Generation Z Entering IT – Navigating Expectations for Employers and Employees

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Abstract

Recruiting Generation Z IT professionals (born between the mid-1990s and the early 2010s) presents unique challenges for organizations in the fast-paced digital era. This paper employs a cluster analysis approach to gain insights into Generation Z IT professionals' employer and workplace expectations, enabling organizations to develop targeted strategies for effective digital talent attraction and employment. Analyzing the expectations of 370 current IT students, we highlight three distinct clusters within the sample: Success-Driven Prestige Seekers, Challenge-Driven Autonomy Seekers, and Money-Driven Security Seekers. We show how each cluster prefers different employer and workplace characteristics and illustrate paths for organizations to tailor their recruitment strategies for each cluster. This paper contributes valuable insights into the preferences and motivations of Generation Z IT professionals and provides practical recommendations for organizations seeking to build a talented, digital workforce by integrating Generation Z IT professionals.

Keywords: IT workforce, IT professionals, digital natives, digital talent, IT skills shortage, recruitment

1. Introduction

In an era of ongoing, significant changes due to global events such as the COVID-19 pandemic, and economic recessions, the nature of work is evolving and is anticipated to undergo further transformations (Kniffin et al., 2021). Among the key factors shaping the future of work, changing employee expectations hold a significant influence (Carraher-Wolverton, 2022), especially in as we experience global skills shortages in many different industries. To attract skilled talent in the job market, employers must adapt their recruitment strategies to align with societal, technological, and environmental shifts. With Generation Z (individuals born between the mid-1990s and the early 2010s)[1] projected to comprise the majority of the workforce and reshape the economy (Chillakuri & Mahanandia, 2018), understanding the expectations of these potential employees becomes essential for developing effective hiring strategies. Consequently, addressing the expectations of Generation Z employees has become a crucial skill for organizations worldwide to compete for skilled digital talent (Janssen & Carradini, 2021).

Generation Z is poised to make a profound impact, particularly in the IT industry, which operates within a rapidly changing technology landscape. In current times, with the ever-present evolution of technology (Niederman et al., 2016), Generation Z stands out as the techno-savvy generation, equipped with innovative skills essential for future technological advancements (Janssen & Carradini, 2021). Organizations hold high expectations for this generation, recognizing their potential to drive significant changes in a technologically driven world. This is especially relevant as the demand for IT professionals consistently exceeds the supply in the IT job market (Bureau of Labor Statistics, 2023). However, this talent shortage may intensify further with the increasing utilization of AI in workplaces and broader society. As AI becomes more prevalent, the demand for skilled IT professionals, especially digital native ones such as those from Generation Z, will continue to rise (Alekseeva et al., 2021), making their contributions crucial to meeting future technological needs.

In light of the increased need for digital talent in the IT job market, we dedicate this study to Generation Z, currently entering the IT industry. Our objective is to

[1] We acknowledge that generational definitions can differ across studies. Generation Z typically includes individuals born between the mid-1990s and the early 2010s. For this study, we have operationalized this timeframe to be from 1995 – 2012, following the approach of other research papers (Gabrielova, K., & Buchko, A., 2021).

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enhance comprehension of the expectations held by Generation Z and explore patterns among this generation of young IT professionals. Based on this improved understanding, companies can adapt their recruitment strategies to the unique characteristics of this generation and position themselves as attractive employers for Generation Z IT professionals. With this study, we address the following research questions:

RQ 1: What are Generation Z IT professionals' expectations when looking for a job in IT?

RQ2: How can these expectations be clustered so that companies can derive target group-specific recruitment measures?

To answer this research question, we surveyed 370 current IT students in Germany about their expectations of employers. By clustering their preferences, we present three groups of Generation Z IT professionals that are distinct in their expectations concerning employers and workplaces. The paper is organized as follows: We start with the theoretical background, discussing the evolving IT job market and the expectations of future IT professionals. Then, we detail the study design and cluster analysis. Next, we present the results, illustrating three distinct clusters of future IT professionals' expectations. Finally, we discuss the findings, providing paths for companies to hire distinct groups of Generation Z IT professionals.

