

Factors that contribute to the development and labor integration of people with disabilities (PwD) in industrial SMEs in Perú.

Sandra Peña-Jara, Carlos Augusto Lizárraga-Portugal and Juan Carlos Quiroz-Flores

Facultad de Ingeniería y Arquitectura, Universidad de Lima, Perú
20172470@aloe.ulima.edu.pe, clizarra@ulima.edu.pe, jcquiroz@ulima.edu.pe

Abstract

In Peru there are different vulnerable groups, with approximately 10.3% of the Peruvian population belonging to the group of people with disabilities (PwD) presenting some physical and/or mental condition that may limit their performance and labor integration, so it is very important to carry out this research to know the factors that contribute to facilitating the labor integration of PwD in industrial SMEs in Peru. The study design is empirical and qualitative with a grounded theory approach. For its development, three industrial companies that had jobs occupied by people with disabilities were summoned, and the interview technique was applied in order to understand the position of the actors related to the problem; taking a sample of 9 people who participated freely and voluntarily prior invitation and information on the scope of the study, choosing these people regardless of their age or sex. The study made it possible to provide a model of knowledge of the relevant factors for the labor integration of PwD and the level of effort on the part of the organization: a) the type of work, with 33%; b) the adequacy of the work, with 33%; c) awareness of work, with 22%; d) the evaluation of the capacities and performance of workers with disabilities, with 12%

Keywords

Labor inclusion, disability, human development, employability, integration strategies.

1. Introduction

In Peru there are more than 3 million people with some condition and/or permanent limitation that prevents them from developing normally in their daily work activities; that is, almost 10.3% of the Peruvian population (Instituto Nacional de Estadística e Informática [INEI] 2021) and that according to information from the United Nations Population Fund, 77% of PwDs do not participate in the labor market; that is, they face an unemployment rate three times higher than the unemployment rate of the population without disabilities (United Nations, 2019).

The United Nations General Assembly adopted as Sustainable Development Goals to 2030, to achieve full and productive employment and ensure decent work for all men and women, including youth and persons with disabilities, and equal pay for work of equal value; and in that sense the state has made an important step by applying minimum quotas for hiring PwD in companies, according to the General Law of Persons with Disabilities requires that private companies with 50 or more workers must hire a minimum of 3% of workers with disabilities and in 5% for public sector companies (Law N. ° 29973 2012); however, aspects such as the training facilities required by PwD to perform in a job position; or the physical accessibility required to reach the work centers; or the adequacy that the employer must make in the facilities to provide facilities to the worker have not yet been resolved; or in a special case, the awareness that should be given to the company's workers in order to avoid situations of discrimination or abuse of PwDs; and in other cases, the adaptation of procedures and work methods that facilitate the fair integration of PwDs would be pending (Botha and Leah 2020).

It is essential to promote and strengthen corporate social responsibility policies embodied in the mission, vision and values of the organization. According to Ngalula et al. (2020) one of the problems facing the world today is the improvement of the daily lives of people who have some kind of disability, as they are deprived of the political, social, economic and cultural sector. Therefore, it is important to raise awareness and inform society about the importance of providing greater employment opportunities for people with disabilities, as it is essential to break stereotypes and discriminatory barriers in order to improve employment rates of PwD (Diaz 2019, Friedman 2020).

This research is particularly important to promote the understanding of factors that can contribute to ensure the development and integration of PwDs in job performance and, moreover, this study can explore new research approaches to fill the knowledge gap for the benefit of PwDs in the workplace. It is pertinent to pose the research question to be solved: what factors contribute to the development and integration of people with disabilities (PwD) in the workplace?

1.1 Objectives

The objective of the research is to identify the factors that contribute to the development and labor integration of Persons with Disabilities (PwD) in industrial SMEs in Peru.

2. Literature Review

At the end of the 17th century and beginning of the 19th century, people with some type of disability received a more humane treatment under the influence of social movements and events such as the French Revolution that took place in 1789; society adopted specialized practices to support people with disabilities through special education, which became more influential in the 20th century (Palacios 2008). In the second half of this century, the social model appeared with the rise of the independent living movement in Europe and the United States, which fought for a dignified treatment and independent living of people with disabilities, so it was proposed to adapt the environment to the needs of this group of people recognizing the social need for all sectors of society to facilitate the integration of people with different abilities, and in this sense, it is no longer considered that PwD are people totally dependent on others, but that they have skills and competencies that can provide these people with the opportunity to contribute and be useful to society (Muñoz et al. 2022).

The qualification of persons with disabilities (PwD) currently refers to people with some condition that limits their ability to perform some activity and thus the World Health Organization (WHO 2011) states that persons with disabilities are those who have some impairment that may be physical, intellectual, sensory or mental of long duration that when exposed to society faces various barriers that may prevent them from participating efficiently and on an equal footing with other people.

In Peru, the legal regulations through Ley 29973 establishes the protection and promotes equal opportunities and inclusion of people with disabilities in social, economic, political and economic life, pointing out the right of accessibility to education and equal opportunities in the educational and labor field.

