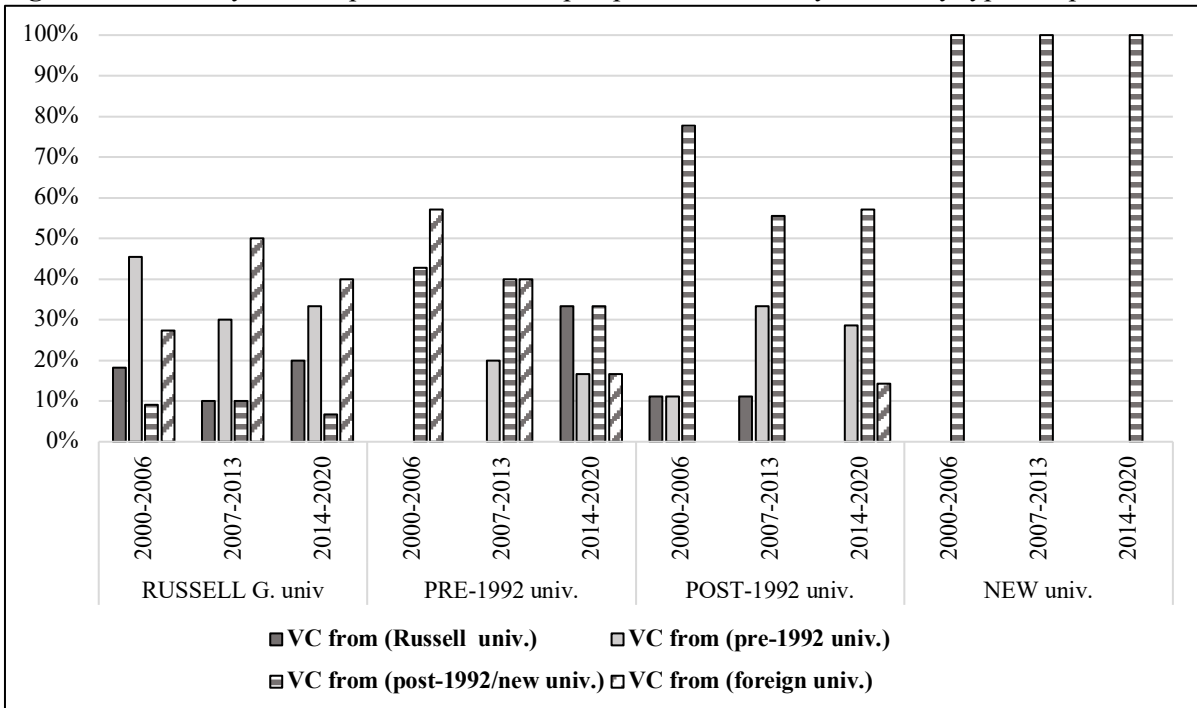**Figure 1.** VCs' type of working career before being appointed by university type and period

Academic ■ Business □ Civil service ▨ Politics ⊟ Univ. administration

Figure 2. VCs' academic title by university type and period
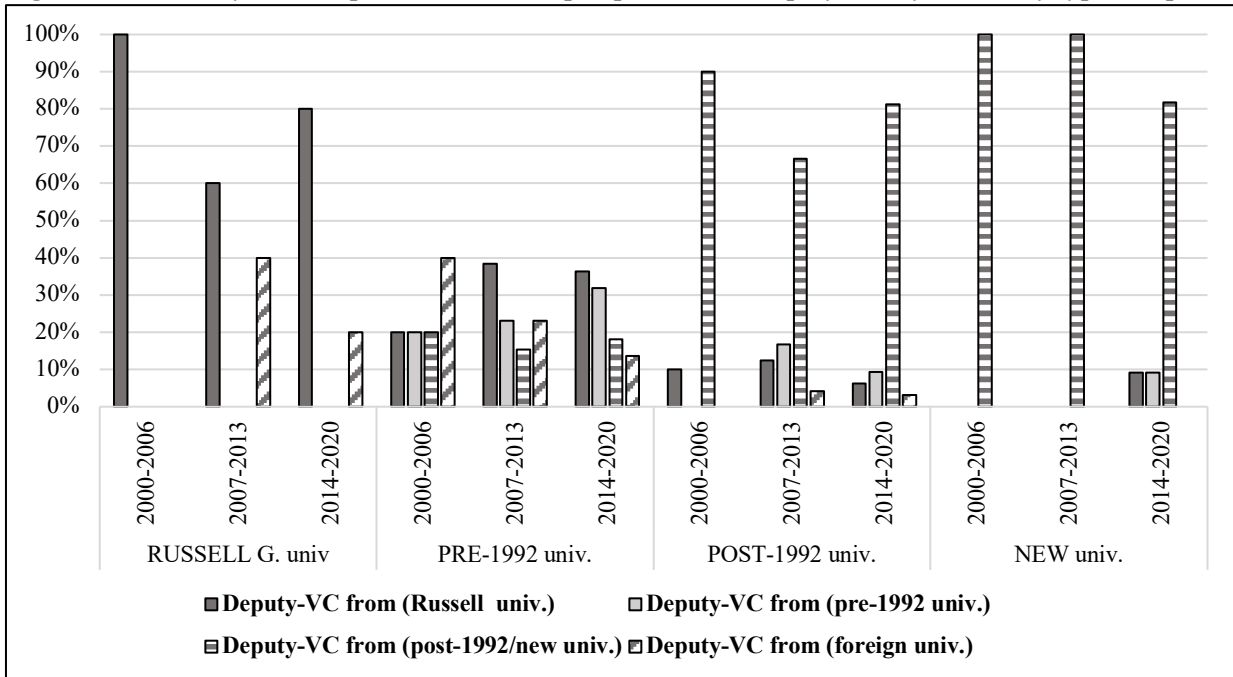

