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Talent Retention of New Generations for Sustainable Employment Relationships in Work 4.0 Era—Assessment by Fuzzy Delphi Method

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Abstract: The transformation in Industry 4.0 has impacted not only manufacturing systems but also work, essentially changing the nature of work. "Work 4.0" is referred to as "Industry 4.0", but with a focus on sustainable employment relationships and the forms of work. However, the issue of talent retention (TR) in the Work 4.0 context remains unsolved. The purpose of this study was to identify factors influencing TR among different generations for the development of sustainable employment relationships from a Work 4.0 perspective. Accordingly, we put forward propositions concerning TR and generational effects in Work 4.0 scenarios. By evaluating the influencing factors using the fuzzy Delphi method, 19 TR determinants were eventually extracted. Furthermore, considering generational effects, our results indicate that Work 4.0 has a higher impact on TR for Gen Y than for Gen X and Baby Boomers. The talents of the new generation seem to pay more attention to autonomy and digitalization at work (e.g., flexible work arrangements and knowledge management through digitalization) but are tired of bureaucracies. The results provided in this study may offer organizations a reference for better meeting the preferences of talents, regarding work in the context of Work 4.0, allowing them to fine-tune their strategies for sustainable talent management, thus enhancing TR in the digital era.

Keywords: fuzzy Delphi method; Industry 4.0; talent management; talent retention; Work 4.0

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1. Introduction

The rapid development of Industry 4.0 has led to a momentous change in work contents and intentions [1]. The working environment has gradually transformed toward Industry 4.0 in developed countries, which is expected to expand worldwide over the next few decades. "Work 4.0" was coined in the *Green Paper of Re-imagining Work* (Germany Federal Ministry of Labor and Social Affairs; BMAS) [2] and refers to the consideration of future perspectives to shape work in a way that benefits people and facilitates sustainability of the economy and society [3–5].

The evolution and development of new technology is swiftly phased in the contemporary business environment, but such a fast-moving technical situation has seldom been regarded as a variable in the exploration of talent management (TM) or talent retention (TR) not to mention its impacts. TR has become a pressing issue for organizations as a result of the shortage of skilled talents in the demographic status quo of many countries [4,6,7]. Meanwhile, as the characteristics of Work 4.0 are oriented toward digitalization, flexibilization, and globalization, it is not only likely to bring about huge impacts on society and the economy but may also blur employer–employee and work–life boundaries [3].

Human-resource strategies with respect to TM and TR are expected to alter in order to fit the preferences of talents due to the nature of work changes. Most organizations neither adequately realize the root causes of why talents leave nor give high priority to TR. This will likely exhaust their human capital, eventually affecting their competitive advantage.

Consequently, several issues regarding TR have been identified, as follows: What are the factors influencing TR? How can we extract TR determinants from them? What are the preferences of workers regarding work associated with TR in the Work 4.0 environment? What is the relationship between Work 4.0 and TR, and is this relationship moderated by generational effects? In the present study, we aim to explore these issues from the perspective of Work 4.0, considering people's preferences regarding work to develop TR criteria and to identify TR determinants.

In the face of talent competition in globalization, society requires capability for innovation and must keep reinventing talents in response to change [2]. Thus, TR is a critical issue in shaping the talent force and enhancing the prospects of sustainable talent development in a new era. However, uncertainty is likely to invade the development of TM and TR in Work 4.0. The challenges that we meet include a shortage of skilled talents and a change in the characteristics of work resulting from the evolution of technology. A new way of working is likely to present a breakdown of boundaries, either between the employer and employee (e.g., crowd-sourcing) or between work and private life [3,8]. Therefore, on the one hand, talents must be protected from negative impacts on their safety and health; meanwhile, on the other hand, and in accordance with the needs of the technological transition, it is necessary to conduct the re-skilling or up-skilling of talents. The TR determinants, assessed using the fuzzy Delphi method (FDM) in the present study, were derived from the literature and *White Paper of Work 4.0*, which may provide organizations with a reference for a review of existing TR strategies or strategic human resource management (HRM) policies.

TM can benefit TR in some ways, including reducing talent turnover rates by motivating them to stay at an organization. In particular, exploring TR and talent preferences can be helpful in understanding and managing workforces consisting of multiple generations [9]. Most notably, the adequate adoption of distinct TM practices among generations could influence organizational performance [10]. Therefore, consideration of the generational context is important in that it may provide helpful information for firms to realize how to attract, develop, and retain talents [11,12].

Due to the vagueness and diversity inherent to the evaluations of experts, fuzzy logic may also be applied to handle tough situations [13]. We adopt the FDM approach to identify the determinants of TR from future perspectives by collecting expert evaluation data. In addition, our results show that TR determinants concerning Work 4.0 significantly differ among generations, and the overall effect of Work 4.0 on TR is higher for Gen Y than for the Baby Boomer generation and Gen X.

The remainder of this article is organized as follows: Section 2 reviews the literature to identify the impacts of Work 4.0 and define the roles of talent, TM, and TR. In Section 3, we identify the factors affecting TR, then develop TR criteria in Work 4.0 scenarios and extract the prominent determinants using the FDM. Next, the TR criteria among generations are assessed. The collected data are analyzed in Section 4. Section 5 provides a conceptual framework and propositions for TM. These criteria may assist HRM by focusing on approaching remaining talents while facing challenges in the context of Industry 4.0. Section 6 concludes by presenting the outcomes and limitations of this study.

2. Literature Review

2.1. Work 4.0

"Work 4.0" was launched in 2015 [2] (p. 8) and based on the vision of "Industry 4.0" while focusing particularly on sustainable employment relationships and the forms of work. Supplementary Section S1 lists the chronological phases of Work 4.0 related to the stages of the industrial revolution. The characteristics of work in Industry 4.0 are oriented toward digitalization, flexibilization, and globalization [3,14,15]. The extension

of the debate regarding the digital transformation in the economy has been addressed in BMAS [3], offering initial answers for relevant questions. Considering technological trends, and developments in society and the talent market, do we require a novel perspective on work to deal with the corresponding TM/TR issues [2]? Notably, Work 4.0 emphasizes new opportunities for shaping future work rather than describing the status quo workforce. Its TM/TR issues require further investigation.

We are in a "working society in evolution" [2,16], which has opened great possibilities to shape the development of work. Although new trends of digitalization have opened up possibilities for greater self-determination in work, providing innovative possibilities for design, process, collaboration, and workforce-shaping [2,17], they also have a huge impact on existing culture and work styles. The trend of flexibility, concerning the time and place of work, which is being reinforced by digitalization, contributes to talents acting as smart workers by offering themselves in the workforce for agile projects or mostly self-directed work processes. Furthermore, the trend of globalization is driven by digitalization: with technological changes, digitalization will drive exchanges within a global information and communication space. Regarding the most important skills for future industries, according to The World Manufacturing Forum [18], the top 10 skills for future needs include not only digital skills (e.g., AI, data analysis, cybersecurity, and data-mindfulness) but also non-digital skills, such as those related to open-minded thinking, flexibility, creative, and entrepreneurship [19].

2.2. Talent, TM, and TR

Talent is the set of a person's competencies, commitment, and contribution [20] or the sum of their abilities, including "intrinsic gifts, skills, knowledge, experience, intelligence, judgment, attitude, character and drive" through learning and subsequently growing to enhance their capabilities [21,22]. Barney [23], from a resource-based view, found that such "valuable resources" help to create a firm's sustained competitive advantage. Cumulatively, a variety of authors based on strategic HRM have argued that the resources and capabilities that contribute to the sustained competitive advantage of a firm are strongly affected by the capabilities of talents [24,25]. Meanwhile, the talents with high value, or that are difficult to replace, need to be segmented in a way that conforms with the strategic HRM in an organization [26]. Accordingly, the talents who are above high-average value should be unquestioned as those who should be retained in firms.