2. Theoretical background

In the following, we introduce literature on the evolving IT job market and the expectations of future IT professionals.

2.1. Evolving IT job market

The unprecedented technological advancements (Carraher-Wolverton, 2022; Niederman et al., 2016)-, the economic recession (Harari et al., 2023), and the increasing pressure to stay competitive are changing the nature of work in the IT industry (Lim, 2023). The effects of these global transformation processes are reflected in the evolving preferences of job seekers (Chang et al., 2011; Thatcher et al., 2012), such as those triggered by the COVID-19 pandemic (Carraher-Wolverton, 2022). As we witness a revolution in the workforce, it is essential to understand these trends and disruptions to navigate a dynamic environment and seize opportunities (Lim, 2023).

After years of hypergrowth in tech, recent major layoffs propagated uncertainty in the job market by forcing masses to move from one place to another (El-Deeb, 2023). The resulting increasingly fragile nature of employment relationships is often seen as a potential threat (Harari et al., 2023). Paradoxical to the layoffs, the tech industry is still in high demand for talent (El-Deeb, 2023). To stay abreast of the slowdown after COVID-19, companies will have to rely heavily on future IT professionals to drive technological progress.

The already limited supply of college graduates decreased in the years leading up to 2010 (Benamati et al., 2010), taking an additional hit on the upward trend during the COVID-19 pandemic due to declining enrollment numbers (Breaux & Moritz, 2021). Frequent attrition of IT professionals during early career stages (Prommegger et al., 2022a; Setor & Joseph, 2021) elevated the importance of attracting and retaining young IT professionals, as they are considered to be the largest generation to reshape the economy (Vyas, 2022).

2.2. Expectations of future IT professionals

Addressing the expectations of future IT professionals is crucial in tackling the IT skills shortage. Contextualizing the expectation disconfirmation theory (EDT) can help with this challenge. The theory describes a process where an individual compares their previous expectations to their post-experienced perceptions (Oliver, 1977) and has been used for different research purposes across the IS field (Bhattacherjee & Lin, 2015; Venkatesh & Goyal, 2010). Notably, the theory is frequently used to explain employees' job performance and satisfaction after expectations (Carraher-Wolverton, 2022). In particular, the EDT explains how, if expectations by employees are not met by their employers or workplaces, individuals may experience a sense of dissatisfaction and frustration due to the perceived gap between their anticipated outcomes and the actual results. This disconfirmation can lead to decreased job satisfaction and performance and, as a result, increased turnover risk. In order to successfully hire and retain young IT professionals, it is therefore crucial to tailor recruitment strategies to the expectations of future IT Professionals.

IS research has picked up addressing the expectations of IT professionals and suggested various recruitment strategies for IT employees (Oehlhorn et al., 2019; Prommegger et al., 2020; Thatcher et al., 2012; Weitzel et al., 2009). However, there has yet to be a consensus on the relative importance of different factors that influence IT job seekers. For instance, while some scholars assign greater importance to challenging tasks (Oehlhorn et al., 2019), others do not consider the challenge of a job to be significant (Prommegger et al., 2020; Thatcher et al., 2012). Similarly, some scholars have considered salary less important (Thatcher et al., 2012) or highest priority (Chang et al., 2011). However, some factors have been found to be significant across several studies. First, due to their technical affinity, IT professionals are especially drawn to technical training

and the latest technologies (Oehlhorn et al., 2019; Prommegger et al., 2020). Second, meaningful work, flexible working hours, and work-life balance have been shown as factors that influence employee recruitment in the IT context (Kuhn & Joshi, 2009; Oehlhorn et al., 2019; Thatcher et al., 2012). Additionally, recent studies have indicated a decline in worker perceptions of job security (Harari et al., 2023), while societal expectations have evolved to encompass factors such as environmental and social governance, diversity and inclusion, and the normalization of remote work and work-life balance (Lim, 2023).

