Concept Paper

Is Human Capital Ready for Change? A Strategic Approach Adapting Porter's Five Forces to Human Resources

Livia Anastasiu * , Ovidiu Gavriș and Dorin Maier

Civil Engineering and Management Department, Technical University of Cluj-Napoca, 400114 Cluj-Napoca, Romania; ovidiu.gavris@ccm.utcluj.ro (O.G.); dorin.maier@ccm.utcluj.ro (D.M.)

* Correspondence: livia.anastasiu@ccm.utcluj.ro

Received: 16 February 2020; Accepted: 13 March 2020; Published: 15 March 2020

Abstract: This article argues for adapting Porter's Five Forces Model to strategic human resources management. The world business environment is facing real challenges: Shortage of talents, ageing of the world population, and disappearance of repetitive jobs. For a sustainable approach, the quality and stability of human capital should be analyzed strategically, based on the influence of five forces which act in the market: Competition in the industrial sector between specialists with core competencies (rivalry), demands of the hiring companies in terms of the number of employees and updated skills (organizations as buyers), recruitment companies and schools (suppliers), effects of globalization on people's migration (new entrants), and modern technologies and innovation (substitutes). The stronger the forces are, the harder it will be for the organization to select or retain valuable employees who will add value to products/services. Actual and future employees should analyze the intensity of these forces when they plan to prepare for jobs or change their career. This analysis was focused mainly on the manufacturing sector, where jobs based on repetitive or dangerous tasks may disappear in time.

Keywords: strategy; sustainability; human capital; five forces Porter

1. Introduction

Human resources management is an important function of business, because no goals can be achieved without people. They maintain an organization's sustainability in the market and their performance has an impact on long-term strategy [1]. Because the success of a company comes from the use of inputs, which are always limited, the strategic approach of human resources management targets the performance of the employees, who add value to all other resources [2].

Strategic planning of the organization's employees is defined as the forecasting of the demand of people (in terms of number and skills) for achieving the strategic goals [3]. Planning the workforce for the future is a complex decision-making process for many reasons: The talent pool is narrow, the economic trends are unpredictable, the individuals' needs are in constant change, and others. Hiring the wrong people for jobs will waste money and time, which will decrease the organization's outcomes [4].

People represent the most important asset of an organization, regardless of the field of activity [5]. When analyzing companies that perform in the same sector, even if they use the same raw materials or technologies, the competitive advantage comes from the employees' competencies [6].

Attracting talent is maybe the biggest challenge of an organization, because performance is achieved through people who should possess core competencies hard for competitors to replicate [7].

According to definition [8], a competitive human resource should be rare, inimitable, and non-substitutable. The strategy of selecting the best candidates for a job is crucial when

competitiveness is involved, because they provide sustainable core competencies, which are essential for the organization's results.

Why does a competitive workforce matter for an organization? The researchers in the field emphasized that there is a huge gap between what companies are looking for and what the real competencies of the people look like.

The evolution of jobs with time may predict the trends of the required skills for the future. The companies will rely on innovation, which will have an impact on the employees' competencies. Some studies even show that the future organizations will tend to nearly-zero employees, because they will be replaced with robots [9].

The human resource, as any other input, may be planned strategically, because the people's core competencies will provide advantages in the long run. Any organization should predict future skills by analyzing the market's trends. One of the resource-based theories is Porter's competitiveness model, which relies on five forces that may generate struggle in the business environment.

This article is a strategic approach to analyzing the phenomena that will affect the structure and configuration of human capital in the future by adapting Porter's Five Forces Model to human resources management, because people represent the most valuable resource of an organization, no matter the specialization. Because strategy is a long-term planning of the outcomes, employees should accomplish the objectives, therefore their competencies are crucial.

The model proposed by the authors is an analysis of the factors that may shape jobs in the future. The changes in the business environment, like globalization, ageing of the workforce, robotics, or artificial intelligence, will affect the strategy of human capital. Therefore, the present research is developed in four chapters. The introduction section describes the concept of human capital and the importance of top talents for a competitive advantage. The literature review presents the previous studies in the field. The third chapter explains the framework and its implications on human capital's strategy. The "Discussion" and "Conclusions" sections present the results and highlight the novelty of the study, as well as the practical applications of the model.

2. Literature Review

Organizations perform in a strong competitive environment that determines its attractiveness in terms of serving clients and making profits. Globalization broke the barriers for products/services, as well as for the workforce. The outcomes of an organization depend on the employees' performances [10,11]. Therefore, a strategic approach is essential to the business, because in the long term, if the activities planned by managers have the expected outcomes, they will lead to better performance [12,13].

Most organizations define competitiveness as direct and rapid profit. This narrow approach is fragile as long as profit is not the only item to consider. The value chain encompasses all the resources that are part of the products/services delivered.

Competitive advantage is validated if it is sustainable, meaning that it will last in the long term. In a changing business environment, anticipating the customers' demands is a hard process that involves all the organization's inputs [14].

Empirical studies show that there is a connection between commitment, involvement, and performance of human resources when they are analyzed in a strategic context [15,16]. High Performant Work Practices (HPWP) are modern methods for recruiting, selecting, motivating, and rewarding people in order to meet an organization's goals. Mainly they are based on employees' in-house training to develop suitable skills. However, HPWP are proved to provide results only in emerging economies, not in developed ones [17,18]. The employees' creativity and willingness to participate to the organization's outcomes are possible if the leadership is flexible and encourages a culture of lifelong learning, which should make a change in a person's attitude to work, especially in the decision-making process. The transferable skills that they may acquire should allow their adaptability, if their actual jobs are in jeopardy due to automation.

Michael Porter considers that an organization should be analyzed as a whole, because each management's function is responsible for the achievement of the strategic goals. The human resources department plays an important role in the company's results, so its strategy has to be aligned to the overall strategy [19]. However, the business environment faces an alarming shortage of talents [20], which is affecting competitiveness. Performant employees should be trained and motivated to increase their competencies for achieving the organization's long-term goals stated by the strategy.

The company's adaptability to the market is important for a successful strategy, no matter if the internal or external environment is involved. Aspects like core competencies, technologies, or innovation are influenced by regulations, customer needs, community, and others. Studies show that performant employees are capable and willing to apply modern technologies if the work is challenging, interesting, and prevents routine [21].

Human resources management represents a source of competitive advantage, because people use their skills to deliver high quality products/services. A resource-based view of an organization places the human capital as the main source of performance, because of its features: It is valuable, rare, and hard to imitate. As the qualified workforce pool is limited, the organizations have to struggle for attracting and retaining talents [22,23].

The workforce is present in all the strategically planned activities. Even if modern technologies are involved, the human presence is indispensable. The best practices in the field provided by researchers and practitioners show that they may be the foundation for differentiating the organizations in the business environment. In their opinion, these practices may be: Accurate recruitment, equity in evaluation and compensation, career development, or training [24]. Therefore, an integrated approach of human resources management is mandatory for competitive advantage. However, keeping the actual employees without updating their skills in concordance with the world economy trends is not a sustainable approach, because in time it will lead to non-performant products/services.

The specialists in human resources have different approaches when analyzing the importance of human capital. Based on Hill et al. [25], this may come from efficiency, quality, innovation, and accountability. In their opinion, people are present in all of these four items, so human resources function is a strong element in the organization's structure. Boxall and Purcell [2] argue that human resources are not the people, but their knowledge, skills, and abilities that give competitive advantage. They possess these competencies and rent them to the organization for a specific period of time. The leadership should have the capability to transform them into key factors for success. If the employees do not understand or accept the tasks, they will leave the organization. A study developed in the UK showed that one of two people quit because of the managers [26].

Human resources is a management function that plays an important role in the organization's strategy. This statement was developed by Barney [27], who designed a framework to allow the companies to analyze the level of competitive advantage based on the available resources, especially human. O'Riley and Pfeffer [28] argue that people are more important than physical assets, because they add value to all the other inputs by their knowledge, skills, and abilities [29,30].

