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ORIGINAL PAPER

Push and pull factors affecting in leaving academia

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Abstract
This paper presents the findings of the push and pull factors that cause professionals to leave academia. Previous research has mostly focused on academic professionals' intent to leave their current organisations and largely neglected occupational turnover, that is, the cases where faculty abandon an academic career. The study included 40 semi-structured interviews and a national survey ($N=410$) conducted in 2017. The interviewees consisted of three groups: previous faculty members who left academia, members of universities' upper management (deans, vice-rectors and HR managers) and upper managers and HR managers of public and private organisations employing previous academic faculty members. The survey was sent to all scholars who had left academia in Finland during 2010–2015. The qualitative empirical analysis suggests that most of the internal push factors that caused the academic professionals to leave were inversed external pull factors that lured them away from academia. However, it also hints that in many cases, certain individual factors seem to mediate the two. In practice this means that individual factors, such as lack of interest in research and/or teaching and unwillingness to compete in some positions, also contribute to the decision to leave academia.

Keywords Academia · Academic profession · Career · Occupational turnover · Push and pull factors

Introduction

Over the past few decades, several studies have investigated the processes of the changing academic workplace, but mostly in the U.S. context (e.g. Johnsrud & Rosser, 2002; O'Meara et al., 2014; Rosser, 2004; Xu, 2008; Zhou & Volkwein, 2004). For instance, Zhou and Volkwein (2004) concluded that compensation, tenure and job security are

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generally important factors in academic staff retention. However, these factors might be interpreted differently at different career stages. Naturally, non-tenured academics are more concerned with job security, autonomy and institutional effectiveness than remuneration level (see also Aarnikoivu et al., 2019; van der Weijden et al., 2015). Similarly, Rosser (2004) found that the decision to leave an institution arises from a combination of individual characteristics, working life issues and job satisfaction level.

Researchers studying professional turnover in academia have recognised numerous factors impacting turnover, typically grouped into 'internal push' and 'external pull' categories (see, e.g., Matier, 1990; Nair et al., 2016; Zhou & Volkwein, 2004). This line of research provides empirical evidence suggesting that the internal push is generally more important than the external pull in most departure decisions. However, these studies often focus on the intent to leave the employer organisation but not the profession itself. Regarding the decision to leave the academic profession – sometimes called 'occupational turnover' (cf. van der Heijden et al., 2007) or 'mobility across sectors' (cf. Bloch et al., 2015) – there are few, if any, studies.

In this study, we explore reasons academic professionals choose to change their careers in Finland. In particular, we explore the internal push and external pull factors. We are interested in academics who leave academia for employment in the private sector, a non-academic public sector organisation or a third sector organisation or to become entrepreneurs (cf. Bloch et al., 2015). We focus on ex-academics (persons who were previously on a university payroll) who hold PhDs in either social sciences or engineering and technology.

In this article, we aim to show that academics have motivations of different kinds when they consider leaving academia. First, we present recent literature on faculty turnover, highlighting the research gap of push and pull factors. Second, we briefly introduce the characteristics of the Finnish higher education system. Third, we introduce our data and mixed-method research design, and fourth, we provide the main findings from our qualitative study and generalise these findings by utilising a subsample of the national survey on push and pull factors. We end by drawing conclusions and presenting our plan to continue this research.

Conceptual and contextual backdrop

Faculty turnover

Scholars have developed different theoretical frameworks for grouping factors that affect employee turnover. For instance, in their seminal work, Porter and Steers (1973) suggested four of such categories: organisation-wide factors, immediate work environment factors, job-related factors and personal factors. Based on their literature review related to professional turnover intention, Ghapanchi and Aurum (2011) introduced a model that identified individual attributes, organisational factors, job-related factors, psychological factors and environmental factors.