A survey about worker preferences, regarding work in the Work 4.0 era and types of talent, along with recommended actions for TR, is summarized in Supplementary Section S2.

In comparison with Work 4.0 scenarios, fostering high-skilled talents and continually developing individual/organization competencies will provide great benefits to both the employer and employee. The talents in new generations desire career prospects and a prosperous working life while firms facing the Work 4.0 era require qualified skilled talents to retain their innovative and competitive advantage during the digital transformation [3].

TM is a specific group of HRM practices, including the activities of attraction, selection, development, and retention for those talents who show a high performance or high potential [27,28]. TM was introduced over a decade after the phrase "War for Talent" was coined by McKinsey Consultants in the late 1990s [29,30]. Boudreau and Ramstad [31] (p. 131), who coined the term "talentship", have noted the strategic implications related to TM, evaluated by a decision model with three independent levels of analysis: impact, effectiveness, and efficiency, which can underpin TM. HRM must consider a talent-oriented perspective on improving decisions, rather than implementing a process based on decisions alone [32]. Additionally, TM is a unique function integrating all responsibilities and activities concerning the talent life cycle, which includes the interactive processes between the organization and its human capital [33].

TR is an essential element in the talent life cycle. Schiemann [33] (p. 282) has argued that the talent life cycle is the path involving the talent's interaction with the organization concerning HR and, above all, human capital, of which the scope has been defined in terms of the serial steps of "attracting, acquiring, onboarding, training, managing performance, developing and succession, retaining and recovering". Moreover, Narayanan et al. [16] have debated that "organizational justice" and "talent perception congruence" play mediating roles between TM and TR, thus having key impacts on management outcomes. When the organization seeks to maximize the outcomes of talent investments through the principle of people equity, it is likely to have a more positive impact on the major outcomes, including financial and/or non-financial performances (e.g., greater quality, higher productivity, and higher employee retention) [34], which can help the organization in managing the talent life cycle and contributing to its competitive advantage.

Regarding the relationship between TM and TR, academic works have examined the impact of TM on TR [35], which is still a gap in the literature regarding mediating mechanisms such as generations [10], particularly in the face of dramatic industrial revolution. Festing and Schäfer [36] have identified three distinct types of TM, including highly engaged, retention-based, and reactive TM. In particular, retention-based TM outlines the considerable activities related to talent development and training, HR development for succession, and career planning for the talents.

2.3. Work 4.0 Impacts on TR in Socio-Technical System

In Work 4.0, the concept of a socio-technical system links with the overall interaction and combination of technical and non-technical elements [37]. Such a socio-technical system provides a promising observation and analysis framework for corresponding TR/TM issues. Human–machine interactions (HMIs) in Work 4.0 are designed to increase the mental and emotional well-being of the workers. Further, digitalization is transforming the whole socio-technical system, based on the "people, process, and technology" concept [3].

Whether for industrial, service, or knowledge work, the intersections of a socio-technical system in a Work 4.0 scenario are delineated in Table 1. However, there is a dilemma regarding up-skilling or re-skilling [3]. The specific design of HMI will become more complex, offering challenges for workers in terms of integrating some activities or connecting inter-disciplinary models. However, these complex activities will be simplified or standardized, such that only a low level of expertise and experience will be required. Accordingly, the transformation of HMI, as a result of digitalization, will offer new opportunities for shaping work, production, and/or service processes in a way that not only relieves the workers from routine activities but also develops their skills, making it easier to reach a better work–life balance [3]. Therefore, there exists an urgent need to investigate the major influencing factors from the literature and to identify the criteria for TR based on HMI in Work 4.0 scenarios from a comprehensive socio-technical perspective.

Table 1. Three interactions in a socio-technical system.

Interactions	Contents
People and technology	The functions are based on situational and specific strengths to be re-assigned in new ways.
Process and technology	The sub-processes are hierarchically separated and substituted for integrated, simultaneous, and decentralized processes.
People and process	The new delineation of tasks is reshaped, and the roles of work are assigned in a novel manner.

2.4. Generational Cohorts

Generational cohorts are defined by birth year, instead of current age. Those within a given generation were born in the same historical period, sharing common life events during similar formative and developmental ages [36,38,39]. In terms of labeling, the

birth-year periods associated to generations are somewhat loose [40]. According to Twenge et al. [39], four generations may be separated in the current main workforce, including the Silent Generation (born 1925–1945), Baby Boomers (born 1946–1964), Generation X (Gen X: born 1965–1981), and Generation Y (Gen Y: born 1982–1999). Each generation has distinct characteristics, resulting from events that the members of the same generation experienced, which shaped their lives, spirits, values, and attitudes. Essentially, consideration of these aspects is necessary when analyzing the factors influencing the retention of talents who belong to various generations [10,40,41]. In the present study, we consider the three most dominant generations—Baby Boomers, Gen X, and Gen Y—to conduct the relevant analyses and develop propositions. These generations can be characterized as follows.

Baby Boomers are the post-World War II generation, thus including those who experienced the rise of economic prosperity, which pre-disposed them to optimism. Most notably, they tend to believe in professional ethics, loyalty, and lifetime employment. Compared to the younger generations, some studies found that they were significantly more satisfied with their jobs, resulting in a lower turnover rate [40,42,43].

Gen X individuals are prone to lower loyalty in their work, leading to higher turnover rates, when compared to Baby Boomers. Moreover, they emphasize work–life balance, self-direction, and independence, and are more technology-savvy than Baby Boomers, as they have effectively grown up with various technologies (e.g., the Internet) [39,41–43].

Gen Y is known for attaching greater importance to work–life balance, development opportunities, and training. In the workplace, the members of this generation expect to have greater mobility in the early careers, and place special emphasis on corporate social responsibility [11,44–46].

In brief, Table 2 lists the key terms used in the study, along with their definitions and major concepts.

Table 2. Key terms in the conceptual model.

Variables	Definitions and Major Concepts
Work 4.0	Work 4.0 shapes work based on future views, in order to embark on new paths in a way that benefits people and facilitates the economy in the digital era, instead of describing the workforce status quo. It will alter the technical field and collaboration at all levels of work [3].
TR	The definition of TR is close to that of retention-based TM, which outlines the considerable activities with respect to the development and training of talents to assist the organization in retaining talent and reducing the rate of turnover by applying motivated approaches [36].
Generation	A group of people who were born in the same historical age (Twenge et al. [39]), such as Baby Boomers (1946–1964), Gen X (1965–1981), and Gen Y (1982–1999), sharing common life events during their formative development period, leading to the views, values, and even attitudes being alike within each generation.

3. Methods

3.1. Research Design and Process

This paper is based on a literature review and secondary research in the field of TM and TR. On the one hand, we implemented a systematic review of the existing literature to successively explore the impacts of Work 4.0 on TM and TR, in order to examine the existing propositions and evidence. On the other hand, we adopt the FDM to evaluate the determinants of TR and the moderating influences of the considered generations. The research process of the study is depicted in Figure 1.