The HR strategy may be analyzed based on two management trends: Porter's "Outside-In" vision [31], which starts with the prospect of the business itself and the needs of consumers, followed by planning the organization's functions accordingly; and Prahalad and Hamel's "Inside-Out" vision, which puts the personnel's core competencies first, and then the organization's management plans to find markets for products/services based on these skills [32].

Studies developed by Deloitte [21] argued that the future of human resources management is questioned, unless the organizations will focus on methods to attract and retain the workforce: Ergonomics of the workplace, flexible working hours, access to information and training, and others. Some researchers [33–35] explained the importance of sustainability in human capital, because, as any resources, people with core competencies are difficult to find and motivate.

As human capital is the strongest asset of an organization, selecting a person should be well planned and evaluated based on core competencies. According to Pellegrino and Hilton [36], they

represent a combination of theoretical notions (knowledge), transferable knowledge (skills), and inner capacity to perform the job (abilities). The core competencies depend on the type, size, culture, and hierarchy of the organization [37]. They should be identified and evaluated based on the job requirements [38]. The skills resulting from the analysis will be ranked and will represent the fundamentals for the decision-making [39].

In order to find the employability skills for the future, PwC [9] surveyed 10,029 persons from China, India, Germany, UK, and USA. The study revealed interesting facts: a lot of jobs will disappear, especially routine ones, and will be replaced with jobs that require adaptability to new technologies. According to the study, the subjects ranked the following employability skills (most of them transferable): adaptability (86%), problem solving (85%), emotional intelligence (76%), creativity (74%), leadership (69%), and entrepreneurship (50%).

Some authors [40–42] showed that the competitiveness of any organization, no matter the area of activity, is strongly related to the workforce's performances. Therefore, the compensation system should not be seen as a cost, but as a source for competitive advantage [43,44]. Moreover, modern human resources management emphasizes the role of teams in all industries, which will have an impact on overall productivity, because of synergy [21].

However, recent researchers point out that robots will replace most of the repetitive and dangerous jobs. Richard Baldwin, president of the Center for Economic Policy Research in the USA, studied the effects of globalization on the world workforce and concluded that “globotics” will change the needs for people's skills, which will have an impact on the number of white and blue collar jobs in the future [45].

3. Porter's Five Forces Model adapted to Human Capital

Each industry has its own characteristics, which should make a difference in the ways of doing business. The aeronautic sector is not similar to civil engineering, pharmaceuticals, or mining in terms of customers' needs, product delivery, level of innovation, marketing, or others, so their strategies to stay in the market are completely different. In fact, strategy may be perceived as the war to eliminate real or potential enemies, along with tactics to strengthen the actual position in the industrial sector.

Michael Porter said that an organization's attractiveness is influenced by the economic environment. A sustainable strategy should be planned according to the competitiveness in the sector. Whether it is a company that aims to penetrate the market or one that is already there, the intensity of the competition involves long-term goals. Porter has demonstrated that there are five main forces that affect and influence the competition in a particular economic sector: competitors' rivalry, suppliers' power of negotiation, buyers' power of negotiation, threat of new entrants, and threat of substitutes.

If these forces are strong, the economic sector is not attractive, because it is hard for the competitors to make high profits or to return their investments. In reverse, if the forces are weak, the companies have opportunities for negotiations and for increasing profits.

Each of the forces represents a threat to the organization's competitiveness in the business environment; therefore, in order to protect its position, barriers should be put up against them.

- The rivalry between competitors: The attractiveness of an industry depends on the level of competitors' rivalry. The competitiveness in the area is high if: There are many companies with similar size and profits; the barriers to exit the business are high, because of the degree of specialization or the emotional involvement of the management; the sector is moving slowly and the customers are not aware of the advantages of the products/services delivered. Usually, the competitors use price wars as methods to win the market, but this is just a short-term strategy. Eliminating the competitors is a weak tactic, because in a globalized competitive environment, new entrants may arise from all over the world.
- The buyers' power of negotiation: The clients' influence may be strong if their number is low in the industry and they buy a large volume, so they can bargain on the price of the products/services. They may represent a threat if they can easily switch to another supplier or

may decide to manufacture the suppliers' products. The same analysis may be developed for intermediate customers.

- The suppliers' power of negotiation: A small number of suppliers may generate monopoly or oligopoly, which can give them uncontrolled power. The same situation may occur if the clients' costs for switching to other suppliers are high, or if their incomes come from more industries (diversification).
- The threat of new entrants: New entrants can be obstructed by economies of scale, or other methods to reduce the costs. If the barriers for new entrants are high, their presence in new markets is difficult. However, when the strategy of strong companies is differentiation, they may plan initial losses, until their position in the market becomes consolidated.
- According to Porter, the entry barriers may be: Economies of scale (existing companies may use economies of scale, because they can control costs along the value chain: Manufacture, research, or marketing for many units), network effects (branded companies may give discounts or other advantages for loyal clients, which act like barriers to new entrants), clients switching costs (clients find it hard to switch to other suppliers because they depend on the products, e.g. software for PC, mobile data), or supremacy of incumbents (intellectual property, discounts from suppliers, geographic advantage, or other things).
- The threat of substitutes: The substitutes may be a threat to the products in a specific market if their prices are competitive, or if they incorporate modern materials or technologies. The barriers that can block the substitutes may be the differentiation of products or the decrease of costs.

The workforce of an organization is essential in the process of transforming the inputs into products or services. People do not belong to the company, they only rent their competencies during the employment contract.

The employees are an important resource, but not the most important, unless their skills contribute to the competitiveness. However, having core competencies is not enough. Individuals, or teams, perform only if they understand, accept, and enjoy doing the job. Unlike other inputs, human resources have brains, they think and have feelings. The philosophy of human resources management is to put people into the center of any enterprise. Creativity, willingness to innovate, or personal touch all make the organization unique in the market, so participative management can no longer be ignored.

Globalization brought changes in the approach of relationships between managers and subordinates. There are pros and cons as well: The organization is able to choose personnel from all over the world, because borders have fallen; on the other hand, the workforce is free to find employers who give them opportunities to fulfill their expectations.

Planning the workforce for the future is a continuous concern of organizations. They should have the core competencies to make them deliver competitive products and services. The long-term strategy involves the need of specialized employees; therefore, the managers have to find ways to attract and retain suitable people for jobs. In the business environment, competitors face the same problems, so the companies should analyze all the factors that may affect their future plans.

The starting point of adapting the Porter model to human resources was that the external environment may determine the internal strengths and weaknesses of the workforce in any organization, no matter its field of activity (Figure 1).

Figure 1. Porter's Five Forces Model adapted to human resources. Source: Authors.

Based on Porter's theory, the personnel's competencies will provide a competitive advantage, so the organization's management should find strategies to have the best employees in the long term. However, people cannot be treated as other resources. They can move easily from a company to another, from one country to another, without constraints. The big challenge is to plan the number and specialization (competencies) according to the overall strategy of the business.

Organizations fight for supremacy in their economic environment. Nothing can be delivered without the personnel's implication. Therefore, companies will look for employees with competencies that will allow them to gain competitive advantage. The new trend in digital business is to search for people via social media and create jobs for talents who match the companies' goals and are free of labor contracts or are ready to change employer.

The changes in the customers' needs will definitely affect the future of the potential and actual employees. The challenges they will face depend on the impact of the five forces upon their career.

3.1. Competitiveness in the Economic Sector

The reason why the force is placed in the center of the model is that the competition concerning employees with the same specialization is strong, especially if they have core competencies. The higher the number of competitors, the more the rivalry is manifested. The rapid development of technologies has an impact on the individual's capacity to update the skills in order to improve his/her competencies in a specific job or search for new ones. Therefore, there are some barriers when they choose to switch between employers or start their own businesses:

- **Age and gender:**
There are some biases coming from individuals' stereotypes that may obstruct a person in their decision to find a better job. The regulations all over the world try to protect the workforce against discrimination, like age, gender, disabilities, religion, or others [46,47].
The researchers in the field argue that the employers prefer men in leadership positions because of their native features: Power, aggressiveness, competitive spirit, or resistance to stress [48,49]. Even if women have the same level of education and experience as men, and they represent 45% of the total human capital in Europe, only 35% of them have managerial roles in organizations [50]. However, the number of manager women is increasing [51].
Statistics show that women are paid lower salaries than men [52]. Moreover, there is an increase of single parent families headed by women, so their expectations are related to flexible jobs, childcare, or working from home. According to the US Census Bureau 2017, around 12 million American families are single parenting, and 84% are headed by single moms. In terms of incomes, the annual average is 35,400 USD, compared to the income of a married couple (85,300 USD). Age is another bias in switching jobs. Studies show that, beginning with job advertisements and continuing with the methods of recruitment, older persons are affected by age discrimination [53,54].
The number of employees aged 65+ is expected to grow from 19% in 2018 to 29% by 2060,

which will represent a major problem in finding talents [55].