The roots of faculty turnover discourse can be traced back to business management and psychology literature (Ryan et al., 2012). Theoretically, the topic of employee turnover has touched on numerous parallel scholarly discourses and topics, such as careers (Baruch, 2013; Dietz & Bozeman, 2005; Schein, 1996), job and workplace choice (Heikkilä et al., 2014; Kulkarni & Nithyanand, 2012), work motivation (Herzberg, 1966; Kallio & Kallio, 2014), job satisfaction (Kankaanranta et al., 2007), employee retention (Allen et al.,

2010; Armstrong-Stassen & Stassen, 2013), employee turnover and absenteeism (Albion et al., 2008; Porter & Steers, 1973) and organisational commitment (Baruch, 1998; Loi et al., 2006; Meyer & Allen, 1991). The concepts and discourses in these studies overlap somewhat, and the evident conceptual heterogeneity makes it difficult to fully grasp the phenomenon studied in this paper.

The above-mentioned conceptual heterogeneity also applies to intentions to leave academia. However, in the context of universities/academia, it is important to define when we are talking about leaving one university or leaving academia altogether. Researcher mobility (Bloch et al., 2015), faculty mobility (Yan et al., 2015), faculty departure and turnover (Zhou & Volkwein, 2004), faculty retention (Piercy et al., 2005), academic migration (Tremblay et al., 2014) and lecturer turnover intention (Nair et al., 2016) are examples of the terms used in the existing literature when referring to the mobility of academic professionals. Nevertheless, it seems that scholars studying the phenomenon share at least some kind of general understanding that the mobility of academic professionals is determined by push and pull factors (Matier, 1990).

Matier (1990) was among the first to propose both internal and external environmental factors as critical in the final decision to change employers or leave a university. While developing his model for push and pull factors, Matier (1990, p. 41) employed, in his own words, 'the most salient features' from three scholarly discourses, namely faculty mobility, job satisfaction and organisational commitment studies. According to him, the internal factors include the intangible and tangible benefits of the job. The intangible benefits include personal and institutional reputation, autonomy, influence and sense of belonging, whereas the tangible benefits include wages, facilities, work rules and fringe benefits. On the other hand, factors such as quality of life, family, friendships and non-related financial considerations constitute the external environmental factors, which, according to Matier (1990), are non-work-related benefits by nature.

Matier (1990) also found that the intangible benefits are essential to departure decisions. He also identified both push and pull factors, stating that the internal push is more important than the external pull in most departure decisions. However, he also suggested interconnectedness between the internal push and external pull factors. Other scholars have followed in Matier's footsteps and further developed the push and pull framework by providing new empirical evidence and more nuanced conceptualisations of the related factors (see, e.g., Nair et al., 2016; Zhou & Volkwein, 2004).

Borrowing the theoretical framework from the migration literature, Fu (2011) suggested a third concept known as 'mooring', which suggests that the push factors can be understood as negative factors and 'stressors' that drive migrants away and the pull factors as 'attractors' that draw migrants toward them. According to Fu (2011, p. 281), mooring factors are 'personal and social factors that can either hold potential migrants to their original place or facilitate migration to the new destination'. Mooring factors, or 'anchors', are thus intervening variables. Fu (2011, p. 281) suggested that 'people have to "untie" these anchors for migration to occur'. Bansal et al. (2005, p. 97), on the other hand, suggested that the push–pull–mooring model 'underscores the importance of mooring variables as drivers of migration'.

The existing literature dealing with push and pull factors tends to focus on intra-sectoral mobility, that is, the mobility of professionals within academia. However, the intent to leave a profession (occupational turnover) has been empirically studied less than other types of career transitions (Blau & Lunz, 1998). This is interesting given the fact that the mobility of professional workers in general has increased throughout the Western world since the beginning of scholarly interest pointed towards it (see Reiss, 1955).

Bloch et al. (2015) made an interesting exception in explicitly examining researcher mobility between different sectors, namely the university, business and the non-university public sectors. Although Bloch et al. (2015) applied the push and pull terminology, they used the concepts in a somewhat different manner than, for instance, Matier (1990). This is logical given that, when discussing mobility between different sectors (instead of mobility between organisations within the same sector), other kinds of variables factor in. Accordingly, in addition to factors recognised in the intra-sectoral push and pull studies discussed above (see, e.g., Matier, 1990; Nair et al., 2016; Zhou & Volkwein, 2004), Bloch et al. (2015) controlled for the effects of labour market conditions. An important labour market condition in academia is restricted number of available positions, particularly at senior levels, which makes the academic labour market less dynamic in terms of entry and continuation.