■ Professor ▨ Lecturer/senior lecturer

Figure 3. VCs' former leadership positions (VC, Deputy-VC, Pro-VC, Dean, Head of department) by university type and period
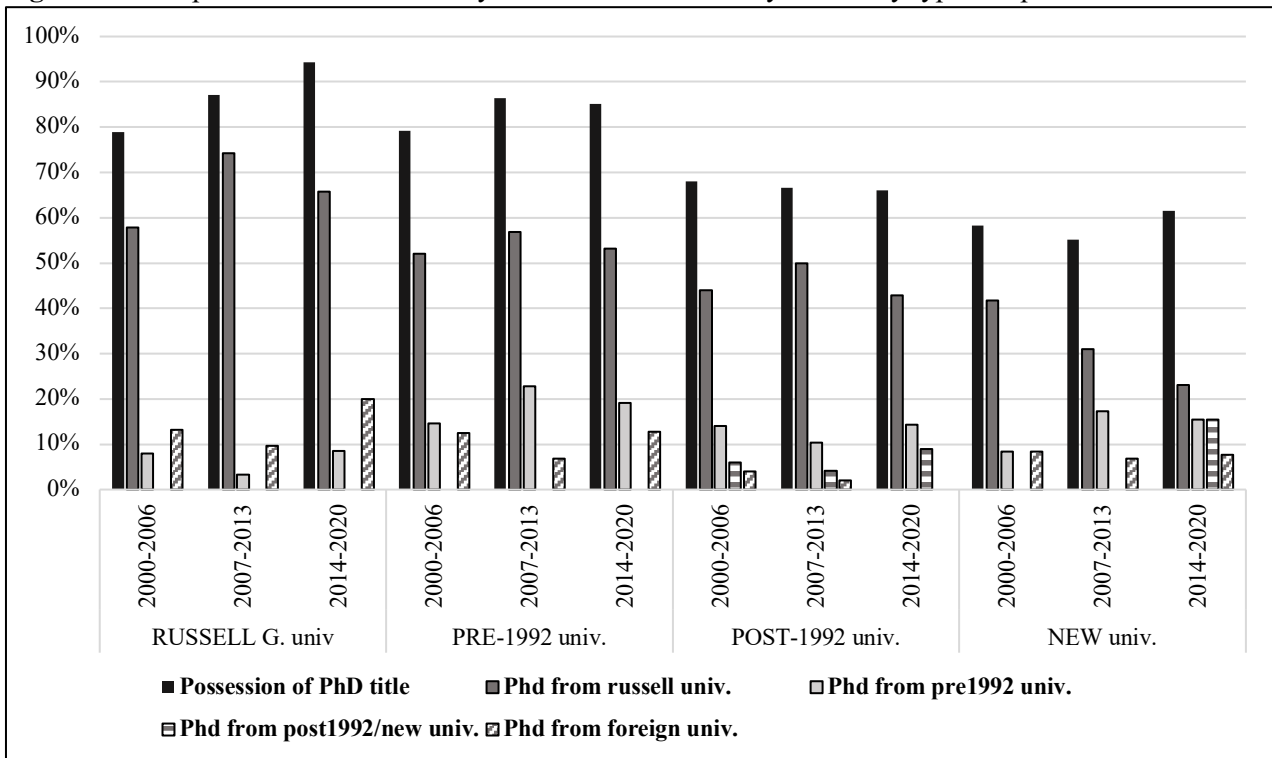