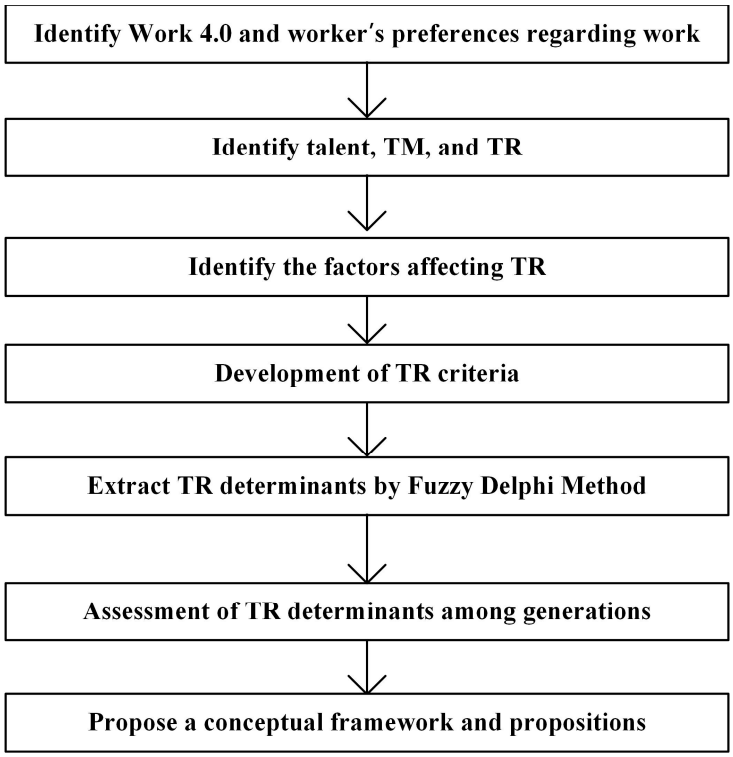

Figure 1. Research process flowchart.

The determinants of TR in Work 4.0 are complex, associated with demographics and the workforce supply in the talent market. The vagueness inherent in the evaluations of experts leads to uncertainty and, so, FDM was considered feasible for the considered exploration. Linguistic variables were applied to evaluate the criteria, which were assessed on a seven-point linguistic scale in a Delphi questionnaire. A consensus on the expert opinions on weights and ratings was acquired by FDM, as the linguistic scores were converted into fuzzy numbers.

According to the literature, for the ideal number of expert participants, the suggested range is 5 experts for a homogenous population to more than 15 experts for a heterogeneous population with people from different social and professional stratifications [47]. A total of 18 survey questionnaires were returned and validated in the evaluation. The backgrounds of the experts are listed in Supplementary Section S3.

3.2. Fuzzy Delphi Method

The significant criteria of TR were determined through the integration of fuzzy sets using the Delphi method, and the ranking for the criteria was established accordingly. Akyuz and Celik [48] have noted that a favorable fuzzy representation used for evaluation is the triangular fuzzy number (TFN), defined as a triplet (l, m, n) (see Figure 2), where l, m, and n denote the lower, medium (i.e., most probable value), and upper numbers of the fuzzy sets, in which $l \leq m \leq n$, and l, m, and n are real numbers. A membership grade, ranging between zero and one, is assigned to each object [13,49]. The membership function for a TFN is defined by Equation (1):

$$\mu_A(x) = \begin{cases} 0 & x < l \\ (x-l)/(m-l) & l \leq x \leq m \\ (n-x)/(n-m) & m \leq x \leq n \\ 0 & x \geq n \end{cases}. \quad (1)$$

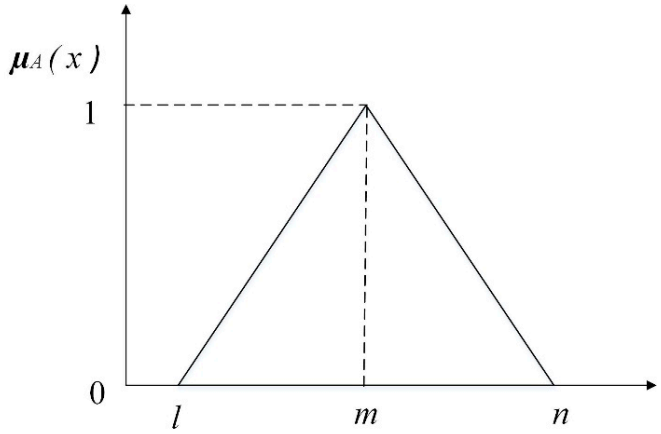

Figure 2. Triangular fuzzy number (TFN).

In a Delphi survey, the expert questionnaires should be formatted in a practical way for data collection, especially when individual interviews are difficult to implement. Questions derived from the literature may be posed to experts in a structured form. The detailed process of the FDM is provided in Supplementary Section S4.

3.3. Identification of TR Criteria in Work 4.0

We developed TR criteria in two ways, in order to explore the relationship between the TM system and its internal elements. One involves gathering TR factors that have been frequently used in the literature while the other considers "preferences regarding work: seven value systems" in Work 4.0 [3]. Then, we combined the items with similar contents. The selected criteria for TR are given in Table 3.

Table 3. List of TR factor criteria.

No.	TR Factors	References
F1	Compensation and benefit	"Wage inequality . . . high skilled workers benefited, while low-skilled workers lost out." [3] (p. 46), [50,51]
F2	Reward and recognition	"Working hard for prosperity" [3] (pp. 35–36), [52,53]
F3	Promotion and opportunity for growth	"Finding fulfilment in work" [3] (pp. 35–36), [54,55]
F4	Effective leadership	[53,56]
F5	Working within a strong community of solidarity	[3] (pp. 35–36)
F6	Seeking meaning outside work	[3] (pp. 35–36)
F7	Talent perception congruence	"Further criticisms include unfair contractual conditions"; "the possibility for a piece of work to be rejected by the platform operator without any reason being given." [3] (p. 170), [16]
F8	Coercion	[57]
F9	Competency mapping	[22]
F10	Norms and values	[58–60]
F11	Work–life balance	[3,61]
F12	Career path management	"Makes lifelong learning essential, and support for continuing vocational education" [3] (p. 112), [62,63]

Table 3. *Cont.*

No.	TR Factors	References
F13	Organizational justice	"Achieving peak performance via dedication" [3,16,64–66]
F14	Participative decision-making	[67]
F15	Flexible work arrangements	"Flexible work arrangements with regard to time and place"; "New incentives for flexibility arrangements" [3] (p.72, p.117), [66]
F16	Training and development	"We need a comprehensive strategy for long-term skills development and continuing vocational training." [3] (p. 106), [68–70]
F17	Work environment	"Being able to live comfortably from work" [3] (pp. 35–36), [71]
F18	Job security	[72,73]
F19	Knowledge management with digitalization	[57]
F20	Justice assessment	[16]
F21	Feedback mechanisms	"The pay and working conditions offered by new forms of work for which digital platforms act as intermediaries." [3] (p. 170)

4. Data Analysis

To clarify our debate, we only focus on the case of the characteristics of work and employee preferences regarding Work 4.0, in order to explore their impact on TR. The expert evaluations, obtained through fuzzy set calculation, are provided in Supplementary Section S5.

4.1. Social-Technical System Perspective on Identifying TR

We considered seven typical value systems (i.e., social-technical system frameworks), regarding people's preferences for work in Work 4.0 and the major influencing factors gathered from the literature, in order to identify the criteria for TR with discrete perspectives. Meanwhile, the 19 TR criteria screened from the FDM were further categorized by 5 experts with a background in HR. Through comparison of the three aspects—people, process, and technology—the 19 critical factors related to TR were clustered into 3 sets (interfaces) of the triangular framework for the socio-technical system [74], which were re-labeled as C11, . . . , C18; C21, . . . , C26; and C31, . . . , C35 (see Table 4).