Characteristics of Finnish academic careers and PhD education

To understand mobility across sectors, it is essential to understand certain characteristics of the Finnish academic sector. Most Finnish universities are by law publicly governed (however, two of them are organised as private foundations). Even though they have the juridical right to make their own decisions in terms of internal management, in practice, their leeway is narrow due to the highly structured public financing system (Kallio et al., 2017). Related to the academic career models used in Finnish universities, most Finnish universities have implemented the four-stage career model that includes four career steps: (1) doctoral researcher, (2) postdoctoral researcher, (3) university lecturer/researcher and (4) professor/research director. The Finnish Ministry of Education and Culture (MEC, 2008) recommended the model, and in Europe, it is widely used and recommended by the European Commission (2011).

In parallel with this model, Finnish universities recently introduced several types of tenure-track career models, some of them recommended by the League of European Research Universities (2014). Tenure-track models have been tools for universities to recruit professors, and the aim is to attract international researchers and offer career prospects to the best ones. This is also part of the strategic human resource management in Finnish universities and a means of strategic profiling/positioning of universities (Pekkola & Siekkinen, forthcoming; Pietilä, 2015; Siekkinen et al., 2016b).

Although most Finnish universities have introduced tenure-track positions, the vast majority of Finnish scholars are not being employed within the tenure-track system. Consequently, many merited scholars are working in senior lectureships or other lower-status and lower-salaried positions. Moreover, as we will discuss later in more detail, the majority of scholars in the Finnish university sector are working in fixed-term positions (Kallio & Kallio, 2023). Therefore, academics compete fiercely for senior positions in general and professorships in particular. Unlike lecturers and senior lecturers, professors rarely leave their posts before retirement. Moreover, many PhDs occupy externally funded project-based positions, typically in short fixed-term contracts, and compete for scarce financial resources (Aarnikoivu et al., 2019; Brechelmacher et al., 2015; Kallio & Kallio, 2023).

For decades, the average age to attain a doctoral degree in Finland was high in international terms, mostly due to the fact that PhD studies were more or less considered a part-time activity. Doctoral education has gone through many reforms in Finland over the past 20 years. The latest major reform took place in 2011 when university-wide doctoral/graduate schools were established, and universities became more responsible for organising and

financing doctoral education. In general, most of the elements of the reform echoed the European recommendations, namely the Salzburg II Principles, by emphasising internationality, clarifying the supervision in doctoral education and strengthening the relevance of doctoral degrees for external labour markets (Kivistö et al., 2017).

The general trend in Organisation for Economic Cooperation and Development countries and several other countries has been a sharp increase in the number of PhDs awarded each year (Bloch et al., 2015; Yan et al., 2015). This also applies to Finland, where the annual number of doctoral degrees has quadrupled in the last 20 years. The arguments presented in Finland for this 'mass production of doctors', as it is often called, are similar to those in many other countries – it positively influences welfare and improves national competitiveness and organisational productivity (Bloch et al., 2015; Santos et al., 2016). However, the level of funding of Finnish universities has not kept pace with the number of PhDs awarded. In fact, the public and private funding of research and higher education has decreased due to the global economic crisis (2008) that struck Finland. The practical outcome is that only a fragment of all new PhDs can 'fit in' Finnish academia (cf. Bloch et al., 2015), and in Finland, they often face challenges as they pursue a job outside of the university sector.

Data and methods

We employ a mixed-methods research approach based on the qualitative and quantitative data. The qualitative data was collected through 40 semi-structured interviews in 2017. The interviewees included three groups: (i) ex-academics, that is, people holding PhDs who once worked at universities, teaching and/or conducting research; (ii) members of universities' upper management (deans, vice-rectors and human resource managers); and (iii) upper managers and human resource managers of public and private organisations who employ academic faculty. The interviews lasted from 45 to 80 minutes.

There were several selection criteria for the 'ex-academics'. First, the informant had to have been on the payroll of a Finnish university at some point in his/her career and hold a doctoral degree in either technical sciences or social sciences. Second, the informant had to have at least one year of experience working in another sector after leaving academia. The snowball sampling method (Bernard, 2000) was used to find the rest of the informants.