Even if regulations forbid, the employers try to find ways to restrict the hiring of older people [56,57] because of their difficulties in adapting to new organizational culture, the decrease in productivity, and the level of compensations they require. However, these stereotypes are false, because this category of employees have skills developed in time, are devoted to the organization, and are exposed to less accidents in work [58].

- Psychological barriers:

Most of these are subjective and are closely related to the personality and employment background of the individual. The person may think that he/she is too old to find a better job, based on what happened on the previous job search.

Another problem might be the lack of self-confidence in the actual skills, compared to other employees in similar positions, so the individuals do not act because of a fear of failing [59].

A major problem in the age of modern technologies represents the disappearance of some specializations. People find it hard to develop new competencies and to start an unpredictable journey, especially when they have an age handicap [60].

- Lack of updated skills:

The last years brought an odd situation: There are a lot of vacant jobs in each country, but people are still unemployed and looking for jobs. Statistics show that in 2018, 43% of people in USA were hired for non-tech jobs, and 57% for tech-jobs [26].

Today, most of the specialized jobs require a graduation diploma. However, the real skills are not there, even if graduating is equal to career success. Considering that the tuitions represent a big effort for the students (9000–30,000 USD per year in USA, 4000 USD yearly in Canada), the decision in choosing vocational or university studies is an important one, because statistics show that two thirds of the students graduate with an average of 29,000 USD debt [61].

The number of graduates reached 70% of the active population, in contrast with the number of white-collar jobs, which is around 25%. According to their level of education, the companies will hire them for specific jobs. According to a study developed by International Policy Digest in 2019, the jobs suffered some important changes in time: management jobs represented 31% in 1990 compared to 40% in 2018; sales office jobs were 28% in 1990 and 22% in 2018; blue collar jobs decreased from 26% in 1990 to 21% in 2018; low payed services jobs increased from 15% in 1990 to 17% in 2018.

Because blue-collar jobs are considered dirty jobs (they require manual competencies), the younger generation goes for white-collar jobs, which are more creative, elegant, and better paid. However, the evolution presented above shows that the number of blue-collar jobs is decreasing, maybe because they are replaced with robots.

Another important fact is the training for jobs. The managers expect the employees to be trained when they hire them, so few of them want to pay for developing skills.

3.2. The Power of Recruiters

Attracting top talents is one of the most critical strategies of an organization. In a stable environment, the process is smooth and easy to achieve. However, in a dynamic market, organizations might find it difficult, because all companies struggle for supremacy in the area, and performance is closely linked to the quality of employees. They may be recruited by the organization, or through external means.

Recruiters aim to find top talents in a competitive workforce market, so they improve the process by using modern technologies, like social media platforms. Their messages are now visible because most of the world population has access to mobile phones or Internet. Candidates have to describe their competencies in a brief and yet relevant manner, because their selection depends on search engines, so the fit for jobs will be based on statistics (key words).

Recruiting talents largely depends on the hiring company's brand. With only a click, a candidate can research on any organization's data and find aspects regarding the financial records, the rate of employee retention, implications in the personnel's development, working conditions, or other things. The working environment should be designed, developed, and maintained in such a way that the actual employees may promote it among friends and relatives. Studies show that especially key jobs are filled from referrals, and not from traditional recruiting methods [62].

Internal recruiting may represent a solution because it is an opportunity for all the stakeholders to express their interest. Companies explore a range of strategies, like v-HRM, because they can be connected to the business environment and understand more clearly what they expect from future candidates [63].

In this adapted model, the suppliers are assimilated to the external recruiting sources. They may be:

- The companies specialized in recruiting workforce:
In a competitive business environment, a qualified workforce is difficult to find. Companies may use precious time to recruit persons to fit a job. Therefore, they often hire them via recruiting agencies, which have many candidates, some of them already tested and selected.
In fact, recruiters play a double role: Experts for companies that seek suitable candidates for vacant jobs, and facilitators for people who are in the process of finding jobs or changing existing ones.
- The universities and vocational schools:
Schools should represent the nursery for future best employees or business owners. Information flows freely, so the younger generation have the opportunity to check the statistics concerning the employability index, which is one of the reasons for choosing a certain high-school or university. Therefore, the educational institutions should update their curricula in order to be in trend with the skills required by the organizations [64].
The Top 10 Graduate Employability universities are: Five from the USA (MIT, Stanford, UCLA, Harvard, UCB), two from Australia (University of Sydney and University of Melbourne), two from the UK (Cambridge and Oxford), and one from China (Tsinghua University) [65].
- Headhunters hired by companies to attract talent from the competition:
There is a huge difference between headhunters and recruiters: While the recruiting companies select candidates from a list of existing persons who fit the requirements, the headhunters represent the company willing to hire and act like advocates for attracting talent.

The way of recruiting the workforce depends on the candidate's degree of specialization. If the skills pool required to perform a job is wide, recruiting agencies may attract people by job advertisements. If the vacant job is strongly specialized, headhunters come into the picture because the recruitment methods have to be scientific and accurate for a niche area. The same process may be available if valuable individuals (in most cases top executives) intend to quit their jobs for some reason (lack of motivation, low level of compensation, arguments with the company's management, and other things). The headhunters cannot afford to miss the opportunity to inform the competition about it, and to persuade the board to create a job accordingly [66].

The existing workforce in a specific sector will try to persuade the external recruiters on their skills by applying some tactics, such as:

- Personal development:
Organizations are constantly targeting the performance of their employees, so in order to improve it they provide training for updating the skills needed for their jobs. However, some of the employees feel that they are able to develop more skills that may be useful in time, especially when competition is harsh. They will take e-courses or pay for extra training.
- Internships:
Internships are methods to acquire or improve people's knowledge, skills, and abilities (KSAs). No matter if they are paid or for free, after working hours or on holidays, the purpose is a practical

one, and it strengthen the employee's position in the organization, because he/she is supposed to perform better.

- Volunteering:

Volunteering provides both knowledge and experience. It may be performed inside or outside the organization. These actions will allow the individuals to learn new things and practice them, without leaving a safe job. It adds value to existing skills, or may be the start of a new journey. After volunteering, employees may find they are comfortable in jobs related to marketing, sales, human resources, or others.

The evolution of the workforce's age in the next 30 years will change the structure of jobs because of the population's ageing. Statistics reveal that there will be a severe decrease in the working population by 2050, especially in developed countries like Japan (−28%), Russian Federation (−21%), China (−21%), or Germany (−23%). The recruiters will search for talents in Argentina (26%), Mexico (26%), Saudi Arabia (41%), or Australia (27%) [67].

3.3. The Power of Organizations

In order to be competitive in the long term, organizations are struggling to attract and keep top talents, mainly for specialized jobs.

In the present adapted model, the authors considered that the business environment is the buyer of the workforce, as the employees represent an input. The more competitive the environment is, the more difficult it is to recruit and retain talents in a cost-effective way.

Organizations fight for success in their area of specialization, meaning that they must adapt to the customers' preferences. Changing according to the client's demands is not easy because the resources are always limited.

Depending on the level of specialization, organizations will recruit people based on the required competencies. The entry-level jobs may be easy to fill because potential candidates may come from graduates of vocational schools or universities. However, for executive positions, experience is an important issue; therefore, companies often hire recruiting firms or headhunters.