Table 4. Re-labeled TR factors after removal of two non-conforming items.

Interface	Criteria Label	Re-Labeled as	TR Determinants
I. People–Process	F1	C11	Compensation and benefit
	F2	C12	Reward and recognition
	F3	C13	Promotion and opportunity for growth
	F4	C14	Effective leadership
	F5	C15	Working within a strong community of solidarity
	F7	C16	Talent perception congruence
	F9	C17	Competency mapping
	F10	C18	Norms and values

Table 4. *Cont.*

Interface	Criteria Label	Re-Labeled as	TR Determinants
II. People–Technology	F11	C21	Work–life balance
	F12	C22	Career path management
	F13	C23	Organizational justice
	F14	C24	Participative decision-making
	F15	C25	Flexible work arrangements
	F16	C26	Training and development
III. Process–Technology	F17	C31	Work environment
	F18	C32	Job security
	F19	C33	Knowledge management with digitalization
	F20	C34	Justice assessment
	F21	C35	Feedback mechanisms

The average fuzzy weight for each TR factor was calculated, as shown in the center column of Table 5. We then obtained the crisp values by defuzzification (DF), allowing us to obtain the ranking order for each interface (shown in the rightmost column).

Table 5. AVG. fuzzy weight and defuzzification.

		AVG Fuzzy Weight				
Interface	**Criteria**	**l**	**m**	**n**	**Defuzzified**	**Ranking**
I	C11	0.79	0.94	0.99	0.907	*2*
	C12	0.70	0.87	0.96	0.844	*5*
	C13	0.81	0.96	1.00	0.922	*1*
	C14	0.77	0.92	0.98	0.889	*3*
	C15	0.64	0.82	0.93	0.796	*8*
	C16	0.68	0.86	0.97	0.833	*7*
	C17	0.72	0.89	0.98	0.863	*4*
	C18	0.69	0.87	0.97	0.843	*6*
II	C21	0.70	0.87	0.97	0.846	*3*
	C22	0.71	0.88	0.97	0.854	*2*
	C23	0.68	0.85	0.96	0.828	*4*
	C24	0.66	0.84	0.96	0.819	*5*
	C25	0.62	0.81	0.95	0.794	*6*
	C26	0.79	0.94	1.00	0.911	*1*
III	C31	0.72	0.91	0.99	0.874	*1*
	C33	0.63	0.82	0.96	0.804	*4*
	C34	0.64	0.82	0.94	0.804	*4*
	C35	0.71	0.88	0.98	0.857	*2*

After expert estimation, the key determinant of TR for interface I (People–Process) was found to be "Promotion and opportunity for growth"; that for interface II (People–Technology) was "Training and development"; and that for interface III (Process–Technology) was "Work environment". The assessment revealed that, overall, the crucial determinants for TR were aimed at future development (e.g., determining whether the firms can provide the potential opportunity for growth and an appropriate working environment). The results seemed to tend towards the perspective of Work 4.0 but not all met the "Preferences regarding work: seven value systems" of Work 4.0. Particularly, although the item "Seeking meaning outside work" derives from Work 4.0, it was rejected by the experts. This may have been due to "Preferences regarding work: seven value systems" of Work 4.0 drawing insights from employees while the FDM was conducted from an expert standpoint.

As per our earlier discussion, Work 4.0 represents the changes happening in the global workplace. These changes may bring about huge impacts on the workforce in the

talent market and HRM in organizations. Meanwhile, enterprises around the world are facing the ruthless competition challenges in TM [46], which may bring about new risks of psychological and physical tension that could have an impact on TR. For instance, in the case that the work environment is highly automated, the talent may be left with monotonous leftover activities only. To the contrary, talent working in complex but integrated systems could lead to a high level of work intension, posing a risk of new psychological strain [3]. Both scenarios will influence the talent's attitude and behavior regarding whether to quit or to stay with the organization.

According to the above results, we propose the following:

Proposition 1a. *Work 4.0 has a high impact on TM.*

Proposition 1b. *Work 4.0 has a high impact on TR.*

4.2. Rating of the Moderating Effect of Generation on TR under Work 4.0

As the birth-year periods of the generations are generally loose, we specifically refer to the classification of Twenge et al. [39], as shown in Table 6.

Table 6. Classification of Generations.

#	Generation	Birth-Year Range	Period
R1	Baby Boomers	1946–1964	18 years
R2	X	1965–1981	16 years
R3	Y	1982–1999	17 years

To assess the expert ratings of each criterion with the triple-wise comparisons for the roles of R1–R3, we applied the codes of assignment in the fuzzy scale to estimate the degree of impact among generations. For instance, the ratings of criteria among R1–R3 for expert #1 are given in Table S6, Supplementary Section S5.

Furthermore, the average fuzzy ratings of all experts were estimated (Table S7, Supplementary Section S5). Then, we evaluated the deviation by calculating the distances between the fuzzy ratings obtained from the individual expert assessments and the average fuzzy rating of all assessments. For instance, the avg. fuzzy rating of generation R1 under criterion C11 was (0.70, 0.86, 0.94) while the original evaluation data assessed by expert #1 for generation R1 under criterion C11 was (0.7, 0.9, 1.0). Hence, the deviation was 0.05 (less than the threshold of 0.2), which means that group consensus was attained for this criterion for R1.

In the first round, for R1, 6 among the 19 criteria failed to satisfy the conditions for group consensus; however, for R2, all items reached group agreement (greater than 75%). For R3, only one criterion did not reach consensus. Next, we conducted the second round by sending the results back to the experts for re-evaluation (or revision, in the case of R1). In the second round, all criteria exceeded the threshold of group agreement, reaching group consensus for R1 except for C32. Thus, C32 was eliminated from the criteria list. Eventually, 18 among the 19 criteria were utilized in this study, with the generation variable taken into consideration.

Meanwhile, we conducted defuzzification (Table 7) for the data of the average fuzzy ratings for generations R1–R3 (see Table S7, Supplementary Section S5) in order to compare and observe the effects among generations.

The results revealed that for the criteria C11 "Compensation and benefit" and C12 "Reward and recognition", there were almost no differences among generations, as the variation was within 5%. This means that they are both key incentive tools to retain talents, regardless of which generation they belong to. For criteria C14 "Effective leadership", there seemed to be no discrepancy among R2 and R3. Likewise, for C18 "Norms and values", there seemed to be no difference between R1 and R2. For the rest of the items, R3 obtained higher scores than R1 and R2.

Table 7. De-fuzzification results of average fuzzy ratings for generations R1–R3.

DF	C11	C12	C13	C14	C15	C16	C17	C18	C21	C22	C23	C24	C25	C26	C31	C33	C34	C35
R1	0.83	0.83	0.74	0.79	0.70	0.69	0.70	0.79	0.63	0.69	0.66	0.68	0.63	0.68	0.65	0.36	0.65	0.59
R2	0.88	0.86	0.85	0.82	0.76	0.80	0.80	0.81	0.77	0.85	0.81	0.78	0.74	0.86	0.83	0.81	0.80	0.80
R3	0.85	0.84	0.92	0.83	0.85	0.86	0.85	0.70	0.93	0.90	0.90	0.83	0.93	0.91	0.92	0.94	0.85	0.87

According to the above, we propose the following hypothesis:

Proposition 2. *The impact of Work 4.0 on TM/TR is moderated by generation*.

Furthermore, from a generational perspective, the effects of the impact of an individual generation was considered, through comparison of the data. The comparison of high/low impacts of criteria for each generation is provided in Table 8.