The representatives of the second group were selected from Finnish universities' websites. The selected deans had to represent either the school of technical sciences or social sciences to highlight the differences between 'hard' and 'soft' disciplines. When possible, the same was applied to the selection of vice-rectors. The informants of the third group were selected from organisations that employed numerous people with doctoral degrees. These were both public and private sector organisations, such as large municipalities, large state-owned foundations, a large multinational company, and a consulting firm.

The interviews were transcribed and analysed through the lens of theoretical viewpoints (Jackson & Mazzei, 2013) derived from prior research. The type of qualitative content analysis where the researcher has a prior framework or a theory to reflect on can be labelled directed content analysis (Hsieh & Shannon, 2005). In our case, the push–pull–mooring framework – discussed in the "Faculty Turnover" – directed both the framing of the semi-structured interview form and the subsequent analysis of the collected qualitative data.

The quantitative data is based on a survey conducted in 2018. Based on the first analysis of the interviews, and the prior research related to the theme, the survey questions were

formed; the survey was conducted to examine push and pull factors from the larger group of ex-academics. The survey population was based on information provided by 10 out of 13 Finnish universities (three universities did not provide their employees' information). Via universities' personnel data systems, it was possible to identify employees who had held PhDs and who had left the university between 2010 and 2015. Retirees and those whose contracts were continued within a month after the expiration of the previous one were excluded. After exclusion of duplicates and some incorrect personal information, the survey was sent to the entire population ($N=4631$), resulting in 1226 responses (28% response rate). In our analysis, we focused on those respondents who held a PhD in social sciences ($N=282$) or engineering and technology ($N=128$).

Although the survey was targeted at persons who had left academia, many ex-academics, especially those with PhDs in social sciences, had already returned to the university sector. We focused on those respondents who, at the time of the survey, were working in Finland outside of academia. As illustrated in Table 1, 60 out of the 282 respondents in social sciences and 67 out of the 128 respondents in engineering and technology met this criterion.

Qualitative analysis of the push (and pull) factors of ex-academics

Work in academia was typically considered interesting, and many ex-academics expressed that they might have wanted to continue to work at the university. However, many considered continuing in academia an unattractive option. As suggested earlier, the majority of Finnish scholars work in fixed-term positions. This outcome was constantly mentioned in interviews with both ex-academics and members of university management. The following extracts provide examples of the ex-academics' responses to the question 'Would you have wanted to stay at the university?'

Table 1 Breakdown of the current employment sectors of the respondents

		Engineering and technology	Social sciences	Overall
University spin-off	*N*	1	1	2
	%	2%	2%	2%
University of applied sciences	*N*	6	12	18
	%	9%	20%	14%
Private or government research institute	*N*	2	11	13
	%	3%	18%	10%
Other public sector organisation	*N*	6	15	21
	%	9%	25%	17%
Private or state-owned company	*N*	44	10	54
	%	66%	17%	43%
Self-employed entrepreneur or freelancer	*N*	8	11	19
	%	12%	18%	15%
Total	*N*	67	60	127
	%	100%	100%	100%

Possibly, yes, but in our research group, there was such a situation that they could not employ post-docs, which is perhaps the main reason why I left. In retrospect, I think that it has been good that I did not stay. (Female ex-academic).
The biggest reason was that I was offered a job [in ministry]. … *It was a two-year project, and, in comparison to the few-months' fixed-term positions in university, it felt, being young at that time, like quite a long time. I wanted permanence to my career because I wanted to move forward in life, to buy my own apartment and so forth. … I wanted a financially more secure and longer contract.* (Female ex-academic).
Well, I considered it [staying in academia], but the possibilities in academia are pretty limited. Basically, you would have to go for some tenure-track position – there's not that many actual post-docs there. And on tenure track, the demands are pretty high … I think I could have met them [the tenure demands], but I got this picture that if I would have my own company, I could do the same research cheaper, easier, and the environment would be more encouraging than in the university, which [the work environment and administrative practices at the university] feels kind of absurd. (A male ex-academic).
Now that I'm here [outside academia], *I've started to ponder all that fuss* [related to the administration in university]. *The likelihood that I would apply for a professorship from a university in future is not zero, but it's maximum of 5 %. I got enough of it.* (Male ex-academic).