Figure 4. University class of previous leadership experience as VC by university type and period
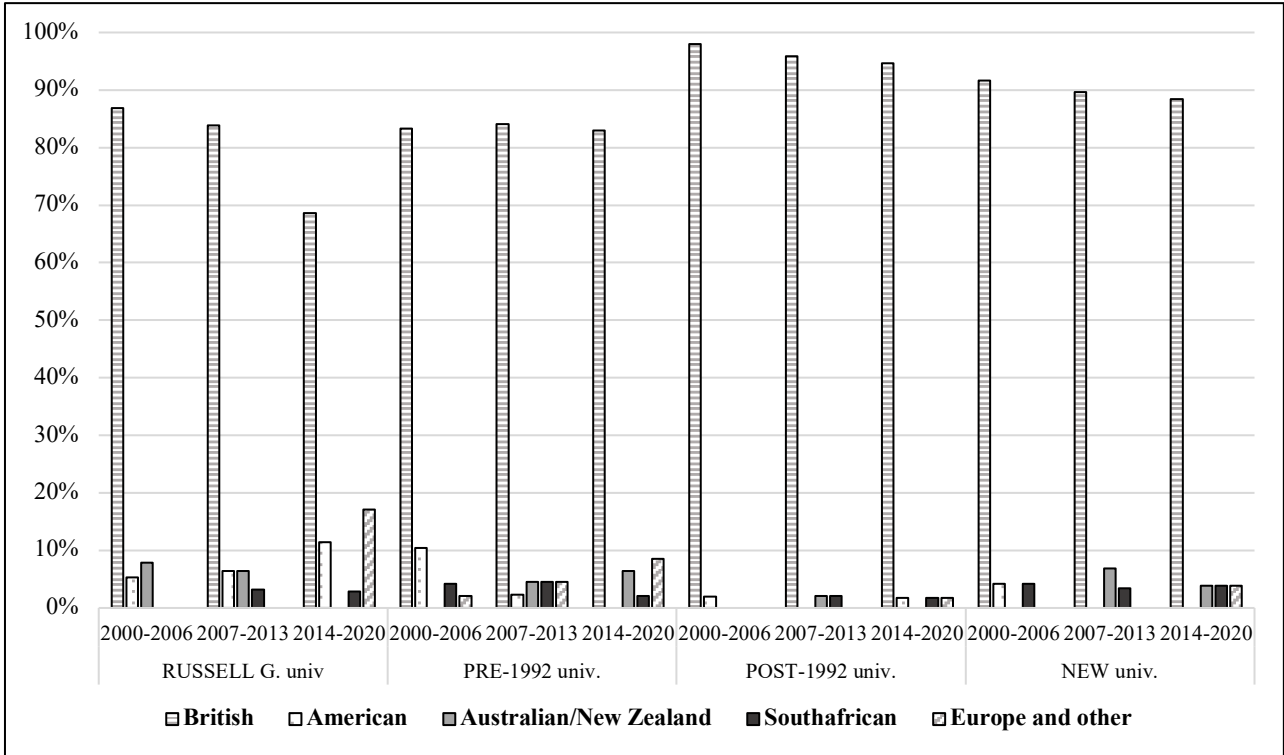
Figure 5. University class of previous leadership experience as Deputy-VC by university type and period
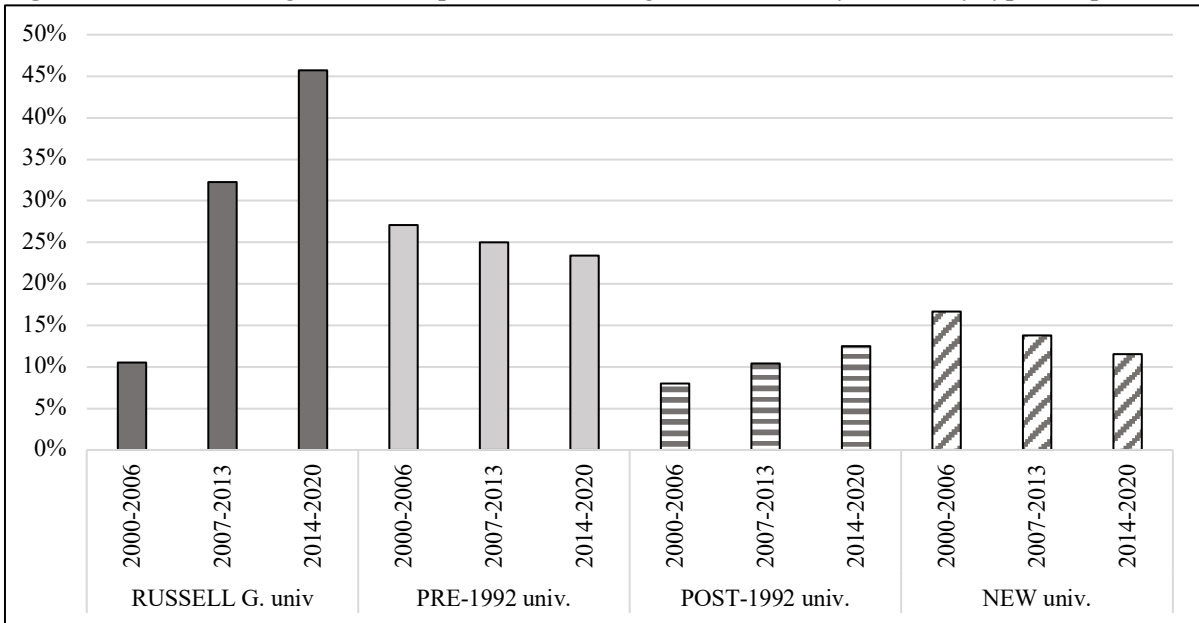