The next generation to enter the IT job market is Generation Z. Shaped by technological advancements, social media, and recent crises, such as the COVID-19 pandemic (Barhate & Dirani, 2022), this generation is expected to drive significant shifts in the workforce. While they share typical desires with other generations, such as appreciation, job security, and satisfaction, Generation Z diverges from traditional motivators and focuses on personal morals, purpose, and feeling valued when choosing an employer (Barhate & Dirani, 2022; Janssen & Carradini, 2021). Generation Z places a high priority on organizational culture, work-life balance, and stability (Barhate & Dirani, 2022), which requires organizations to adapt their recruitment strategies accordingly (Chillakuri & Mahanandia, 2018; Janssen & Carradini, 2021). Relying on digital self-education, this generation has learned gain knowledge self-reliantly. Consequently, it has developed high self-confidence and tenacity (Barhate & Dirani, 2022).

The characteristics of Generation Z may pose hurdles for tech organizations, as they may not be prepared to meet the expectations (Prommegger et al., 2022b). Adapting to Generation Z's expectations is crucial to recruit this generation effectively.

3. Research Method

To answer our research questions, we chose a quantitative survey approach. In the following, we explain the study design, data collection, and analysis.

3.1. Study Design

In order to elicit the expectations from Generation Z IT professionals according to the EDT, we conducted a survey targeting upcoming Generation Z IT professionals. In the survey, we asked the respondents to rank desired employer characteristics when applying for jobs in IT.

We collected this data as part of a more extensive survey on young IT professionals in the IT sector, which included further career, job, and workplace aspects in the IT sector. Following the principles of the EDT, we defined and contextualized employer and workplace expectations for IT job seekers. Based on the work by Thatcher et al. (2012), who defined preferences for IT professionals seeking a new job (nature of work, prestige, training and development, location, compensation and promotion, culture, and job security), we derived a broad set of employer and workplace characteristics, ranging from autonomy to additional benefits (please see Table 1). In the survey, we asked our respondents to rank their top five priorities according to their preferences. Please find the detailed instructions of the survey in Table 1. In addition, we asked the survey participants to name any additional factors that were not part of the listed choices. Lastly, we collected the variables age, gender, study program, semester, and part-time job to detect potential differences in demographics.

3.2. Data Collection

We defined our target group as IT students that belong to Generation Z (born between 1995 – 2012), currently enrolled in Informatics or Information Technology-related studies. These students were considered to be representative of upcoming Generation Z IT professionals, as they were expected to be within the defined age frame (born between 1995 – 2012), expected to enter the IT job market, and/or were already active in the job market via part-time jobs. We included students at three German universities enrolled in the following study programs: Computer science, Software engineering, Games engineering, Information systems, Data engineering, Media informatics, Robotics, and similar.

Table 1: Survey question on Generation Z's preferences when looking for a job in IT

Please think about your (future) employer in IT. Which factors are decisive for the choice of your employer? Rank your top five priorities in order of importance.			
AUT	Autonomy	**SEC**	Job security
CUL	Company culture	**MFN**	Meaningful work
CIM	Company image	**INT**	Interesting work
FWA	Flexible work arrangements	**TRA**	Training opportunities
PRO	Good prospects for promotion	**ENV**	Work environment
SAL	High salary	**BEN**	Add. benefits (e.g., bonus)

We conducted two waves of data collection. The first wave took place in December 2020 and was primarily aimed at Bachelor students. The second wave took place in October 2021 and was primarily aimed at Master's students. We contacted students via email (e.g., mailing lists) or social media (e.g., student groups) and flyers on campus. The first survey reached about 700 students, receiving 301 responses. With the second data collection, we reached about 500 students, receiving 243 responses. In total, we received 544 responses. We decided to follow a rigorous data cleaning process, which involved eliminating respondents who answered < 90% of the questions or had an unreasonable time to complete the survey (<10 min). This reduced the number of respondents to n=370.

Table 2 provides an overview of the age distribution of the sample born between 1995 - 2003. The youngest person was born in 2003, thus being 18 years old during the conduction of the study.

3.3. Data Analysis

In the following, we describe the data analysis. All calculations were done with the statistical software R.