As noted in the last two extracts, besides poor career opportunities, ex-academics had also experienced the administrative practices of the universities as stiff and de-motivating. The representatives of the upper management were typically aware of the difficult situations of fixed-term employees. Some of them also referenced other tangible factors pushing scholars away, such as the low salaries at the university and better research infrastructures elsewhere. The following extracts provide examples of the universities' upper management's responses to the question 'What factors push scholars away from universities?'

Uncertainty pushes people away [from universities]. … *I see that the biggest reason, based on what people are saying, is the salary and uncertainty of career and the short contracts. … Of course, short contracts have always been part of university sector; we offer three- and five-year contracts. … But now this project-orientation has led to even shorter contracts – one year and so forth. This is sad, and it is difficult for people as they are starting families and so on.* (Male vice-rector).
At the moment, the internal competition in academia is the most important factor that pushes people away. The culture within academia is such that the competition is fierce, and it is often so that the opponents or competitors are surprisingly close. … [The competition] *is the greatest factor, and it leads into situations where work contracts tend to become short due the* [lack of] *funding, and the sight for one's own career development and healthy long-term development becomes quite difficult. Not many people dare to make long-term career plans when they don't know whether they still have their work next autumn.* (Male human resource director).
A clear factor that attracts people to outside academia is permanent employments. And, in a way, the more stable labour market position [outside universities] is what attracts young people, and, of course, older people are looking it as well. The question of livelihood and stability is damn important. And in certain fields, such as medicine or in engineering in private companies, there may be better research environ-

ments, more challenging research environments and better infrastructure than what the university is able to offer. (Male vice-rector).

In the Finnish university sector, 68–69% of all academic staff had fixed-term working contracts in 2012–2017 (Vipunen Education Statistics Finland, 2023). Naturally, the fixed-term positions are more common with early-career researchers than senior ones, and, excluding doctoral researchers, 60% of the academic staff have fixed-term contracts. In contrast, in 2021, only 23% of the administrative staff working at universities had fixed-term employment contracts (Sivista, 2021). Consequently, as several interviewees mentioned, it is only fair to say that job prospects are considerably better outside academia. However, when asked, 'What are the factors that attract scholars to work outside academia?', the interviewees also recognised other reasons, as illustrated in the following extracts.

Those [companies] that offer jobs, they tend to be the kind of firms that operate very globally, and they have probably an interesting and inspiring work atmosphere. Of course, the salary is one factor; unless you are a professor, the salary will certainly be much more competitive [in the private sector]. And the jobs are probably pretty versatile, and [the companies] operate in networked way. Of course, universities nowadays are also pretty much internationally networked. … But in the companies, the versatility and possibilities are more multifaceted. (Male upper manager from a large multinational company).

Well, I guess it [the will to leave academia] largely stems from the anxiety caused by the bureaucracy; the university world is in many ways pretty old-fashioned, so that people long for a [more dynamic] work community and, on the other hand, more speed to do their work. And you're probably interested in moving there where you can get things done in faster and maybe be able also to make a difference by what you do. [In companies] It is also possible to participate in organisational development, which, at university, is not always perhaps very easy. (Female upper manager from a mid-size company).

As illustrated in these extracts, several interviewees suggested that the private sector in particular provided more dynamic and less bureaucratic work environments. Besides the above-mentioned general factors pushing scholars away from academia, there were also numerous personal reasons mentioned. The following extracts illustrate the individual reasons for leaving academia.

The teaching: I never experienced that it would have been my thing. … Well, what comes to theory and so on, I felt like I wasn't developing anymore … and when I was making thematic interviews and I knew beforehand what the informant was about to say, I got tired of it. … And the idea that I don't want to be only at university. (Female ex-academic).

Research is interesting, but I wanted to do something else. … At that point, I felt that it [academic career] *was so far out of reality that I wanted to work with* [more practical] *things.* (Female ex-academic).