According to the World Health Organization [WHO] it is estimated that 1 in 7 people suffer from some type of disability, which represents approximately 15% worldwide and that they are constantly discriminated by society in various ways within a social context as well as in the opportunities to get a job (WHO 2011).

The issue of inclusion of people with disabilities is very important, in Latin America people with disabilities face high levels of inequality of employment opportunities compared to people without disabilities (Pinilla-Roncancio and Rodriguez 2022). Although within corporate social responsibility is the issue of the inclusion of people with disabilities (Gálvez et al. 2021), many companies still do not implement it due to different factors such as lack of information, since it is believed that these people cannot perform different tasks in a job and that they could delay the company's activities (Grześkowiak et al. 2021).

Bonaccio et al. (2020) give evidence-based answers to the concerns employers have when hiring people with disabilities, some of them are performance, adequate support, costs, and safety. According to Jansen et al. (2021) employers play an important role in the work participation of workers with disabilities, facilitation in the work area and supervisor support were found to be important factors for good performance.

While the implementation and proper use of human resource practices for people with disabilities is important, it is crucial to see the goal of this inclusion as it will ultimately benefit the whole society and motivate to work in an inclusive system (Schloemer et al. 2022).

According to the authors Lindsay et al. (2018) hiring people with disabilities promotes greater diversity and benefits the company by improving its corporate image, employee loyalty, turnover, etc. He also points out that employees

with disabilities are more reliable, punctual and put more effort into their work so they have higher productivity compared to other employees in organizations.

This concept should be taken into account for the integration of people with disabilities into the labor market, since one of the main problems faced by the world's population in recent years has been the lack of jobs, especially for the elderly or people with disabilities, since it is difficult for them to access the labor market. However, the employment rate remains low for people with disabilities despite national efforts to find employment (Bush and Tassé 2017).

3. Methods

The labor market integration of people with disabilities still presents limitations that need to be improved because, to a certain extent, people with these conditions are still excluded from work. The business sector is the protagonist of the labor market and the fundamental agent to achieve true integration, either through compliance with established laws and regulations, or through corporate social responsibility, which governs the integration of workers with disabilities.

In order to know the factors that can contribute to the development and integration of people with disabilities in industrial SMEs in Peru, this research was carried out with an empirical design, qualitative and with a grounded theory approach at a descriptive level. It is empirical because information is obtained through observation and experience of lived events (Cohen and Gómez 2019). It is qualitative because it is practical, interpretative and based on people's experience (Marshall and Rossman 1999), allowing to obtain data in a precise way through a not very large number of interviews helping to record and process more adequately all the information. And it is descriptive because it is based on facts that allow a correct explanation of the observed phenomenon.

The in-depth interview was used as a research technique, which according to Taylor and Bogdan (1987) allows the collection of qualitative data from the follow-up of the prepared interview script, which embodies the topics expected to be addressed during the session. Finally, a semi-structured interview instrument was used to provide a greater degree of flexibility with planned questions that can be adjusted according to the interviewees; a conversational tool designed to approach the discourse of the research participants, clarify terms and identify ambiguities to understand their perceptions about the research topic (Hernández et al. 2014).

4. Data Collection

For the research, 3 industrial SMEs were selected, the object of the research are people with disabilities in industrial SMEs and the unit of study are the entrepreneurs, the disabled themselves and the workers who belong to these companies. The sample is 9 people, individuals were chosen regardless of age or sex (people participated voluntarily). The interview was conducted over a period of two weeks according to the availability of the participants, this was done individually in sessions of approximately 30 minutes with each one. In order to be able to collect data necessary for the research, the interviews were recorded and later transcribed with the permission of the companies and people who participated.

The research was structured in two parts, the first consisting of personal data such as age, sex, level of studies and job position. The second part consists of 5 open questions. For this, different questions were asked according to the unit to which they belonged (managers, people with disabilities and workers belonging to these companies). The dimensions to be evaluated are job characteristics, job satisfaction, working conditions, incorporation to the job and labor relations. See Table 1

The interview began with the introduction of the interviewer, explaining the purpose of the research work, the expectations of the interviewees, and it was considered necessary to ask permission from each of the participants for the interview to be recorded. The interviewer then began with personal and open-ended questions, giving a reasonable amount of time to answer each one of them (obtaining as much information as possible). Finally, confidentiality of data was guaranteed and thanks were expressed for the time given.

Table 1. Interview structure

Interviewee	Personal data	Open-ended questions
Bosses	1. Gender	<ol style="list-style-type: none"> 1. What is your concept of people with disabilities? 2. Do you have personnel with disabilities in the work areas? 3. What type of personnel with disabilities? 4. What are your filters for hiring personnel? Do people with disabilities have the same filters or do they differ in any way? 5. What were the barriers to incorporating people with disabilities?
People with disabilities (PwD)	<ol style="list-style-type: none"> 2. Age 3. Level of education 	<ol style="list-style-type: none"> 1. Has it been difficult to adapt to the area in which you are currently working? 2. How do you feel about your co-workers and bosses? 3. Do you feel valued in the company where you work? 4. Are your opinions taken into account? 5. Is the area in which you operate adapted to your needs?
Collaborators	4. Position held	<ol style="list-style-type: none"> 1. What is your concept of people with disabilities? 2. What is your opinion about the insertion of PwD in the labor market? 3. How do you feel about working with PwD? 4. Do you feel that a PwD contributes in the same way as other people? Why? 5. Do you think that companies should adapt the work environment to people with disabilities?