To first get a good overview of the expectations of Generation Z IT professionals, we conducted an exploratory analysis of the top five ranked expectations. For this step, we assigned ranks to the mentioned criteria from 1 (best rank) to 5 (worst rank). Criteria that were not ranked within the first five were assigned an NA. We then calculated the overall ranking positions per criterion, resulting in a table providing an overview of criteria and their position in the ranking (see Table 2). A low average ranking (>=3) but a decent number in high priorities indicates that the criterion was chosen rarely, but when chosen, it was highly ranked. This result speaks for significant differences in the data set, with single criteria being highly important for some and unimportant for others. These signs already indicate different clusters in the data set.

Second, we adopted the recommendation of Thatcher et al. (2012), who argue for segmenting job candidates according to similarities. Consequently, we decided to identify patterns between students based on their ranked employer preferences. We conducted a cluster analysis based on the ranked preferences and identified differences in their demographics.

Table 2: Age of Generation Z respondents

Age (Year born)	%
< 21 years old (born after 2000)	**28.1%**
21–23 years old (born 2000–1998)	**53.6%**
24–26 years old (born 1997–1995)	**18.3%**

We could not rely on regular, well-known clustering algorithms for the cluster analysis of the employer expectancies since they require the data to be (a) scaled and not ranked and (b) not have any NA values, a condition that our top-5 partial ranking cannot meet. We finally settled on BayesMallows, using the BayesMallows package in R (Sørensen et al., 2020), an only recently developed package, which comes with a predefined function for our (and similar) use case and also supports multi-threading, thus speeding up the computation. BayesMallows first uses the Bayesian Mallows model to perform data argumentation on the missing ranks 6-12 before running the Metropolis-Hastings, Markov Chain Monte Carlo algorithm for clustering.

As typical for clustering, we first conducted calculations to find a suitable number of clusters in the data. We thus let the algorithm run for varying numbers of clusters to decide on the optimal number of clusters using the within-cluster sum of distances. Based on the assumption that the optimal number of clusters is between 1 and 10, we conducted ten runs for each number of clusters. The within-cluster sum of distances reduced after three clusters, hinting at three significant, distinct clusters in the sample (Sørensen et al., 2020). A lower within-cluster sum of distances implies higher similarities between clusters, causing potential blurring. To reduce the risk of overlooking essential groups in the sample, we ran robustness checks with clustering of K = 4 or 5, which resulted in at least one cluster containing less than 10% of students. As we consider this number too small for any meaningful clustering, we conducted the clustering algorithm based on three desired clusters. After conducting the clustering algorithm, we enriched the cluster results with additional information based on the demographics of the respondents (see Table 4: gender, study degree, study program, and part-time job) and calculated whether we could find significant differences in demographics based on the Fisher's Exact Test that underline the distinctiveness of the groups. In the following section, we will outline the results.

4. Results

In this section, we report our results based on the exploratory analysis of Generation Z IT professionals' expectancies and the cluster analysis that identified differences between groups in our sample.

4.1. Exploratory Analysis of Expectancies Towards Employers and Workplaces

We first evaluated which of the 12 criteria are most important to Generation Z IT professionals. Table 3

provides an overview of the ranked factors (see row Overall Ranking). The results show that the following factors were ranked best based on their mean rank: *work on interesting tasks, meaningfulness of work, company image, high salary, and flexible work arrangements.* Taking a closer look, we can see that *high salary, interesting tasks*, and *meaningfulness of work* were not only most frequently selected as one of the five most important criteria but also ranked first on more occasions than the remaining nine factors (see bold numbers), which makes these three factors the three winners, despite *company image* having an overall better mean rank. We explain this effect as follows: C*ompany image*, while not always included among the five most important factors, often received high priority in those cases where it got selected, resulting in a good mean rank. In contrast, *work environment* was included in the top five most often but generally only placed 4th or 5th, resulting in a worse overall mean rank than the other factors.

In contrast, *company culture (rank 10), training opportunities (rank 11), and additional benefits* (rank 12) have rarely been in the selected expectations. These factors ended up – if even included at all – mostly in fifth place.