Table 8. High/low impacts of criteria for each generation (R1–R3).

#	Generation	High Impact	Low Impact
R1	Baby Boomers	· Compensation and benefits (C11) · Reward and recognition (C12)	· Work–life balance (C21) · Flexible work arrangements (C25) · Knowledge management with digitalization (C33) · Feedback mechanisms (C35)
R2	Gen X	· Compensation and benefits (C11) · Reward and recognition (C12) · Training and development (C26)	· Working within a strong community of solidarity (C15) · Flexible work arrangements (C25)
R3	Gen Y	· Work–life balance (C21) · Flexible work arrangements (C25) · Knowledge management with digitalization (C33)	· Norms and values (C18) · Participative decision-making in an organization (C24)

For Baby Boomers (R1), "Compensation and benefits" (C11) and "Reward and recognition" (C12) seemed to have higher impacts on this generation while "Work–life balance" (C21) and "Flexible work arrangements" (C25) had lower impacts. Additionally, the positive effect of technical impacts, such as "Knowledge management with digitalization" (C33) and "Feedback mechanisms" (C35), was lower than for the other generations.

For Gen X (R2), "Training and development" (C26) had a high impact on this generation while those of "Working within a strong community of solidarity" (C15) and "Flexible work arrangements" (C25) were lower. Better "Compensation" (C11) and "Reward" (C12) would be welcomed by this generation.

For Gen Y (R3), there were high impacts on this generation for "Work–life balance" (C21), "Flexible work arrangements" (C25), and "Knowledge management with digitalization" (C33) but lower impacts were found for "Norms and values" (C18) and "Participative decision-making in an organization" (C24).

4.3. Overall Fuzzy Evaluation

By adding generations as an option to identify the impacts on TR, we conducted an assessment by combining the fuzzy ratings and the fuzzy weights, according to the rule of Step 5 in Supplementary Section S4, expressed as Fuzzy evaluation = (Average fuzzy ratings) × (Average Fuzzy weight), as shown in Table 9a.

Table 9. Fuzzy evaluations among three generations.

(a) Fuzzy evaluation.				
R1	*l*	6.42	7.95	8.77
	m	8.85	10.97	12.13
	n	10.86	13.47	14.91
R2	*l*	8.20	10.17	11.26
	m	10.60	13.16	14.57
	n	12.15	15.10	16.73
R3	*l*	9.43	11.72	12.99
	m	11.38	14.14	15.68
	n	12.32	15.32	16.98

(b) Aggregate the fuzzy evaluations among three generations by Defuzzification					
Generation	Fuzzy evaluation			Score	Ranking
R1: Baby Boomers	6.42	10.97	14.91	10.77	*3*
R2: Gen X	8.20	13.16	16.73	12.69	*2*
R3: Gen Y	9.43	14.14	18.14	13.90	*1*

After aggregation of the results by defuzzification of the fuzzy evaluation, following Step 6 in Supplementary Section S4, the generations are thus listed by order of priority (R3, R2, R1), in terms of their score rankings in Table 9b.

In consequence, we found that R3 (Gen Y) has the highest impact in the context of Work 4.0., followed by R2 (Gen X) and R1 (Baby Boomers), respectively. According to the results, we propose the following hypotheses:

Proposition 3a. *TR determinants in Work 4.0 have different effects among generations.*

Proposition 3b. *The impact of Work 4.0 on TR is higher for Gen Y than for the Baby Boomer generation and Gen X.*

5. Discussion

We integrate all propositions and propose a conceptual framework, as shown in Figure 3.

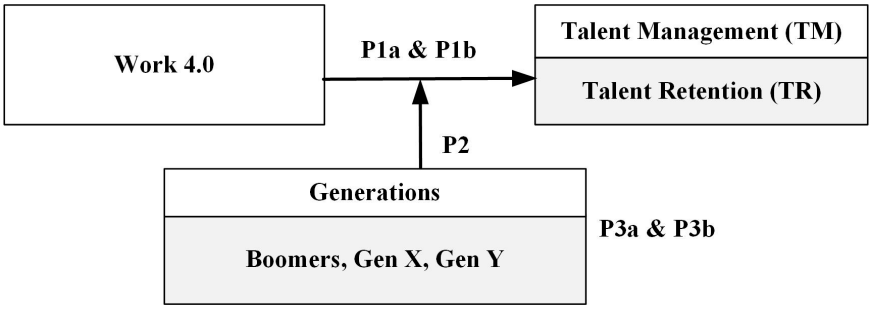

Figure 3. A conceptual framework regarding Work 4.0, TR, and generations.

5.1. Summary

Assessment of the propositions by FDM indicated that Work 4.0 has a higher impact on TR for Gen Y than for Gen X and Baby Boomers. Furthermore, the positive effect of Work 4.0 on TR is higher for Gen Y than for Gen X and Baby Boomers. The outcomes serve to distinguish the attraction conditions between Gen X and Gen Y, which is valuable for future research on TR considering generational differences in the digital age. The two resulting hypotheses were summarized from Propositions P1a, P1b, P2, P3a, and P3b.

Proposition A. *TR determinants with respect to Work 4.0 significantly differ among generations.*

Proposition B. *The overall effect of Work 4.0 on TR is higher for Gen Y than for Baby Boomers and Gen X.*

The top priority determinants for TR in each interface of the socio-technical system were "Promotion and opportunity for growth", "Training and development", and "Work environment", which are all associated with future development. Additionally, the criteria "Compensation and benefit" and "Reward and recognition" showed little difference among generations, in terms of the impact on TR; in other words, these are both always effective incentive tools for retaining talents, regardless of which generation they belong to. For the criteria "Effective leadership" and "Norms and values", there seemed to be no clear difference between Gen X and Gen Y, in terms of their impact on TR in the Work 4.0 environment. Furthermore, we can summarize the diversity of the determinants among generations and propose some TR strategies for improving retention as follows.

The Baby Boomers seem to attach great importance to "Compensation and benefits" and "Reward and recognition" but are less concerned with "Work–life balance" and "Flexible work arrangements". Furthermore, the positive effects obtained through the impacts of technology seemed to be lower for this generation than the others. Accordingly, special bonuses or rewards may help the talents in this group feel proud of their work, and their efforts should be acknowledged as well [75], providing that compensation and recognition are, in some way, linked to performance. Thus, organizations may consider improving retention for this group by enhancing the quality of compensation, benefits, and special perks as an approach.

The Gen X group tends to look for "Training and development" but lower impacts of "Working within a strong community of solidarity" and "Flexible work arrangements" were observed. Accordingly, the training system—including the associated infrastructure and training programs—must be improved or invested in with high priority, which may not only enhance the motivation for TR, but also facilitate the development of the organization in the long term. In general, Gen X is the most stable group for TR in talent marketing. Thus, improvement of the work environment, including the physical workplace and networking quality, can benefit TR in Work 4.0 environments.

The Gen Y group pays high attention to "Work–life balance", "Flexible work arrangements", and "Knowledge management with digitalization" but seems less concerned with "Norms and values" and "Participative decision-making in organization". As such, organizations should offer greater scope for entrepreneurial decision-making and a better work–life balance in Work 4.0 scenarios [3]. The younger group is regarded as more likely to change jobs, as they may be more willing to seek opportunities for growth and advancement [75]. According to our results, feasible approaches for TR of this generation could aim at autonomy, rather than norms and regulations. In addition, an organic organizational structure, rather than a hierarchical organization, should essentially be built for relevant scenarios, resulting from the nature of work being oriented to flexibility. Thus, new incentives in work, with flexibility for working time and the workplace, are expected to become popular. Meanwhile, as the talents of the younger generation are more skilled in the operation of IT tools, the efficiency of digital platforms applied in the work will also influence TR. Therefore, increasing the degree of digitalization in work is posed as another prevalent TR tactic.