Filling vacant jobs, especially the strong specialized ones, is a major problem. A survey made by Deloitte in 2018 shows a difference between 2015 and 2018 concerning the number of days in fulfilling the process. It shows that specialized engineers and researchers are the hardest jobs to fill; it may take an average of 118 working days (almost five months) compared to 94 days in 2015, which can generate important losses for the companies involved [21].

Moreover, the causes that may generate difficulties in recruiting suitable candidates may be: Small number of candidates, lack of experience, lack of required skills, or non-competitive salaries [68].

The organization's power of negotiation may influence the number and specialization of the workforce in a certain industry. They may impose barriers that may shape the structure of the human resources in terms of compensations and working conditions:

- In a niche industrial sector;
- When the organization has devoted clients and long-term contracts;
- If the company is a brand and has a good image, so the jobs are stable;
- The jobs are not threatened by substitutes.

There are some exit barriers which, depending on the level of influence, may shape the human capital in terms of number and specialization:

- Costs for firing and hiring the workforce:

These are an organization's direct costs that may affect the profit, so this is a tough decision.

According to the Society of Human Resource Management and the American National Standards Institute, the cost for hiring (CPH) is calculated with the formula:

$$CPH = \frac{\text{Internal recruiting costs} + \text{External recruiting costs}}{\text{Total number of hires}}$$

Based on Porter's theory, if the labor market in a specific specialization is crowded, the companies find it easy to replace the workers because there is a large pool of people. On the other hand, if the required skills are hard to find, the management is forced to keep the employees, even if they are not performant.

Surveys done by some researchers [69] show that almost half of the employers have difficulties in finding talented employees.

- Industry dynamics:

The organizations perform in a constantly changing environment and they have to adapt to market demands. The barriers to change will help companies in predicting the number of jobs and specializations that will have a crescent trend or a downsizing one [70].

There is also a change in the age of the world workforce population. Some segmentation may be identified and evaluated: Veterans (born 1939–1947), baby boomers (born 1948–1963), Generation X (born 1964–1978), Generation Y (born 1980–1990), and Millennial (born 1990–2000) [71].

The skilled employees may have the power to persuade the company's management to keep them: A creative and innovative person is a valuable asset.

- Scarcity of talents:

The organizations face some real problems: The presence of unemployment in the labor market and the lack of updated skills. Baby Boomers have retired, Generation X is rather mature, and the next generations are determined to make fast and easy money. Therefore, a strong specialized company is forced to keep actual employees and train them for updating their skills.

- Emotional barriers:

Emotion is manifested when the organization is loyal to its employees and has assumed responsibilities that are not stipulated in the employment contract, and some affective connections have been established between managers and subordinates. Especially in small companies, a workforce is like a family; they know everybody's personal problems, and these aspects influence, most of the time in a negative manner, the decisions concerning firing employees with bad performances.

However, this approach has effects on costs, quality, and delivery of the products or services. In the long run, the image of the company is in danger.

- Legislation:

The labor legislation is specific for each country, and it aims to protect employees against the organizations' abuses regarding firing: Discrimination of any type, like disabilities, pregnancy, age, gender, religion, sexual orientation, or other civil rights.

3.4. The Threat of Globalization

Another force that may influence the quality of human capital is represented by the new entrants in the world labor market due to globalization.

Countries around the world have wanted to conquer global markets by making alliances: NAFTA (North American Free Trade Agreement) in 1994, EU (European Union) in 1993, or ASEAN (Association of Southeast Asian Nations) in 1967.

What began for political reasons was transformed in people's movement. This massive phenomenon is a real threat for the host country's workforce because the migrants come from their countries in search for a better life. They often accept jobs below their specializations or competencies because they are positive that, in time, their expertise will be recognized. According to statistics, the number of world migrants increased from 173 million in 2000 to 273 million in 2019, which represents more than 150% [67].

A study developed in the UK showed that most of the migrants who applied for jobs did not succeed in the same jobs as in their native countries. As can be noticed, executive jobs were in a slow descendent trend, but the interest of the employers in professional migrants was very poor (7%

compared to 22% in their countries of origin). The migrants accepted low-specialized jobs, mainly in services and sales (31%), as well as in unskilled jobs (24% versus 13% in their native countries) [72].

However, not all developed countries are targeted by migrants. A survey shows the most desirable countries are: USA, UK, Canada, and Australia. Almost 33% of migrants are hosted by the USA, especially highly skilled persons [73].

Companies prefer to hire people coming from poor countries because they agree to do unskilled or dirty jobs, but also because they are paid less than employees from their states.

In modern management, globalization is perceived differently from the past: It is not a strategy to lower the costs for products/services, but a challenge to find top talents all over the world. The development of communications has allowed organizations to manage the workforce located far from their origin countries. Few could imagine that white-collar jobs (managers, professionals), like computer engineers or researchers, may perform as team members of multi-national companies. As for blue-collar (manufacturing, constructions, transport, installation), and pink-collar jobs (service, sales, clerks), they are often offshored [74,75].

Even if offshoring is seen as the main cause of unemployment in developed countries, statistics show that it is responsible for only 10% of the job losses rate [76].

The employees of an organization may set some barriers against potential competitors like new entrants:

- Diversification: Both for individuals and teams, acquired through lifelong learning, for new skills related or not to the existing ones, or for any competencies that are hard to replicate. Multi-task teams benefit from synergy, so they will be difficult to replace with individuals who cannot compete as separate entities;
- Product differentiation: In niche sectors, loyal costumers may force the negotiation for manufacturing of specific products by some employees who proved their skills and behavior in previous projects;
- Experience as teams: The existing organizations in the market have employees with theoretical and practical backgrounds, experience in teamwork, and organizational behavior, which may represent a solid advantage, because new entrants will need time to reach the same level of competencies and adaptability.

The gig economy is another new entrants threat. People can perform temporary jobs, most of them grouped around a project. A report made by the *Harvard Business Review* in 2019 revealed that over 150 million people from North American and Western countries are independent contractors. There are pros and cons to these types of jobs. The freelancers (experts) may have multiple jobs and balance their priorities in life, while getting rewards for their acquired talents. This benefits also the companies and the customers, because the costs are lower and the quality and time delivery of the products/services are better. It is also a method for decreasing the unemployment rate. However, they are less paid than people with permanent jobs and do not have continuity in health and security insurances or retirement plans.

The power of negotiation of the new entrants may influence the attractiveness of the present employees in a certain sector of activity. The main idea from a strategic point of view is to be different, meaning to perform different from the competition, or to do similar products/services, but in a different and inimitable way.

3.5. The Threat of Modern Technologies

Modern ages are governed by updated technologies, innovation, and creativity. Internet is an endless source of information that generates new ideas; because individuals are in constant movement, organizations become globalized, and the workforce goes with the trend. Robots and automation procedures have invaded the business environment, so the companies may use them 24/7 without danger of getting tired or bored doing the same thing, as most of the time humans do.

The development of modern technologies has had effects on jobs' activities. Routine tasks are more and more performed by robots, providing advantages related to productivity, better quality, and reduced waste or accident. Moreover, the emergence of artificial intelligence (AI) and Internet of Things (IOT) replaced some of the human contribution even in non-routine jobs. Therefore, they can be assimilated with the workforce's substitutes.

Bill Gates said in 2016: "For jobs that are largely physical and visual manipulation—driving, security guard, warehouse work, waiter, maid, that threshold—I do not think you'd get much disagreement that over the next 15 years the robotic equivalents in terms of cost, in terms of reliability, will become a substitute to those activities".

The substitutes may represent a threat if:

- They are suitable for the organization's goals;
- They do not generate excessive expenses for the company;
- They follow aggressive politics.

Companies are struggling to stay in business by adapting to the new trends that force them to change the obsolete management style: Organizational hierarchy, communication, building teams, relationships between departments, and other things. The companies that are not able to adapt will disappear. According to studies, only 12% of the companies listed by Fortune 500 in 1995 were operational in 2017 [21].

Statistics show that the number of robots used for operational tasks is increasing and these are dramatically affecting white- and blue-collar jobs. The number of robots in manufacturing industry increased from 178000 in 2013 to 421000 in 2019 and is predicted to reach 584000 in 2022 [77].