Figure 6. VCs' possession and university class of the PhD title by university type and period
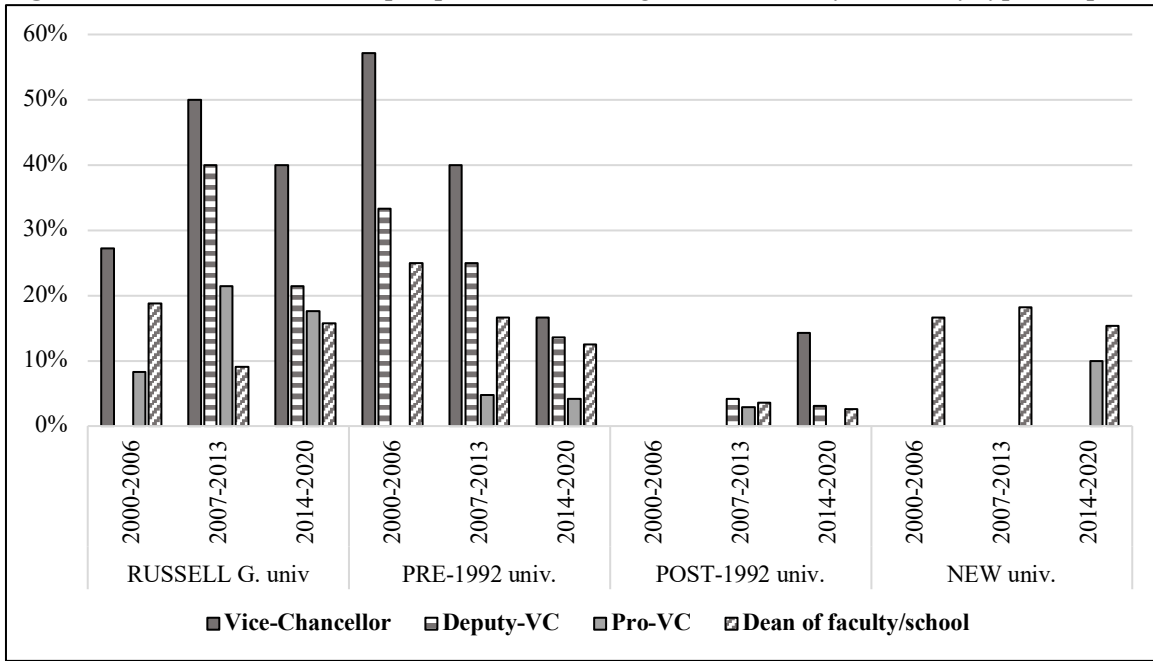
Figure 7. VCs' nationality by university type and period

Figure 8. VCs' teaching/research experiences in foreign universities by university type and period

Figure 9. VCs' former leadership experiences in foreign universities by university type and period

Figure 1. VCs' type of working career before being appointed by university type and period

Figure 2. VCs' academic title by university type and period

Figure 3. VCs' former leadership positions (VC, Deputy-VC, Pro-VC, Dean, Head of department) by university type and period

Figure 4. University class of previous leadership experience as VC by university type and period

Figure 5. University class of previous leadership experience as Deputy-VC by university type and period

Figure 6. VCs' possession and university class of the PhD title by university type and period

Figure 7. VCs' nationality by university type and period

Figure 8. VCs' teaching/research experiences in foreign universities by university type and period

Figure 9. VCs' former leadership experiences in foreign universities by university type and period