4.2. Cluster Analysis for Identifying Different Target Groups

As a next step, we conducted the cluster analysis to identify different groups in the data set (see Tables 4 + 5). Below, we present three identified clusters of Generation Z IT professionals: The first group consists of success-oriented individuals who seek prestige and recognition in their careers. The second group consists of challenge-oriented individuals who seek flexibility and the opportunity to work on interesting tasks. The third group consists of individuals primarily motivated by financial compensation and job security. Between these groups, we found significant differences in terms of gender, degree, and part-time employment. These clusters serve as a valuable guide for employers to understand Generation Z IT professionals' expectations.

Out of the 370 respondents whose rankings we evaluated, 22.4% (n=83) were assigned to Cluster 1, 43.5% (n=161) to Cluster 2, and the remaining 34.1% (n=126) belonged to Cluster 3. In the following, we explain each cluster in detail.

Cluster 1, "Success-Driven Prestige Seekers," is defined by the factors company image, high salary, and promising promotion prospects, which they consider the most crucial criteria when selecting their first employer. These students anticipate personal social recognition through their employer's positive image and perceive themselves as more successful when associated with a reputable company. The emphasis on a high salary can be attributed to its symbolic value as a status indicator, enabling a lavish lifestyle that signifies professional and personal achievement.

Career advancement, reputation, and prestige take precedence for the students in this cluster. They are motivated not solely by a personal interest in their tasks but by external incentives, such as substantial earnings, promotions, and affiliation with a well-regarded company. However, despite their focus on external appearances of success, they also value meaningful work and interesting tasks when choosing their first employer. Looking at the demographics in Table 5, we can find another noteworthy characteristic of this cluster related to their part-time jobs. Students in Cluster 1 engage in significantly fewer part-time jobs alongside their studies compared to other clusters. Furthermore, the demographic analysis reveals a lower representation of female students than other clusters.

Cluster 2, "Challenge-Driven Autonomy Seekers," starkly contrasts Cluster 1 in terms of their prioritized criteria. In this cluster, students placed high importance on interesting and meaningful work, while a high salary takes a backseat. They seek intellectually demanding and intricate tasks, finding fulfillment in tackling problems. Additionally, they place great importance on the meaningfulness of their work, desiring to contribute positively to society.

Unlike Cluster 1, which emphasized company image and career opportunities, Cluster 2 prioritizes the work environment and flexible work arrangements as essential criteria for their first job. Flexibility in work location signifies their preference for alternatives to a traditional office setting, such as working from home or a co-working space. Flexibility in working hours involves determining the start and end of the workday according to their preferences. As many students in this cluster already have work experience, they have gained insights into pleasant and unpleasant work environments, shaping their preferences.

The desire for interesting and meaningful tasks alongside a positive and flexible work environment highlights their intrinsic motivation. They derive their drive primarily from internal sources. Their work mindset is task-oriented, driven by personal interest and conviction, with external incentives playing a secondary role. However, intrinsic motivation does not render salary irrelevant to them. Recognition for their work, including appropriate compensation, is reported as the fifth most important factor.

Considering the demographic evaluation of this cluster, particularly the higher representation of women, the prototype student within Cluster 2 can be envisioned as an advanced-stage bachelor's degree student with early work experience, irrespective of gender.

Table 3: Overall ranking of employer expectations across the whole data sample

	AUT	CUL	CIM	FWA	PRO	SAL	SEC	MFW	TRA	ENV	INT	BEN
Rank 1	32	14	36	34	20	**50**	19	**58**	6	19	**82**	0
Rank 2	17	11	15	41	27	72	29	45	20	33	56	4
Rank 3	20	19	11	45	44	61	23	38	19	36	45	9
Rank 4	25	17	15	46	34	36	38	35	26	40	40	18
Rank 5	24	28	25	24	31	42	32	35	26	47	31	25
Mean rank*	**2.93**	**3.38**	**2.78**	**2.92**	**3.19**	**2.80**	**3.25**	**2.73**	**3.47**	**3.36**	**2.54**	**4.14**

*explanation mean rank = ranking from first (1) to fifth priority (5) = a lower number in mean rank means a higher priority