Above all, most retention strategies are especially difficult to formulate, but each retention tactic will be met with a varying degree of success [75].

5.2. Managerial Relevance

5.2.1. Theoretical Implications

Socio-technical systems may underpin new approaches to TM/TR in future research, in which the interactions among people, processes, and technology may provide essential ele-

ments for strategic HRM development. Accordingly, interdisciplinary or multi-disciplinary research, as conducted in this study, is expected to be a main principle for the future development of TM/TR in a digital world. As such, the existing talent's competences must be re-skilled to meet the needs of the talent market in the next decade.

The 19 TR criteria extracted by the FDM were based on relevant theories. Generation was regarded as a key variable moderating the impact of Work 4.0 on TR in this article, offering a theoretical basis to support the extended analysis of TR determinants within a conceptual framework. The results showed that the overall impact of Work 4.0 on TR has different effects among the generations (i.e., it is higher for Gen Y than for the others). The outcomes were summarized as propositions, indicating that TR determinants concerning Work 4.0 significantly differ among generations.

This study was conducted from a Work 4.0 perspective, in which working scenarios are gradually transformed by digitalization, which will likely expand all over the world over the next few decades, in order to explore the key TR determinants among generations. In comparison to the existing literature regarding TR, some articles have drawn insights from a psychological standpoint, some have focused on the relationship between TM and TR, and others have considered HR practices and investments [31,36]. It is worth noting that the technical environment has seldom been regarded as a variable for exploration, not to mention its impacts on TM or TR. Our framework, with propositions regarding the relationships between Work 4.0, TR, and generations, was proposed to fill this research gap. The results of our study indicate that the TR determinants related to self-directed or flexibility-oriented work are likely to be favored by the newer generations (e.g., work–life balance, flexible work arrangements), which may offer directions for future research.

5.2.2. Empirical Implications

The outcomes described here can provide organizations with reference for reviewing their existing TR strategies and practices, in which the organization's demands and the talent's preferences regarding work should be balanced. Furthermore, the organization should take generational differences into consideration when developing TM/TR policies/practices.

As the new trends or scenarios in Work 4.0 are oriented towards digitalization and flexibilization, organizations will be impacted in terms of existing education and training structures (BMAS, 2016); hence, the adjustment of TM/TR policies and reshaping of education and training structures should be the foremost considerations prior to TR practices.

If an organization refers to the TR criteria extracted in this study to retain talents, on the one hand, they should offer digital assistance and tutorial systems for the talents in order to improve their digital skills. On the other hand, they should open more opportunities for the talents by making use of the digital technologies to increase their value-added, especially for the Baby Boomer generation and Gen X [76].

Further, the organization should have a forward-looking approach in order to realize the talent's preferences to facilitate attracting and retaining talents. Meanwhile, the generational effects must be considered when deliberating upon how to enhance the positive effects of TR in practice. Most notably, a human-centric approach [19] should be embedded in the organization, whatever the technical environment.

6. Conclusions

In this study, we investigated TR issues from the perspective of Work 4.0 and identified the factors influencing TR among different generations in order to develop sustainable employment relationships. We evaluated 19 influencing factors using the fuzzy Delphi method and showed that Work 4.0 has a higher impact on TR for Gen Y than for Gen X and Baby Boomers. We also put forward propositions concerning TR and generational effects in Work 4.0 scenarios.

To be more specific, we focused on developing TR criteria and extracting relevant determinants in the Work 4.0 scenario, ultimately proposing some hypotheses based on

a social-technological framework. The future world of work will be shaped not just by employees but also by self-employed individuals, and the characteristics of Work 4.0 are focused on digitalization, flexibilization, and globalization; this will not only lead to huge impacts on society and the economy but may blur the employer–employee and work–life boundaries as well [3]. Therefore, the proposed research and propositions can help organizations to deal with TR issues in the Work 4.0 era. Based on Work 4.0 scenarios, we investigated 21 influencing factors determined through a literature review, of which 19 determinants were extracted successfully from the TR criteria by FDM. Further, considering the roles of generations, we conducted an assessment of the moderating effect of different generations on the impact of Work 4.0 on TR. We outlined a conceptual framework and developed corresponding propositions concerning the major relationships between Work 4.0, generational effects, and TR. The results demonstrated that Work 4.0 has a high impact on TR, which shapes the talent force. Meanwhile, the orientations of the considered generations, with distinct values and preferences, were found to moderate the effect of Work 4.0 on TR, delineating future avenues for the development of TR and sustainable employment relationships. This exploration may assist managers to focus on talent perception and to fine-tune their TR strategies, which will facilitate their organization's sustainable competitive advantage in the digital world. As the future work and workforce supply are expected to significantly change under Work 4.0, this paper may offer a good reference to help future researchers in the area of TR.

There were some limitations to the present study, which may be extended upon in the future. We selected three generations as subjects—Baby Boomers, Gen X, and Gen Y—because they are the major workforce in the existing talent market while future studies may also explore the Silent Generation and Gen Z [77]. Furthermore, we adopted the FDM to assess the TR criteria and determinants, instead of implementing a cause–effect analysis in Work 4.0. Moreover, further in-depth discussions regarding the welfare state or social security systems may be explored in future research.

As for the applicability and validity of the TR determinant, they were not confirmed through a practical test in the present study. Relevant firms need to test the TR criteria they selected, if any, in order to determine the effects for their best practice. As for the factors influencing TR, although some of them were sourced from worker's preferences regarding work in "Value Systems in the Context of Work 4.0" [3], who were surveyed in German, we developed TR criteria and further extracted TR determinants by FDM through a team formed of 18 experts, comprising a heterogeneous population from different social and professional stratifications. A more comprehensive survey in a diversified population is encouraged.

Supplementary Materials: The following are available online at https://www.mdpi.com/article/10.3390/su141811535/s1, Section S1. The chronological phases of Work related to the stages of the industrial revolution [2,14,15]. Section S2. Worker's preferences regarding work and types of talent with recommending actions [3,19,26,27,37,74,78–80]. Section S3. Expert background. Section S4. The process of FDM. Section S5 [81,82]. Expert's evaluation by fuzzy set calculation.