Future jobs are generally related to innovation, as a driver to an organization's sustainability. Studies reveal that, by 2022, around 2.5 million jobs will be created, most of them for non-repetitive tasks [78]. Therefore, only employees who update their skills will succeed in the market. Researchers from MIT argue that automation is not only affecting areas like manufacturing and sales, but also education, law, finance, and medicine [79].

Automation does not necessarily eliminate jobs that have become obsolete, but it will reduce the number of jobs that can be more productive by introducing modern communication and computer software. Employees will work on interpreting results, not gathering data; thus, maybe eight workers will be able to do the job for ten [80].

One of the most important strategies of organizations is growing the incomes while reducing expenses, but not affecting the quality of the products/services delivered. They will focus on methods to replace human errors by using robots or machinery for routine operations. Modern technologies will impact the level of wages as well: The operational costs for a robot are around 5 euros/hour, compared to world labor costs (47 euros/hour in Europe and 10 euros/hour in China) [77].

Robotization and artificial intelligence are a plus for organizations. However, automation will give a new direction for future jobs. A study developed by the World Economic Forum in 2016 predicts that 7.1 million people could lose their jobs due to automation [81]. Accordingly, by 2030, the jobs that will disappear are: Travel agents, cashiers, librarians, bank tellers, textile workers, and pilots [82].

4. Discussions

Human capital is one of the most valuable assets of an organization. Companies struggle to stay in business, and so does the workforce. They have safe jobs as long as their competencies meet the organization's standards of performance.

Employees' core competencies are the skills that add value to the products/services. Even if they differ according to the organization's field of activity, people should possess that combination of professional (technical knowledge and experience) and transferrable (communication, teamwork, cooperation, critical thinking) skills that will lead to competitive advantage against competitors [83]. Some can be trained, others are native. A study presented by Deloitte argued that higher

education graduates lack competencies like analytical thinking, teamwork, communication, and decision-making [84]. Companies are in a constant struggle to attract and retain people with core competencies suitable for their businesses. Surveys show that 73% of employees are thinking about changing their actual jobs [85].

Michael Porter analyzed the attractiveness of an industry by measuring the power of five forces: Rivalry between companies, the power of buyers, the power of suppliers, new entrants, and substitutes.

The present paper argues for the importance of human capital in an economic sector and for the forces that influence employees to be performant. So we adapted Porter's model to human resources.

In the center of the model the authors placed the workforce's rivalry. Depending on the intensity of the competition, they may face some barriers if they intend to leave the organization or perform in other specializations: Age and gender, lack of updated skills, psychological barriers, and others.

The suppliers are assimilated to the recruiters who provide suitable employees. They may come from competition, as well as from vocational schools, universities, or headhunters. Their power of negotiation depends on the market demand. If the jobs are specialized in a specific area, and the number of candidates is low, they may influence the level of wages, the working conditions, or other facilities.

The clients are the organizations that are searching for the best employees. If there are only a few in an industry, they have a real power of negotiating the employment contracts. If the number is high, people can easily switch from one company to another.

The new entrants may be graduates or migrants. Their power may be manifested in niche sectors, where their competencies are essential. However, current employees may block them in some ways: Individual or team training for missing skills, quality and experience in performing tasks, and others.

Substitutes may be assimilated to artificial intelligence (AI) and Internet of Things (IOT), which can replace routine tasks or activities that may affect the health and/or security of workers. This means that future jobs will suffer intensive changes: Some will disappear, some will need different skills, and others will gain in importance, especially managerial ones.

Migrants move from native countries to developed countries and fill key jobs that are not of interest for their inhabitants. According to statistics, in 2018 the number of immigrants was 266 million, representing around 3.4% of the world's population, and they contributed more than 9% of the world GDP [86].

Globalization is more and more related to the spread of creativity and innovation from the workforce's countries of origin to the host countries. Migrants bring knowledge acquired at home, but also ambition to succeed abroad. They are determined to prove their skills, and the statistics are beyond doubt: From 2000 to 2017, 33 of 85 US Nobel Prize winners were born outside the country's borders.

Globalization has pros and cons:

- People and products may travel freely in countries all over the world, which may affect competitiveness in a good way;
- Communication allows the exchange of information, but it is an advantage only if the users (consumers, suppliers, or workforce) are able to filter and rank it;
- The cultural bias is diluted, because individuals (or groups) may adopt organizational behavior from others, if they are comfortable with them, and learn to be more tolerant;
- People coming from crowded societies (such as China or India) to developed countries may be a threat to locals because they accept low wages for skilled jobs, which can generate unemployment for native employees;
- Multi-national companies may expand their businesses (especially manufacturing) in poor countries, so they may generate incomes, and in the long term, the increase of GDP for the whole society;
- The relocation of business in poor countries may be seen as a source of threat for the environment, as well as for workers (low wages, poor working conditions, lack of health and security care, and other things).

By analyzing the data provided by the researches in the field, the authors believe that this new approach to human resources management, based on the competitive business environment, has a solid practical applicability. In fact, the two main actors (organizations and employees), are not seen as opposite interests, but through a win–win perspective.

Organizations need skilled and suitable people. All disturbances arising may represent an alert of possible malfunctions, which should be considered and not ignored. A simplistic analysis will reveal only the effects, but not the causes that generate the imbalance.

The framework proposed by the authors may be used both by the actual workforce and the high school or college graduates who are in the process of continuing their studies and have to choose a specific vocational school or university. By analyzing the power of the five forces, they should be able to plan their career according to the market trends.

By analyzing the changes in human resources structure, a real threat is the fact that a lot of jobs in manufacturing and services will disappear in the next years due to robotization and artificial intelligence. Moreover, over 50% of youngsters choose obsolete jobs.

A sustainable approach to this phenomenon may have practical implications on shaping the workforce in the long term. The jobs in the manufacturing sector will be affected by the intensity of the five forces. For example, in the construction industry, the number of jobs will decrease in the future (e.g., bricklayers will face a crisis due to robots that work three times faster, with no waste and with more precision; moreover, accidents in the process are zero). The model can guide the actual or future employees to plan their career as follows:

- Competitiveness in the industry: If the competitiveness is harsh, the employees should update their skills to continue their activity in the present workplace and/or acquire transferable skills which will allow them to switch between employers. Recent studies show that the industrial sectors where people have the most transferable skills are: Construction and engineering (80%), energy and environment (70%), technology (60%), automotive and healthcare (50%), retail, business and finance (30%), and transportation and storage (20%) [87]. In the case of graduates, they should apply for jobs that allow them to express their adaptability, creativity, or teamwork.
- The power of recruiters: Both internal or external, recruiters choose the right candidates for the available jobs. The applicants should highlight their skills because, especially for obsolete jobs, only the experience is not relevant. So, in order to succeed, the candidates have to find those soft skills that may make the difference. They can also go for temporary jobs, in order to increase their incomes, while learning new things. Universities and high schools may be seen as recruiters, because they prepare the graduates for the workforce market. These educational institutions will be chosen by candidates only if they deliver updated information, connected to practice in the field.
- The power of organizations: The employees' skills are performance drivers for organizations. Therefore, the companies will hire only talents for key jobs in order to gain competitive advantage. Another important aspect is the flexibility and adaptability of the workforce in the business environment. These requests should be acknowledged by actual and future employees as well because, by being prepared, they may face the challenges. Even changing career or choosing a first entry job are decisions that depend on market demands.
- The threat of globalization: The exodus of human capital migrating from less developed to highly developed countries is a phenomenon which can no longer be ignored. The main challenge for the locals is to keep their actual jobs based on competitive skills. Globalization is an opportunity for companies to attract talent and replace the employees who do not possess enough competencies. When a person is in the process of switching job, or wants to prepare for a new one, the threat of new entrants has to be considered and evaluated in a specific industrial sector.
- The threat of modern technologies: Automation and artificial intelligence are affecting the number and structure of jobs. Due to robots and software, a lot of specializations will disappear, both for operational and managerial jobs. These aspects should be analyzed when a person is in the

process of planning their career. In the case of pilots, for example, by 2030 the number per flight will be cut from three to two because of AI. On the other hand, a study developed by Dell shows that 85% of the jobs in 2030 have not been created yet.