Table 4: Cluster breakdown of sample

	Cluster 1	Cluster 2	Cluster 3
Name	**Success-Driven Prestige Seekers**	**Challenge-Driven Autonomy Seekers**	**Money-Driven Security Seekers**
N (%)	83 (22.4%)	161 (43.5%)	126 (34.1%)
Rank 1	Company image	Interesting tasks	High Salary
Rank 2	High Salary	Meaningful work	Interesting tasks
Rank 3	Prospects for Promotion	Work environment	Flexible work arrangements
Rank 4	Meaningful work	Flexible work arrangements	Job security
Rank 5	Interesting tasks	High Salary	Prospects for Promotion

Table 5: Cluster details and differences based on demographics

		Cluster 1, N = 83	**Cluster 2**, N = 161	**Cluster 3**, N = 126	**p-value**
Gender	Female	4 (6.0%)	40 (29%)	33 (32%)	<0.001***
	Male	63 (94%)	99 (71%)	70 (67%)	
	Other	0 (0%)	0 (0%)	1 (1.0%)	
	Prefer not to say	16	22	22	
Degree	Bachelor's Degree	67 (81%)	112 (70%)	86 (68%)	0.0402*
	Master's Degree	14 (17%)	46 (29%)	40 (32%)	
	Other	2 (2.4%)	3 (1.9%)	0 (0%)	
Course	Technically oriented	50 (60%)	101 (63%)	77 (61%)	0.7
	Mixed	29 (35%)	46 (29%)	38 (30%)	
	Management oriented	4 (4.8%)	14 (8.7%)	11 (8.7%)	
Part-time job	Yes	33 (40%)	97 (60%)	63 (50%)	<0.001***
	No	42 (51%)	63 (39%)	63 (50%)	
	Prefer not to say	8 (9.6%)	1 (0.6%)	0 (0%)	

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Cluster 3, "Money-Driven Security Seekers," is defined by their significant desire for a high salary and increased need for job security. They view a high salary as recognition for their skills, work, and performance. However, they are not interested in routine work; instead, they seek a range of interesting and challenging tasks. Flexible work arrangements rank third among their most important criteria when selecting an employer, meaning this cluster values autonomy in deciding when, where, and how they work.

In contrast to Cluster 1, where company image is vital, and Cluster 2, where the work environment takes precedence, job security is the main selling point for Cluster 3. This cluster prefers companies that offer permanent contracts resistant to crises.

Based on the demographic analysis, more of the Master's students and most of the female students are assigned to Cluster 3 than the other clusters. These individuals have already gained experience through part-time jobs, which leads them to value flexible working conditions and permanent contracts, in addition to engaging tasks for which they expect fair compensation.

5. Discussion

5.1. Theoretical Implications

In the following, we discuss key findings in the paper and explain our interpretation of these findings:

Generational differences in the employer and workplace expectancies of IT professionals: Following the principles of EDT, it will be crucial for organizations to meet Generation Z IT professionals' expectations to retain this group in organizations and the IT field in the long term. In general, we observed the expectations of Generation Z to gradually shift, which is evident in certain areas that reflect their values and mindset. The results show how salary remains a strong motivator for Generation Z, similar to previous generations (Ge et al., 2015; Slaughter et al., 2007). However, our study also illustrates a trend that distinguishes Generation Z from other generations and has been discussed in other literature (Barhate & Dirani, 2022; Chillakuri & Mahanandia, 2018): a lack of desire for vertical advancement in organizations.