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References

1. Reis, I.; Sousa, M.J.; Dionísio, A. Employer Branding as a Talent Management Tool: A Systematic Literature Revision. *Sustainability* **2021**, *13*, 10698. [CrossRef]
2. Germany Federal Ministry of Labor and Social Affairs (Bundesministerium für Arbeit und Soziales—BMAS). *Re-imagining Work, Green Paper Work 4.0*; Federal Ministry of Labour and Social Affairs: Berlin, Germany, 2015.
3. Germany Federal Ministry of Labor and Social Affairs (Bundesministerium für Arbeit und Soziales—BMAS). *Re-Imagining Work, White Paper Work 4.0*; Federal Ministry of Labour and Social Affairs: Berlin, Germany, 2017.
4. Stirpe, L.; Trullen, J.; Bonache, J.A. Retaining an ageing workforce: The effects of high-performance work systems and flexible work programmes. *Hum. Resour. Manag. J.* **2018**, *28*, 585–604. [CrossRef]
5. Beckett, R.; Daberkow, T. *Work 4.0 and the Need for Boundary-Spanning*; Association for Information Systems: Atlanta, GO, USA, 2020.
6. European Commission. *Demography Report 2010—Older, More Numerous and Diverse Europeans*; Publications Office of the European Union: Luxembourg, 2011. Available online: http://ec.europa.eu/social/main.jsp?langId=en&catId=22 (accessed on 30 August 2022).
7. Ward, K. *The World in 2050: Quantifying the Shift in the Global Economy*; HSBC: London, UK, 2011.
8. Simms, M. Understanding employer engagement in youth labour market policy in the UK. *Hum. Resour. Manag. J.* **2017**, *27*, 548–564. [CrossRef]
9. Tarique, I.; Schuler, R.S. Global talent management: Literature review, integrative framework, and suggestions for further research. *J. World Bus.* **2010**, *45*, 122–133. [CrossRef]
10. Latukha, M.; Kriklivetc, A.; Podgainyi, F. Generation Diverse Talent Management Practices: Main Determinants and its Influence on Firm Performance. *J. East-West Bus.* **2022**, 1–32. [CrossRef]
11. DelCampo, R.G.; Haggerty, L.A.; Haney, M.J.; Knippel, L.A. *Managing the Multi-Generational Workforce*; Gower: Surrey, UK; Burlington, VT, USA, 2011.
12. Dries, N.; Pepermans, R.; Kerpel, E.D. Exploring four generations' beliefs about career: Is "satisfied" the new "successful"? *J. Manag. Psychol.* **2008**, *23*, 907–928. [CrossRef]
13. Zadeh, L.A. Information and control. *Fuzzy Sets* **1965**, *3*, 338–353.
14. Mittelmann, A. Competence development for Work 4.0. In *Knowledge Management in Digital Change*; Springer: Cham, Switzzerland, 2018; pp. 263–275.
15. Picot, A.; Neuburger, R.; Arbeit in der Digitalen Welt. Zusammenfassung der Ergebnisse der AG1-Projektgruppe Anlässlich des IT-Gipfels-Prozesses; 2013. Available online: https://www.muenchner-kreis.de/wp-content/uploads/fileadmin/dokumente/_pdf/it-gipfel-2014-ag-1-arbeit-in-der-digitalen-welt.pdf (accessed on 22 July 2022).
16. Narayanan, A.; Rajithakumar, S.; Menon, M. Talent management and employee retention: An integrative research frame-work. Hum. Resour. *Dev. Rev.* **2019**, *18*, 228–247.
17. Plass, C. Digital Business Processes and Models change the Workplace. In *Opportunity—Facts for Experts and Decision Makers*; Springer Cham: Cham, Switzzerland, 2016.
18. The World Manufacturing Forum. The WMF's Top Ten Skills for the Future of Manufacturing. 2019. Available online: https://www.worldmanufacturingforum.org/skills-for-future-manufacturing (accessed on 30 August 2022).
19. European Commission. *R&I Paper Series: Policy Brief, Industry 5.0—Towards A Sustainable, Human-Centric and Resilient*, 1st ed.; Publications Office of the European Union: Luxemburg, 2021.
20. Beechler, S.; Woodward, I.C. The global "war for talent". *J. Int. Manag.* **2009**, *15*, 273–285. [CrossRef]
21. Michaels, E.; Handfield-Jones, H.; Axelrod, B. *The War for Talent*; Harvard Business Press: Brighton, MA, USA, 2001.
22. Ulrich, D.; Smallwood, N. Capitalizing on capabilities. *Harv. Bus. Rev.* **2004**, *82*, 119–127.
23. Barney, J.B. Firm Resources and Sustained Competitive Advantage. *J. Manag.* **1991**, *17*, 99–120. [CrossRef]
24. Cheese, P.; Thomas, R.J.; Craig, E. *The Talent Powered Organization: Strategies for Globalization, Talent Management and High Performance*; Kogan Page Publishers: London, UK, 2008.
25. Wright, P.M.; McMahan, G.C.; McWilliams, A. Human resources and sustained competitive advantage: A resource-based perspective. *Int. J. Hum. Resour. Manag.* **1994**, *5*, 301–326. [CrossRef]
26. Zuboff, S. *the Age of the Smart Machine: The Future of Work and Power*; Basic Books: New York, NY, USA, 1988.
27. Collings, D.G.; Mellahi, K. Strategic talent management: A review and research agenda. *Hum. Resour. Manag. Rev.* **2009**, *19*, 304–313. [CrossRef]
28. Collings, D.G.; Mellahi, K.; Cascio, W.F. Global talent management and performance in multinational enterprises: A multi-level perspective. *J. Manag.* **2018**, *45*, 540–566.
29. Axelrod, B.; Handfield-Jones, H.; Michaels, E. A new game plan for C players. *Harv. Bus. Rev.* **2002**, *80*, 80–88.
30. Chambers, E.G.; Foulton, M.; Handfield-Jones, H.; Hankin, S.M.; Michaels, E.G., III. The war for talent. *McKinsey Q.* **1998**, *3*, 44–57.
31. Boudreau, J.W.; Ramstad, P.M. Talentship and the new paradigm for human resource management: From professional prac-tice to strategic talent decision science. *Hum. Resour. Manag.* **2005**, *44*, 129–136. [CrossRef]
32. Lewis, R.E.; Heckman, R.J. Talent management: A critical review. *Hum. Resour. Manag. Rev.* **2006**, *16*, 139–154. [CrossRef]