Employees will be aware that they are not irreplaceable, unless they possess core competencies hard to replicate and thus become indispensable, but within ethical limits and responsible behavior. In fact, they are a force only if they stay together.

5. Conclusions

Organizations perform in a competitive business environment. Human capital, as the main asset, is strongly affected by competition; therefore, the effects of changes and challenges in the environment should be considered.

Employees can no longer be treated in an obsolete way. They are performant only if they understand, accept, and enjoy their jobs. Michael Porter explained that an organization should not be separated from the environment and emphasized that there are five main forces that influence the intensity of the competition in a well-defined economic sector: Competitors, suppliers, buyers, substitutes, and new entrants.

The 21st Century brought a change in framing human resources in the competitive environment. People are different in terms of needs and capabilities, they are creative and innovative. The workforce is globalized, so they may move without borders. They also feel that they represent a real force and may impose their own rules.

Based on these aspects, the authors adapted the Porter's Five Forces Model to human resources management. In order to be prepared for the changes that will occur in the globalized market, both organizations and employees should plan their actions strategically by analyzing the forces that may impact their decisions. The literature review (87 references) did not reveal such an approach, so, in our opinion, it is a novelty in the area.

The main discussion is on the competitiveness of human capital, which, in a sustainable approach, will have a major impact on the organization's performance. The stronger the intensity of the forces, the more difficult it is for the organization to replace, outsource, or downsize.

Globalization may have a positive effect on developed countries, which face a huge ageing problem of the workforce. Statistics show that in 2017, 75% of the migrants coming from poor countries are between 20 and 59 years old; the world ageing trend (people over 60 years old) will increase from 962 million in 2017 to around 2 billion in 2050.

Artificial intelligence (AI) is a phenomenon that shapes most of the manufacturing and communication businesses. Robots are replacing the routine and harmful jobs, so the number of blue-collar workers is decreasing constantly. However, by 2020, almost 2.5 million non-repetitive jobs will be created, compared to the disappearance of less than 2 million jobs, meaning that unemployment is not a threat if the skills are updated with the job trends in the market.

The present research aims to highlight the imperative need for cooperation between all the parties involved in the development of human resources in connection to future trends. The workforce's skills are continually dynamic; therefore, the entities responsible for updating the required competencies should be in permanent contact.

Vocational schools, as well as universities, are the main providers of graduates' KSAs, so their curricula should be shaped accordingly. However, the number of students in developed countries is decreasing along with the increase in the number of universities. In order to be competitive, education should be the driving engine for progress.

Traditional models of competitive strategies have often missed the contribution of human capital. Open system organizations are in constant interaction with the environment; they take resources, deliver outputs, and receive feedback from it. People are perceived as inputs, like any other resources. Since nothing can be achieved without people contribution, researchers and practitioners developed HR models for attracting, retaining, and motivating employees. The Harvard Model (1984) is

focused on treating employees as assets, and not as costs, because their contribution is a source of competitive advantage. The 5P' Model (1992) evaluates the importance of human capital in delivering products/services according to customers' needs. The Ulrich Model (1997) emphasizes the role of human capital in the decision-making process in participative management. The ASTD Model (2004) is based on the analysis of the core competencies the employees should possess in order to be competitive.

These frameworks refer to the existing workforce of an organization and the methods of improving their results. However, the roots of the problems may occur before hiring, or in the labor process. The strategic approach of human capital may represent a solution for long-term planning, especially because automation and AI are aspects that cannot be neglected. As strategy refers to the future, the authors argue for adapting the Porter's Five Forces Model to HRM because the workforce is now globalized.

The proposed model may be used both by actual and future employees because, by analyzing the trends in the market, they may improve their skills or even switch jobs.

Author Contributions: Conceptualization, L.A. and O.G.; formal analysis, L.A.; writing—original draft preparation, L.A., O.G., D.M. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Armstrong, M.; Taylor, S. *Armstrong's Handbook of Human Resource Management Practice*, 14th ed.; Kogan Page: New York, NY, USA, 2017; pp. 231–237.
2. Boxall, P.; Purcell, J. *Strategy and Human Resource Management*, 4th ed.; Palgrave Macmillan: London, UK, 2016; pp. 82–102.
3. Rees, G.; Smith, P.E. *Strategic Human Resources Management: An International Perspective*, 2nd ed.; Sage Publications: Thousand Oaks, CA, USA, 2017; pp. 80–101.
4. HR Daily Advisor. The Future of Workforce Planning. Available online: <https://hrdailyadvisor.blr.com/2017/01/17/future-workforce-planning/> (accessed on 14 November 2018).
5. Bayraktar, O.; Sencan, H. Employees' Approaches to Human Resources from the Asset-Resource Concepts Perspectives. *Int. J. Bus. Soc. Sci.* **2017**, *8*, 116–127.
6. Davis, P.J.; Simpson, E. Resource-Based Theory, Competition and Staff Differentiation in Africa: Leveraging Employees as a Source of Sustained Competitive Advantage. *Am. J. Manag.* **2017**, *17*, 19–33.
7. Bostjancic, E.; Slana, Z. The Role of Talent Management Comparing Medium-Sized and Large Companies—Major Challenges in Attracting and Retaining Talented Employees. *Front. Psychol.* **2018**, *9*. [CrossRef]
8. Kleiman, L.S.; Faley, R.H.; Faley, S.G. *Human Resource Management: Managerial Tool for Competitive Advantage*, 6th ed.; Kendall Hunt: Dubuque, IA, USA, 2012; pp. 17–24.
9. PwC Annual Report 2017–2018. Available online: <https://www.pwc.nl/nl/assets/documents/pwc-annual-report-2017--2018.pdf> (accessed on 22 October 2018).
10. Kenny, V.S. Employee Productivity and Organizational Performance: A Theoretical Perspective. *MPRA* **2019**. Available online: <https://mpa.ub.uni-muenchen.de/93294/> (accessed on 12 November 2019).
11. Verburg, R.M.; Nienaber, A.; Searle, R.H.; Weibel, A.; Den Hartog, D.N.; Rupp, D.E. The Role of Organizational Control Systems in Employees' Organizational Trust and Performance Outcomes. *SAGE J. Group Organ. Manag.* **2018**, *43*, 179–206. [CrossRef]
12. Leitao, J.; Pereira, D.; Goncalves, A. Quality of Work Life and Organizational Performance: Workers' Feelings of Contributing, or Not, to the Organization Productivity. *Int. J. Environ. Res. Public Health* **2019**, *16*, 3803. [CrossRef]
13. Motyka, B. Employee Engagement and Performance: A Systematic Literature Review. *Int. J. Manag. Econ.* **2018**, *54*, 227–244. [CrossRef]