The individual reasons in the qualitative data indicated that personal factors, such as the ones described above, were salient reasons for leaving the university sector. Previous research has shown that researchers commonly find their work very meaningful – senior researchers more than PhD students – and this feeling also impacts their perceptions of the security of possible future employment at a university (Siekkinen et al., 2016a). This type of weak 'taste for science' suggests that PhD students will choose careers outside academia

(Roach & Sauermann, 2010). The individual reasons also include an unwillingness to tolerate the uncertainty related to an academic career and weariness from competing for positions.

To sum up, the analysis of our qualitative data suggests that poor opportunities to advance one's career at the university, lack of research funding and low salaries are the most important factors pushing academics to exit. On the other hand, better job prospects elsewhere, as well as a more flexible and less bureaucratic work environment, make the other sectors attractive. These factors, along with personal reasons, are important factors pushing scholars to leave academia. The qualitative analysis revealed largely tangible factors.

Compared to the push factors, fewer pull-related factors were mentioned by the ex-academics. This is only logical given that these interviewees were people who had left academia, and thus, the push factors for leaving academia were greater than the pull factors for continuing there. Had the target group been scholars who had returned to academia after working elsewhere, the situation would have likely been different. Regarding the factors that get scholars to stay in academia, academic freedom and independence in their work, as well as meaningful and interesting work, were typically mentioned, as illustrated in the following extract.

> My salary was dropped to almost half when I came here [back to the university after working for a long time in the private sector] as a professor. … It [working as a scholar] is more like a way of life. I would compare it to nursing … or being a priest, so that it is a vocation. So, there are a lot of people here in the university, and in other universities too, who experience meaningfulness in it [in their work]. Among other things, their interest in research tasks is so strong. And that's what I've come experience as well. (Male dean).

Quantitative analysis of the push and pull factors

Internal push factors were measured in a survey with 24 Likert-scale items under the question 'To what extent do/did the following factors make you want to leave employment at a Finnish university?' Regardless of the fact that interviewees rarely mentioned pull factors, we wanted to determine the main counterforces that could have made the decision to leave difficult. Thus, the internal pull factors were measured with 24 Likert-scale items under the question 'To what extent do/did the following factors make you want to stay at the Finnish university you left?' Table 2 presents the percentage of those who considered that the item had a great or very great influence on their desire to stay/leave.

Based on the data, the most significant reasons for leaving academia were related to uncertain research funding, poor opportunities to advance in one's career, inflexible administrative practices, better career prospects elsewhere and personal reasons (see the factors with the darkest tint in Table 2). This was the case in engineering and technology and social sciences. Thus, it seems that from the perspective of ex-academics, there are no disciplinary differences between the two fields.

The most important push factors were a combination of external and internal factors. They were mostly tangible factors related to environmental (research funding) and labour market factors (salary, career opportunities, job prospects). However, intangible job-related factors, such as poor opportunities to do meaningful work at the university

Table 2 Push-factors affecting to leaving academia in Finland based on the survey analysis

Push factors	Engineering and technology		Social sciences	
Uncertain research funding at the university	41	67,20%	41	70,70%
Poor opportunities to advance in one's career at the university	37	60,70%	30	51,70%
Better job prospects elsewhere	33	55,00%	31	52,50%
Inflexible administrative practices at the university	20	33,90%	15	26,30%
Personal reasons	19	33,30%	29	50,00%
Low salary at the university	16	25,80%	13	22,00%
Poor opportunities to do meaningful work at the university	14	23,00%	20	34,50%
Poor supervision at the university	14	23,00%	12	20,70%
Organisational changes at the university'	14	22,60%	8	14,00%
Internal competitiveness of the work community at the university	13	22,40%	15	26,30%
Poor work atmosphere at the university	12	19,40%	8	13,80%
The university's habit of favouring certain individuals or groups	11	18,30%	16	29,10%
Lack of interest towards my own work duties at [TK28]	10	16,10%	12	20,70%
Lack of university resources	9	15,00%	12	20,70%
Lack of independence in university work	7	11,90%	5	8,80%
Unfair salary system at the university	7	12,10%	11	19,30%
Performance measurements (conducted by the university)	6	10,50%	12	22,20%
Lack of academic freedom at the university	5	8,50%	4	7,00%
Poor chances to combine work and family life at the university	4	6,60%	3	5,20%
High workload at the university	3	5,10%	4	7,00%
Poor geographical location of the university	3	4,80%	10	17,20%
Difficulties in managing several simultaneous work duties at the university	3	4,80%	5	8,60%
Gender inequality in university work	1	1,70%	3	5,40%
Other, please specify	1		8	