The importance of vertical advancements, such as the prospect of promotion and related factors like further training, seems to be diminishing for Generation Z (Barhate & Dirani, 2022). Our findings suggest that hierarchical advancement in the organization is no longer a high priority for Generation Z when entering the workforce. Instead, they prioritize engaging in interesting and meaningful activities. This trend can be attributed to several factors: one prominent theory is that taking on leadership roles conflicts with the high priority of work-life balance (Barhate & Dirani, 2022). However, another reason might be a lack of confidence in skills and especially leadership skills. Although Generation Z generally has higher self-confidence (Barhate & Dirani, 2022), the generation suffers from anxiety and fear of lacking the skills for a leadership role (Schroth, 2019), which might cause shifts in the career aspiration of IT career entrants away from traditional career ladders. The prevalence and importance of interesting and meaningful tasks in our survey suggest that learning plays a significant role, and vertical advancement does not matter as much as developing laterally (Barhate & Dirani, 2022). Another perspective to consider is that young IT professionals who are just starting their careers might not yet place significant importance on vertical advancement, given their limited workplace experience. The aspiration for advancement within the company could potentially evolve only after a few years of work. This notion should be considered when interpreting the findings. Irrespective of how this finding is interpreted, a lack of desire for manager positions in the IT context, where many IT professionals still choose specialist careers (Joseph et al., 2012) and where conflicts between managers and professionals are frequently reported (Rao & Ramachandran, 2011) could become a problem in the coming years. Therefore, measures must be taken early to prepare and motivate Generation Z IT professionals for leadership roles.

Furthermore, we discovered that company image holds high priority for a specific group among Generation Z, which has been mentioned (Barhate & Dirani, 2022) but has not been extensively addressed in previous research. This result suggests that a part of Generation Z seeks recognition not only for their individual accomplishments but also through the reputation of their employers. This finding aligns with the general perception of Generation Z working with personal morals (Schroth, 2019) and being motivated to work for a meaningful purpose for humanity (Barhate & Dirani, 2022). We conclude that Generation Z IT professionals are aspiring to grow potent mainly when they can relate to the values of the organizations they are working for. In an IT context, company image takes on a unique role: As the IT sector comprises numerous cutting-edge companies, this sector and associated jobs within these companies have a positive and innovative image in society, often supported through extensive employer branding (Dabirian et al., 2019). Working for such employers confers external recognition on employees, as the positive characteristics associated with the company extend to its employees.

Differences in expectations among Generation Z IT professionals: According to the EDT, companies should proactively address the expectations of

Generation Z IT professionals. However, our findings reveal that a one-size-fits-all approach is insufficient; instead, companies should segment target groups within Generation Z to effectively cater to their diverse needs.

Cluster 1 specifically displayed a characteristic of valuing promotion prospects despite it being a factor ranked relatively low overall. This group demonstrates a desire to assume responsibility in the future, indicating that while the preference for promotion opportunities may be decreasing overall, there are still individuals who aspire to such roles; they simply must be identified.

The results further reveal cluster 2 as a group of individuals inherently drawn to interesting, meaningful work in a flexible work environment, prioritizing intrinsic factors over extrinsic ones. These individuals align well with the characteristics of the traditional agile software development environment, which emphasizes work autonomy, team self-organization, and dynamic and diversified tasks (Venkatesh et al., 2020). We propose that this cluster has strengthened, particularly with the introduction of agile methodologies, and these individuals will thrive in agile work environments.

Cluster 3 places high value on salary and job security and seeks a balance between monetary rewards and interesting work tasks. These individuals prioritize financial compensation and stability, indicating a potential inclination to remain with their employers long-term as long as their financial needs are met. However, they exhibit a lower desire for meaningful work, suggesting that they may not prioritize jobs with high impact or a strong sense of purpose.

Lastly, we want to discuss gender distribution differences. Cluster 1 consisted predominantly of men, while women were predominantly represented in clusters 2 and 3. This gender disparity may be linked to still-existing imbalances in career expectations between men and women in IT, as they were observed by other researchers (please find some recent studies here: Harmon & Walden, 2021; Serenko & Turel, 2021).

Based on the analysis, we can see that women hardly belong to success-driven prestige seekers, which hints at women prioritizing interesting and meaningful tasks and flexible work arrangements. Without further information on the reasons for the preferences, we refrain from further interpretation. However, we want to emphasize that, similar to other generations, we can still see gender differences in career aspirations among Generation Z professionals, which research and practice should pay further attention to. We call for companies and universities to actively extend their diversity initiatives to reshape career expectations and create more inclusive environments for all individuals.

5.2. Practical Implications

Our practical implications are aimed at companies seeking to find, attract, and employ Generation Z IT professionals. We provide these companies with a better picture of this new generation in the IT job market and show differences in the target groups by identifying clusters. Table 6 overviews how to find, attract, and employ the different clusters.