14. Zabieh, L.E. Processes and Mechanisms of Creating and Maintaining Sustainable Competitive Advantage. *J. Financ. Serv. Mark.* **2014**, *21*, 47–48.
15. Al Adresi, A.; Darun, M.R. Determining Relationship between Strategic Human Resource Management Practices and Organizational Commitment. *Int. J. Eng. Bus. Manag.* **2017**, *9*. [CrossRef]
16. O’Riordan, J. The Practice of Human Resource Management. *Inst. Public Adm.* **2017**. Available online: https://www.ipa.ie/_fileUpload/Documents/THE_PRACTICE_OF_HRM.pdf (accessed on 3 September 2019).
17. Hamadamin, H.H.; Atan, T. The Impact of Strategic Human Resource Management Practices on Competitive Advantage Sustainability: The Mediation of Human Capital Development and Employee Commitment. *Sustainability* **2019**, *11*, 5782. [CrossRef]
18. Totterdill, P.; Exton, T.; Exton, R.; Gold, M. High-performance Work Practices in Europe: Challenges of Diffusion. *Eur. J. Workplace Innov.* **2016**, *2*, 63–81.
19. Porter, M.E. *Competitive Strategy. Techniques for Analyzing Industries and Competitors*, 1st ed.; The Free Press: New York, NY, USA, 1980; pp. 50–66.
20. Wojcik, P. Shortage of Talents—A Challenge for Modern Organizations. *Int. J. Synerg. Res.* **2017**, *6*, 123–135. [CrossRef]
21. Deloitte Global Human Capital Trends. Rewriting the Rules for the Digital Age. Available online: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/HumanCapital/hc-2017-global-human-capital-trends-gx.pdf> (accessed on 12 December 2018).
22. Noor, U.H.; Shahjehan, A. Role of Employer Branding Dimensions on Employee Retention: Evidence from Education Sector. *Adm. Sci.* **2018**, *8*, 44. [CrossRef]
23. Goessling, M. Attraction and Retention of Generations X, Y and Z in the Workplace. *Integr. Stud.* **2017**. Available online: <https://digitalcommons.murraystate.edu/bis437/66> (accessed on 30 August 2019).
24. CPWR. The Center for Construction Research and Training. Development of a Workforce Sustainability Model for Constructions. Available online: <https://bit.ly/2WrRKet> (accessed on 12 December 2018).
25. Hill, C.W.L.; Jones, G.R.; Schilling, M.A. *Strategic Management Theory*, 11th ed.; Cengage Learning: Stamford, CT, USA, 2015; pp. 82–108.
26. Glassdoor Research Report. Job Market Trends: Five Hiring Disruptions to Watch in 2019. Available online: <https://www.glassdoor.com/research/app/uploads/sites/2/2018/12/FINALGlassdoor2019JobTrends.pdf> (accessed on 24 November 2019).
27. Barney, J. Firm Resources and Sustained Competitive Advantage. *J. Manag.* **1991**, *17*, 99–120. [CrossRef]
28. O’Reilly, C.; Pfeffer, J. *Hidden Value: How Great Companies Achieve Extraordinary Results with Ordinary People*; Harvard Business School Press: Brighton, MA, USA, 2000; pp. 1–20.
29. Rennie, W.H. The Role of Human Resource Management and the Human Resource Professional in the New Economy. Ph.D. Thesis, University of Pretoria, Pretoria, South Africa, 2003.
30. Khandekar, A.; Sharma, A. Organizational Learning in Indian Organizations: A Strategic HRM Perspective. *J. Small Bus. Enterp. Dev.* **2005**, *12*, 211–226. [CrossRef]
31. Johnson, G.; Scholes, K.; Whittington, R. *Exploring Corporate Strategy*, 8th ed.; Prentice Hall, Financial Times: Essex, UK, 2008; pp. 473–515.
32. Wright, P.M.; Snell, S.A.; Jacobsen, H.H. Current Approaches to HR Strategies: Inside-Out versus Outside-In. *Hum. Resour. Plan.* **2004**, *27*, 36–46.
33. Ehnert, I. *Sustainable Human Resource Management: A Conceptual and Exploratory Analysis from a Paradox Perspective*; Physica: Berlin/Heidelberg, Germany, 2009; Available online: <https://www.springer.com/gp/book/9783790821871> (accessed on 7 December 2019).
34. Jabbour, C.J.C.; Santos, F.C.A. The Central Role of Human Resource Management in the Search for Sustainable Organizations. *Int. J. Hum. Resour. Manag.* **2008**, *19*, 2133–2154. [CrossRef]
35. Wright, P.M.; Dunford, B.B.; Snell, S.A. Human Resources and the Resource Based View of the Firm. *J. Manag.* **2001**, *27*, 701–721. [CrossRef]
36. Pellegrino, J.W.; Hilton, M.L. *Education for Life and Work. Developing Transferable Knowledge and Skills in the 21st Century*; The National Academies Press: Washington, DC, USA, 2012; pp. 21–36.
37. Müller, R.; Turner, R. Leadership Competency Profiles of Successful Project Managers. *Int. J. Proj. Manag.* **2010**, *28*, 437–448. [CrossRef]
38. Bartram, D. Assessment in Organizations. *Appl. Psychol. Int. Rev.* **2004**, *53*, 237–259. [CrossRef]

39. Mahdi, K.; Rahim, E. Application of Multi Criteria Decision Approaches for Personnel Selection Problem: A Survey. *Int. J. Eng. Res. Appl.* **2015**, *5*, 14–29.
40. Onalenna, S.; Robin, G.; Philip, C.H.; Pauline, B. Understanding Human Resource Management Practices in Botswana's Public Health Sector. *J. Health Organ. Manag.* **2016**, *30*, 1284–1300.
41. Laprade, N. The Competitive Edge: Creating a Human Capital Advantage for Kentucky. *Foresight* **2006**, *44*, 1–6.
42. Karami, A.; Analoui, F.; Cusworth, J. Strategic Human Resource Management and Resource-Based Approach: The Evidence from the British Manufacturing Industry. *Manag. Res. News* **2004**, *27*, 50–68. [[CrossRef](#)]
43. Stucke, M. Is Competition Always Good? *J. Antitrust Enforc.* **2013**, *1*, 162–197. [[CrossRef](#)]
44. Bhattacharya, A. Switching Costs and Sustained Competitive Advantage. *Int. J. Bus. Manag. Invent.* **2013**, *2*, 101–111.
45. Baldwin, R. *The Globotics Upheaval: Globalization, Robotics, and the Future of Work*, 1st ed.; Weidenfeld & Nicolson: New York, NY, USA, 2019; pp. 185–210.
46. Institute for Women's Policy Research. Occupational Segregation and the Gender Wage Gap: A Job Half Done. Available online: <https://iwpr.org/publications/occupational-segregation-and-the-gender-wage-gap-a-job-half-done/> (accessed on 28 December 2019).
47. Davis, P.J.; Frolova, Y.; Callahan, W. Workplace Diversity Management in Australia: What Do Managers Think and What are Organizations Doing? *Equal. Divers. Incl. Int. J.* **2016**, *35*, 81–98. [[CrossRef](#)]
48. Crites, S.N.; Dickson, K.E.; Lorenz, A. Nurturing Gender Stereotypes in the Face of Experience: A Study of Leader Gender, Leadership Style, and Satisfaction. *J. Organ. Cult. Commun. Confl.* **2015**, *19*, 1–23.
49. Ratcliff, N.J.; Vescio, T.K.; Dahl, J.L. (Still) Waiting in the Wings: Group based Biases in Leaders' Decisions About to Whom Power is Relinquished. *J. Exp. Soc. Psychol.* **2015**, *57*, 23–30. [[CrossRef](#)]
50. EUROSTAT. Only 1 Manager Out of 3 in the EU Is a Female. Available online: <https://ec.europa.eu/eurostat/documents/2995521/7896990/3-06032017-AP-EN.pdf/ba0b2ea3-f9ee-4561-8bb8-e6c803c24081> (accessed on 5 January 2019).
51. Razavi, S. The 2030 Agenda: Challenges of Implementation to Attain Gender Equality and Women's Rights. *Gend. Dev.* **2016**, *24*, 25–41. [[CrossRef](#)]
52. AAUW American Association of University Women. The Simple Truth About the Gender Pay Gap. 2018. Available online: <https://files.eric.ed.gov/fulltext/ED596219.pdf> (accessed on 29 October 2019).
53. Carral, P.; Alcover, C.M. Measuring Age Discrimination at Work: Spanish Adaptation and Preliminary Validation of the Nordic Age Discrimination Scale (NADS). *Int. J. Environ. Res. Public Health* **2019**, *16*, 1431. [[CrossRef](#)] [[PubMed](#)]
54. Voss, P.; Bodner, E.; Rothermund, K. Ageism: The Relationship between Age Stereotypes and Age Discrimination. In *Contemporary Perspectives on Ageism*; Ayalon, L., Tesch-Römer, C., Eds.; Springer: Berlin/Heidelberg, Germany, 2018; Volume 19. [[CrossRef](#)]
55. Society of Human Resource Management. Hiring in the Age of Ageism. 2018. Available online: <https://www.shrm.org/hr-today/news/hr-magazine/0218/pages/hiring-in-the-age-of-ageism.aspx> (accessed on 14 January 2019).
56. Stypinska, J.; Turek, K. Hard and Soft Age Discrimination: The Dual Nature of Workplace Discrimination. *Eur. J. Ageing* **2017**, *14*, 49–61. [[CrossRef](#)]
57. IZA Institute of Labor Economics. Population Ageing, Age Discrimination, and Age Discrimination Protections at the 50th Anniversary of the Age Discrimination in Employment Act. 2019. Available online: <http://ftp.iza.org/dp12265.pdf> (accessed on 12 January 2020).
58. Aaltio, I.; Salminen, H.; Koponen, S. Ageing Employees and Human Resource Management—Evidence of Gender-Sensitivity? *Equal. Divers. Incl. Int. J.* **2014**, *33*, 160–176. [[CrossRef](#)]
59. Nelson, K.L.; Newman, D.N.; McDaniel, J.R.; Buboltz, W.C. Gender Differences in Fear of Failure amongst Engineering Students. *Int. J. Hum. Soc. Sci.* **2013**, *3*, 10–16.
60. Axelrad, H.; Malul, M.; Luski, I. Unemployment Among Younger and Older Individuals: Does Conventional Data About Unemployment Tell Us the Whole Story? *J. Labor Market. Res.* **2018**, *52*, 3. [[CrossRef](#)]
61. TICAS The Institute for College Access&Success. 13th Annual Report Student Debt and the Class of 2017. 2018. Available online: https://ticas.org/wp-content/uploads/legacy-files/pub_files/classof2017.pdf (accessed on 4 September 2019).