and poor supervision, were quite high on the list (see the factors with a light tint in Table 2). Surprisingly, the high workload, family life balance, multiple tasks, lack of academic freedom and gender equality were not considered major factors pushing academics out of the university sector (see the factors with no tint in Table 2).

Regarding the factors pulling people to stay in or return to academia, job-related intangible factors seemed to be important. The most significant factors were the independence related to academic work, academic freedom, interests regarding work duties and possibilities to do meaningful work. However, some of the important pull factors related to the managerial and organisational practices (or lack of them): good work atmosphere, opportunities to combine work and family life, versatile work duties and the reasonable amount of work. It seems that neither push nor pull factors are particularly related to discipline. The disciplinary differences are apparent in academic freedom and the differences in understanding of the fairness in competitiveness of academic work and remuneration (see Table 3).

Table 3 Pull-factors affecting to leaving academia/staying in academia in Finland based on the survey analysis

	Engineering and technology		Social sciences	
Pull factors	*N*	%	*N*	%
Independence related to university work	40	75,50%	35	67,30%
Academic freedom at the university	39	73,60%	37	72,50%
Interest towards one's own work duties at the university	33	58,90%	34	65,40%
Good geographical location of the university	30	56,60%	26	52,00%
Good work atmosphere at the university	29	54,70%	18	34,60%
Possibilities of doing meaningful work at the university	27	50,00%	28	53,80%
Chances to combine work and family life at the university	25	49,00%	23	46,00%
Versatile work duties at the university	24	44,40%	19	35,80%
Good amount of work at the university	22	42,30%	14	27,50%
Personal reasons	14	28,00%	12	25,50%
Gender equality in university work	10	21,70%	7	14,60%
Poor job prospects elsewhere	10	19,60%	8	16,00%
Good supervision at the university	9	17,60%	9	18,00%
Fair salary system at the university	8	15,40%	2	4,00%
High salary at the university	7	13,20%	4	7,70%
Performance measurements (conducted by the university)	6	12,00%	1	2,20%
Good university resources	6	11,50%	3	6,00%
Research funding of the university	6	10,90%	4	7,70%
Internal competitiveness of the work community at the university	5	10,40%	2	4,00%
Possibilities to advance in one's career at the university	5	9,30%	2	4,10%
Organisational changes at the university	3	6,10%	0	0,00%
Flexible administrative practices at the university	3	5,70%	1	2,10%
The university's habit of favouring certain individuals or groups	2	4,40%	2	4,20%
Other, please specify	1		0	

Discussion

Matier (1990, p. 58) suggested that 'without strong internal pushes to invite individuals seriously to consider external offers, lavish external pulls are typically not sufficient in and of themselves to disengage a faculty member'. Behind the internal push and external pull factors, individual decisions naturally play a pivotal role. Accordingly, while studying PhDs' career choices, Bloch et al. (2015) found that individual reasons played a major role in their decisions. The individual reasons for leaving academia can thus be perceived as mooring factors. Given that this study focused on persons who had already left academia, it is understandable that individual mooring factors were facilitators for academic migration. Figure 1 summarises the most frequently mentioned organisational and managerial reasons as well as individual mooring reasons for leaving academia.

The different factors that cause job satisfaction and dissatisfaction have already been presented by Hertzberg (1966) in his seminal study and are known as the two-factor theory. There is empirical evidence that the factors causing professional workers to remain in their organisations are not the same factors as the ones that cause them to leave (e.g.