33. Schiemann, W.A. From talent management to talent optimization. *J. World Bus.* **2014**, *49*, 281–288. [CrossRef]
34. Kostman, J.T.; Schiemann, W.A. People equity: The hidden driver of quality. *Qual. Prog.* **2005**, *38*, 37–42.
35. Chami-malaeb, R.; Garavan, T. Talent and leadership development practices as drivers of intention to stay in Lebanese organisations: The mediating role of affective commitment. *Int. J. Hum. Resour. Manag.* **2013**, *24*, 4046–4062. [CrossRef]
36. Festing, M.; Schäfer, L. Generational challenges to talent management: A framework for talent retention based on the psychological-contract perspective. *J. World Bus.* **2014**, *49*, 262–271. [CrossRef]
37. Hirsch-Kreinsen, H. Digitization of industrial work: Development paths and prospects. *J. Labour Mark. Res.* **2016**, *49*, 1–14. [CrossRef]
38. Arsenault, P.M. Validating generational differences. A legitimate diversity and leadership issue. Leadersh. *Organ. Dev. J.* **2004**, *25*, 124–141.
39. Twenge, J.M.; Campbell, S.M.; Hoffman, B.J.; Lance, C.E. Generational differences in work values: Leisure and extrinsic val-ues increasing, social and intrinsic values decreasing. *J. Manag.* **2010**, *36*, 1117–1142. [CrossRef]
40. Crampton, S.M.; Hodge, J.W. Generations in the workplace: Understanding age diversity. *Bus. Rev.* **2007**, *1*, 16–22.
41. Jenkins, J. Strategies for managing talent in a multigenerational workforce. *Employ. Relations Today* **2008**, *34*, 19–26. [CrossRef]
42. Benson, J.; Brown, M. Generations at work: Are there differences and do they matter? *Int. J. Hum. Resour. Manag.* **2011**, *22*, 1843–1865. [CrossRef]
43. Burke, M.E. Alexandria: Society for Human Resource Management. In *Generational Differences*; Survey Report; SHRM: Alexandria, VI, USA, 2004.
44. Cennamo, L.; Gardner, D. Generational differences in work values, outcomes and person-organisation values fit. *J. Manag. Psychol.* **2008**, *23*, 891–906. [CrossRef]
45. DelCampo, R.G. Understanding the psychological contract: A direction for the future. *Manag. Res. News* **2007**, *30*, 432–440. [CrossRef]
46. Scullion, H.; Collings, D.G.; Caligiuri, P.M. Global Talent Management (Global HRM). *J. World Bus.* **2010**, *45*, 105–108. [CrossRef]
47. Delbecq, A.L.; Van de Ven, A.H.; Gustafson, D.H. *Group Techniques for Program Planning: A Guide to Nominal Group and Delphi Processes*; Scott Foresman: Northbrook, IL, USA, 1975.
48. Akyuz, E.; Celik, E. A fuzzy DEMATEL method to evaluate critical operational hazards during gas freeing process in crude oil tankers. *J. Loss Prev. Process Ind.* **2015**, *38*, 243–253. [CrossRef]
49. Kahraman, C.; Cebeci, U.; Ulukan, Z. Multi-criteria supplier selection using fuzzy AHP. *Logist. Inf. Manag.* **2003**, *16*, 382–394. [CrossRef]
50. Lawler, E.E. Strategic Planning; Pay-for-Knowledge Systems. In *Compensation Management*; Jossey-Bass Publishers: San Francisco, CA, USA, 1990.
51. Parker, O.; Wright, L. Pay and employee commitment: The missing link. *Ivey Bus. J.* **2001**, *65*, 70–79.
52. Agarwal, N.C. Reward systems: Emerging trends and issues. *Can. Psychol. Can.* **1998**, *39*, 60–70. [CrossRef]
53. Silbert, L. The Effect of Tangible Rewards on Perceived Organizational Support. Master's Thesis, University of Waterloo, Waterloo, ON, Canada, 2005.
54. Arthur, D. *The Employee Recruitment and Retention Handbook*; Amacom Books: New York, NY, USA, 2001.
55. Butler, T.; Waldroop, J. Job sculpting: The art of retaining your best people. In *Harvard Business Review*; Harvard Business School Press: Boston, MA, USA, 1999; pp. 179–203.
56. Deters, J. *Global Leadership Talent Management: Successful Selection of Global Leadership Talents as an Integrated Process*; Emerald Group Publishing: Bradford, UK, 2017.
57. Ortlieb, R.; Sieben, B. How to safeguard critical resources of professional and managerial staff: Exploration of a taxonomy of resource retention strategies. *Int. J. Hum. Resour. Manag.* **2012**, *23*, 1688–1704. [CrossRef]
58. Amar, A. Motivating knowledge workers to innovate: A model integrating motivation dynamics and antecedents. *Eur. J. Innov. Manag.* **2004**, *7*, 89–101. [CrossRef]
59. Edward, J.R. Person-job fit: A conceptual integration, literature review, and methodological critique. In *International Review of Industrial and Organizational Psychology*; Cooper, C.L., Robertson, I.T., Eds.; John Wiley and Sons: Hoboken, NJ, USA, 1991; Volume 6, pp. 283–357.
60. Lofquist, L.H.; Dawis, R.V. *Adjustment to Work*; John Wiley and Sons: London, UK, 1969; pp. 85–92.
61. Yanadoria, Y.; Katob, T. Work and family practices in Japanese firms: Their scope, nature and impact on employee turnover. *Int. J. Hum. Resour. Manag.* **2009**, *20*, 439–456. [CrossRef]
62. Hall, D. *The Career Is Dead—Long Live the Career. A Relational Approach to Careers*; The Jossey-Bass Business & Management Series; Jossey-Bass Inc.: San Francisco, CA, USA, 1996.
63. Prince, B.J. Career-focused employee transfer processes. *Career Dev. Int.* **2005**, *10*, 293–309. [CrossRef]
64. Adams, J.S. Inequity in social exchange. In *Advances in Experimental Social Psychology*; Academic Press: Cambridge, MA, USA, 1965; pp. 267–299.
65. Folger, R.G.; Cropanzano, R. *Organizational Justice and Human Resource Management*; Sage: Thousand Oaks, CA, USA, 1998.
66. Hausknecht, J.P.; Rodda, J.; Howard, M.J. Targeted employee retention: Performance-based and job-related differences in reported reasons for staying. *Hum. Resour. Manag.* **2009**, *48*, 269–288. [CrossRef]

67. Valverde-Moreno, M.; Torres-Jimenez, M.; Lucia-Casademunt, A.M. Participative decision-making amongst employees in a cross-cultural employment setting: Evidence from 31 European countries. *Eur. J. Train. Dev.* **2020**, *45*, 14–35. [CrossRef]
68. Bassi, L.J.; Van Buren, M.E. Sharpening the leading edge. *Train. Dev.* **1999**, *53*, 23–32.
69. Clarke, K.F. What businesses are doing to attract and retain employees–becoming an employer of choice. *Empl. Benefits J.* **2001**, *26*, 21–23. [PubMed]
70. Messmer, M. Orientation programs can be key to employee retention. *Strateg. Financ.* **2000**, *81*, 12–15.
71. Ramlall, S. Organizational application managing employee retention as a strategy for increasing organizational competi-tiveness. *Appl. HRM Res.* **2003**, *2*, 63–72.
72. Ashford, S.J.; Lee, C.; Bobko, P. Content, cause, and consequences of job insecurity: A theory-based measure and substantive test. *Acad. Manag. J.* **1989**, *32*, 803–829.
73. Davy, J.A.; Kinicki, A.J.; Scheck, C.L. Developing and testing a model of survivor responses to layoffs. *J. Vocat. Behav.* **1991**, *38*, 302–317. [CrossRef]
74. Germany Federal Ministry of Labor and Social Affairs (Bundesministerium für Arbeit und Soziales—BMAS)/Nextpractice. Wertewelten Arbeiten 4.0. In *Disruption und Transformation Management*; Federal Ministry of Labour and Social Affairs: Berlin, Germany, 2016.
75. Bernthal, P.R.; Wellins, R.S. Retaining talent: A benchmarking study. *HR Benchmark Group* **2001**, *3*, 1–28.
76. Zobrist, L.; Brandes, D. *What Key Competencies are Needed in the Digital Age? The Impact of Automation on Employees, Companies and Education*; Deloitte AG: London, UK, 2017.
77. Olsson, L.; Friman, M.; Lättman, K.; Fujii, S. Travel and life satisfaction—From Gen Z to the silent generation. *J. Transp. Heal.* **2020**, *18*, 100894. [CrossRef]
78. Pandita, D.; Ray, S. Talent management and employee engagement—A meta-analysis of their impact on talent retention. *Ind. Commer. Train.* **2018**, *50*, 185–199. [CrossRef]
79. Ready, D.A.; Conger, J.A. Make your company a talent factory. *Harv. Bus. Rev.* **2007**, *85*, 68–77. [CrossRef] [PubMed]
80. Organization for Economic Cooperation and Development. *New Skills for the Digital Economy*; OECD Digital Economy Papers; OECD Publishing: Paris, France, 2016; p. 258.
81. Chang, P.L.; Hsu, C.W.; Chang, P.C. Fuzzy Delphi method for evaluating hydrogen production technologies. *Int. J. Hydrogen Energy* **2011**, *36*, 14172–14179. [CrossRef]
82. Cheng, C.-H.; Lin, Y. Evaluating the best main battle tank using fuzzy decision theory with linguistic criteria evaluation. *Eur. J. Oper. Res.* **2002**, *142*, 174–186. [CrossRef]