62. Forbes. How to Use Employer Branding to Recruit Potential Employees. 2018. Available online: <https://www.forbes.com/sites/forbescommunicationscouncil/2018/08/28/how-to-use-employer-branding-to-recruit-potential-employees/#62f953ad7548> (accessed on 17 November 2019).
63. Suen, H.Y.; Chang, H.L. Toward Multi-Stakeholder Value: Virtual Human Resource Management. *Sustainability* **2017**, *9*, 2177. [CrossRef]
64. ISE (Institute of Student Employers). The Global Skill Gaps in the 21st Century. 2018. Available online: <http://info.qs.com/rs/335-VIN-535/images/The%20Global%20Skills%20Gap%2021st%20Century.pdf> (accessed on 15 February 2019).
65. World Universities Ranking. Graduate Employability Ranking. 2019. Available online: <https://www.topuniversities.com/university-rankings/employability-rankings/2019> (accessed on 15 February 2019).
66. Coverdill, J.E.; Finlay, W. *High Tech and High Touch: Headhunting, Technology, and Economic Transformation*; Cornell University Press: Ithaca, NY, USA, 2017; Available online: <https://digitalcommons.ilr.cornell.edu/books/140> (accessed on 15 January 2019).
67. United Nations. Department of Economic and Social Affairs. International Migration. 2019. Available online: https://www.un.org/en/development/desa/population/migration/publications/wallchart/docs/MigrationStock2019_Wallchart.pdf (accessed on 4 February 2020).
68. Society of Human Resource Management. Average Cost-per-Hire for Companies Is \$4,129, SHRM Finds. 2016. Available online: <https://www.shrm.org/about-shrm/press-room/press-releases/pages/human-capital-benchmarking-report.aspx> (accessed on 14 September 2018).
69. TalentNow. Recruit Smarter. Faster. Recruitment Statistics. Trends and Insights in Hiring Talented Candidates. 2018. Available online: <https://www.talentnow.com/recruitment-statistics-2018-trends-insights-hiring-talented-candidates/> (accessed on 4 January 2019).
70. Gino, F.; Staats, B. Why Organizations Don't Learn. *Harv. Bus. Rev.* **2015**, 110–118. Available online: <https://hbr.org/2015/11/why-organizations-dont-learn> (accessed on 6 January 2020).
71. Center for Ageing Better. Becoming an Age-Friendly Employer. 2018. Available online: <https://www.ageing-better.org.uk/sites/default/files/2018-09/Becoming-age-friendly-employer.pdf> (accessed on 24 January 2019).
72. Nottingham Trent University. New Migrants in the North East Workforce. Final Report. 2015. Available online: https://www.vonne.org.uk/sites/default/files/files/New%20Migrants%20in%20the%20NE%20Workforce%20Project%20Report_FINAL.pdf (accessed on 12 March 2019).
73. Citigroup. Migration and the Economy. Economic Realities, Social Impacts and Political Choices, Citi GPS: Global Perspectives and Solutions. 2018. Available online: https://www.oxfordmartin.ox.ac.uk/downloads/reports/2018_OMS_Citi_Migration_GPS.pdf (accessed on 14 February 2019).
74. Ghosh, K. Creative leadership for workplace innovation: An applied SAP-LAP framework. *Dev. Learn. Organ. An. Int. J.* **2016**, *30*, 10–14. [CrossRef]
75. Cortes, G.M.; Gallipoli, G. The Costs of Occupational Mobility: An Aggregate Analysis. *J. Eur. Econ. Assoc.* **2018**, *16*, 275–315. [CrossRef]
76. ERM European Restructuring Monitor Annual Report. Globalization Slowdown? Recent Evidence of Offshoring and Reshoring in Europe. 2017. Available online: <https://www.eurofound.europa.eu/ro/publications/executive-summary/2017/erm-annual-report-2016-globalisation-slowdown-recent-evidence-of-offshoring-and-reshoring-in-europe> (accessed on 23 January 2019).
77. IFR Robotics. Robots and the Workforce of the Future. 2019. Available online: https://ifr.org/downloads/papers/IFR_Robots_and_the_Workplace_of_the_Future_Positioning_Paper.pdf (accessed on 6 January 2020).
78. Gartner Reports Fourth Quarter. Financial Results. 2018. Available online: <https://investor.gartner.com/press-releases/press-release-details/2019/Gartner-Reports-Fourth-Quarter-2018-Financial-Results/default.aspx> (accessed on 29 December 2019).
79. Latham, S.; Humbert, B. Four Ways Jobs Will Respond to Automation. *MIT Sloan Manag. Rev.* **2018**, *60*, 11–14. Available online: <https://sloanreview.mit.edu/article/four-ways-jobs-will-respond-to-automation/> (accessed on 3 March 2019).
80. Davenport, T.; Kirby, J. *Only Humans Need Apply: Winners and Losers in the Age of Smart Machines*, 1st ed.; HarperCollins Publishers: New York, NY, USA, 2016; pp. 131–150.
81. World Economic Forum. The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution. 2016. Available online: https://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf (accessed on 12 October 2019).

82. Foundation for Young Australians. The New Work Order. Report Series. 2017. Available online: https://www.fya.org.au/wp-content/uploads/2017/07/NWO_ReportSeriesSummary.pdf (accessed on 16 December 2019).
83. Mohem-Alizadeh, H.; Handfield, R.B. Developing Talent from a Supply-Demand Perspective: An Optimization Model for Managers. *Logistics* **2017**, *1*, 5. [CrossRef]
84. Deloitte Insights. Accessing Talent: It's More Than Acquisition. 2017. Available online: <https://www2.deloitte.com/us/en/insights/focus/human-capital-trends/2019/talent-acquisition-trends-strategies.html> (accessed on 28 February 2020).
85. McKinsey&Company. Attracting and Retaining the Right Talent. 2017. Available online: <https://www.mckinsey.com/business-functions/organization/our-insights/attracting-and-retaining-the-right-talent> (accessed on 28 February 2020).
86. World Economic Forum. Migration Can Support Economic Development If We Let It. Here's How. 2019. Available online: <https://www.weforum.org/agenda/2019/03/migration-myths-vs-economic-facts/> (accessed on 12 October 2019).
87. ZipRecruiter. Even If Their Jobs Disappear, Manufacturing Workers Will Still Thrive. 2018. Available online: <https://www.ziprecruiter.com/blog/manufacturing-workers-will-thrive/> (accessed on 28 February 2020).

© 2020 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).