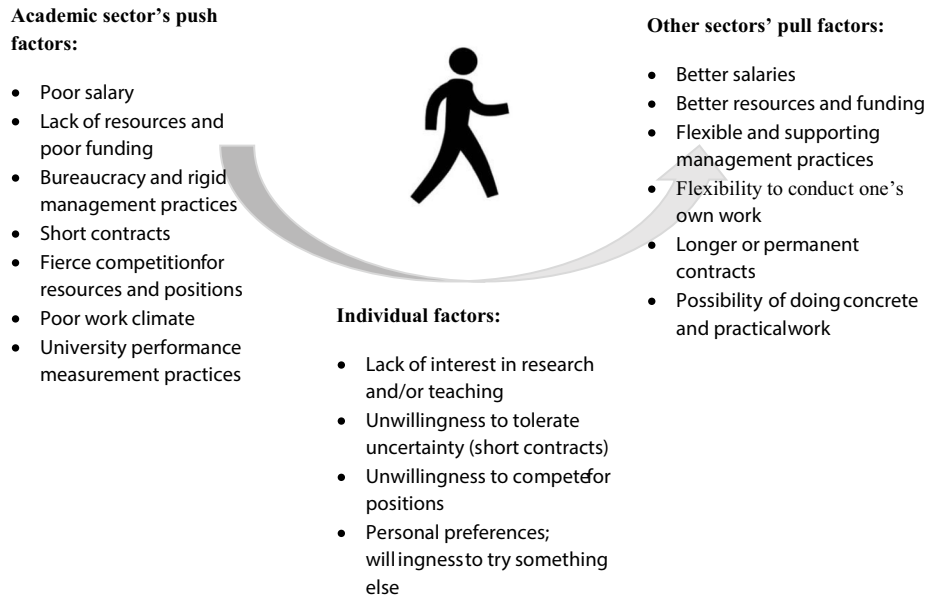

Fig. 1 Individual factors mediating push and pull factors in leaving academia

George, 2015). Based on the findings of our study, this classic idea does not seem to apply to academic professionals leaving their profession. Accordingly, as seen in Fig. 1, most of the factors that pushed academic professionals away from academia were also (inversed) pull factors that lured them to other sectors. In fact, only one factor, namely the possibility to do concrete and practical work, was mentioned just in the external pull context. This factor, nevertheless, seemed to be potentially important, as interviewees from all three groups mentioned it. However, more empirical data and analysis are needed to draw further conclusions.

The findings related to labour markets are context specific. However, in many other continental European countries, there is an oversupply of PhDs in comparison to the positions offered by universities, and the post-doctoral careers are based on fixed-term contracts, often of a precarious nature. Our findings can be useful for analysing the careers of ex-academics, as well as their career stories and decisions, especially in these countries.

Conclusions

This paper presented findings of the push and pull factors causing professionals to leave academia. The study suggests not only that the push and pull factors are interlinked but also that individual mooring factors seem to mediate the two. In practice, this means that individual factors, such as lack of interest in research and/or teaching and unwillingness to compete for positions, triggers individual decisions to leave academia. The role of these individual factors potentially differentiates faculty mobility within academia from mobility between sectors.

The labour market conditions in the Finnish academic sector seem to be a major push factor for professionals to leave academia. This is not surprising because experiences in

academia in Finland (Aarnikoivu et al., 2019; Kuoppala et al., 2015; Siekkinen et al., 2016; Kallio & Kallio, 2023) suggest that short, fixed-term contracts are common at Finnish universities, and this factor is perceived to cause insecurity, making planning for the future and research work difficult. For now, this issue continues to push academics to leave universities, and Finland is not an exception (OECD, 2021). It has been studied around the globe, that during the COVID-19 -pandemic the polarisation in academic careers increased, affecting strongly to those academics' working conditions who already had a insecure position in the university (see e.g. Hadjisolomou et al., 2022).

In several interviews, the informants referenced the 'overproduction of doctors', or the 'doctor flood', as a negative trend that causes continuous competition for scarce resources and excessive rivalry for positions in academia. The competition for resources and positions has a further negative impact on the working climate in academia. Although the lack of tenure (or more frequent use of tenure-track models) in Finnish academia is not explicitly connected to the above-mentioned overproduction of doctors, in practice, these two phenomena mingle and make working in academia less desirable. The same applies to university performance measurement practices, which have been found to have a negative effect on the working climate (Kallio & Kallio, 2014; Kallio et al., 2021).

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Data availability In process.

Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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