Success-oriented, prestige-seeking Generation Z students can be found in early undergraduate semesters.

To attract them, companies should address their desire for prestige. We, therefore, recommend offering a good starting salary, showing clear career paths in the company with a route to leadership, and offering to interact with a professional network. In the long term, these employees are particularly suited to take on management tasks with responsibility in the company, even if this may not be an option for the first job. A trainee program, for example, would be suitable.

Challenge-driven, autonomy-seeking Generation Z students can be found in companies, doing internships, or part-time jobs. Companies should address their desire for challenging and meaningful work to attract them. We, therefore, recommend offering a fast-paced and dynamic environment, challenging projects, and working on cutting-edge technology. These employees are particularly suited to work in dynamic, agile teams as they will make great technical experts.

Money-oriented, security-seeking Generation Z students can be found in higher semesters of Bachelor's

Table 6: Recommendations for finding, attracting, and employing Generation Z IT professionals

	Cluster 1	Cluster 2	Cluster 3
Name	**Success-Driven Prestige Seekers**	**Challenge-Driven Autonomy Seekers**	**Money-Driven Security Seekers**
Find	Early bachelor students	Within companies, doing part-time jobs or internships	Late bachelor + master students
Attract	Address their expectation for prestige: - good entry salary - road to leadership - network events	Address their expectations for challenging / meaningful tasks: - Fast-paced environment - challenging projects - cutting-edge technology	Address their expectation for security and flexibility: - long-term contract - good entry salary - flexible work arrangements
Employ	Management functions with responsibility	Technical experts in agile teams	Stable teams with low-risk projects

and Master's programs. Companies should cater to their desire for security and flexibility. We recommend offering a good starting salary with a long-term contract and flexible working arrangements (time + location). These workers are expected to perform well in a stable, low-risk environment.

5.3. Limitations

Our study, like any other study, has limitations. First, we would like to emphasize the specific context of the study. We focused our data collection on Generation Z IT students in Germany. Therefore, the results are primarily interpretable for the German or Central European IT job market, and any extension to the global market should be treated with caution. Specifically, we want to highlight cultural differences and the educational systems that might have influenced our results. Secondly, by giving students 12 preselected preference factors, of which we only considered the top five choices, we may have restricted students in their preference statements. While we did ask for additional expectations, this restriction may have led us to overlook important factors in employer choice. Another limitation is that the data set consists of students, partly Bachelor students, and students in low semesters who are still in the early stages of their studies. This can be a limitation in interpreting the results because students may have little or no experience and insight into the IT industry. Accordingly, students' statements at this early stage about their career expectations must be interpreted with caution, as they might change and evolve with work experience. However, we are confident that the survey respondents well understood the overall aim and the constructs in the study.

5.4. Future Research

Our study offers many possibilities for points of connection. First, we recommend replicating the study in a more global context. This will make the results globally interpretable and thus bring new insights into geographical differences in Generation Z IT professionals. We also suggest that further research should be limited to a narrower sample of IT-related courses. Although we did not find significant differences between management-oriented and technology-oriented courses, we expect to find differences between, for example, computer science students and information systems students. To target these different students, we suggest further research focusing on different subdivisions of these target groups. Furthermore, we recommend observing whether the assessments of the study participants change over time. As career expectations like career anchors might change over time (Chang et al., 2012), a longitudinal study is likely to detect potential differences between the intention and the later decisions of young IT professionals.

6. Conclusion

In conclusion, our study reveals shifts in the expectations of Generation Z IT professionals. We find a decreasing emphasis on vertical advancement and a greater focus on engaging in interesting and meaningful work. Furthermore, our findings highlight the rising significance of company image. Lastly, we observed gender differences among Generation Z IT professionals, finding that men predominantly valued vertical advancement, while women were more inclined towards meaningful tasks and flexible work arrangements. These disparities indicate the need for further attention to address gender imbalances in career expectations among Generation Z. To attract Generation Z IT professionals effectively, organizations must adapt their recruitment strategies to align with their evolving expectations for the highly diverse groups within Generation Z IT professionals

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