5. Results and Discussion

5.1 Characteristics of the persons interviewed

The people interviewed for this research were 9, as follows: 3 workers with some type of disability (D1, D2, D3), 3 PwD managers (J1, J2, J3), and 3 co-workers (T1, T2, T3). See Table 2

Table 2. Data of the interviewed persons

No. Interviewee	Gender	Age	Condition	Education level	Position
J1	Female	49	None	Industrial Engineer	Operations and maintenance manager
J2	Male	49	None	Industrial Engineer	Human Resources Manager
J3	Male	33	None	Industrial Engineer	Logistics Manager
T1	Female	30	None	Electrical engineer	Analyst
T2	Female	42	None	Business Administrator	Analyst
T3	Female	25	None	Warehouse technician	Warehouse Assistant
D1	Male	39	Physical disability	Machine Technician	Machine operator
D2	Male	35	Physical disability	Business Administrator	Administrative Assistant
D3	Female	27	Intellectual disability	Technician in administrative sciences	Analyst

In this way the age distribution of the participants in the research. See Figure 1

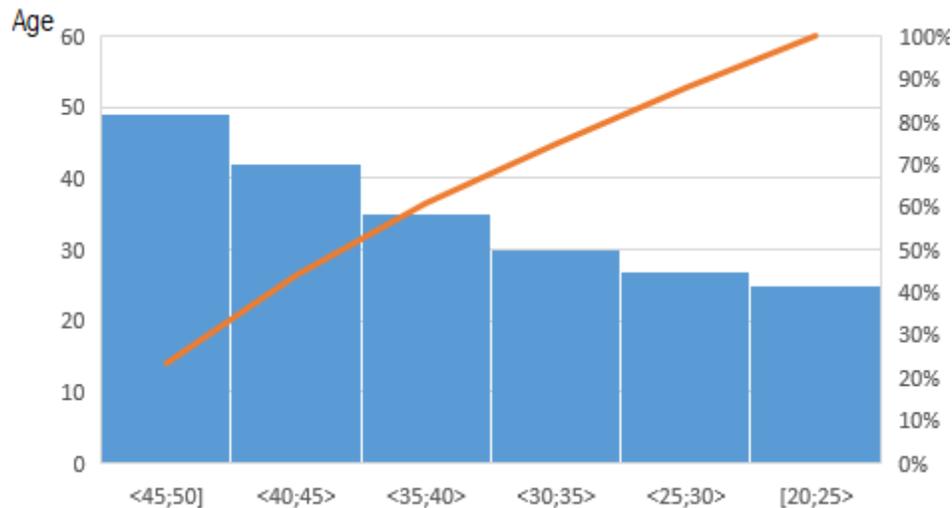


Figure 1. Age distribution by participants

5.2 Main findings in the interview with managers

Currently, people with disabilities present different obstacles to society, which leads to inequality, especially in the labor area. In several cases, in spite of having the same capacities to develop in a job position, they are not taken into account by the companies.

We can consider that, according to the in-depth interview, in which the topic of the selection process for people with disabilities in equality was carried out, the interviewed managers state that the companies to which they currently belong hire this type of people.

For the selection process, a call is made for people with disabilities, indicating the level of studies and skills required for this position, after passing this filter, a knowledge test is performed in which several applicants are discarded and, finally, there is the psychological test (respondents: J1, J2).

In another case the company does not make a different call for people with disabilities, they do it in a general way evaluating the level of study and knowledge they have without any distinction (respondent: J3).

Despite the fact that the General Law for People with Disabilities establishes the requirement that companies adapt the workplace to the different conditions of the worker, many companies do not have the necessary information on existing disabilities, so they do not know how to adapt the workplace to the type and degree of disability that the person has.

One of the interviewees commented that the company hired people with disabilities but it was not possible to achieve complete adaptation of jobs, since one of the barriers to including this group of people was the economic issue, so it was not possible to complete this task (respondent: J1).

In another company, before a person with a disability enters the company, training was conducted for all employees and awareness workshops were also held; this company has adapted the positions of its workers with disabilities; however, it does not perform adequate follow-up, which does not allow identifying if any change is required (respondent: J2). Finally, there are companies in which, although they integrate people with disabilities, they have not considered adapting jobs, having as a barrier the economic factor and time (respondent: J3).

5.3 Main findings in the interview with persons with disabilities (PwD)

For many years the problem regarding the labor market, discrimination continues to be a latent issue for people with some type of disability, which prevents them from accessing the same job opportunities as any other person (Diaz 2019). On the other hand, this echo also occurs within the same organizations, either by the bosses or the same colleagues who exclude PwD. According to the statements of the respondents, the following responses were obtained:

For the interviewee (respondent: D1) at the beginning it was difficult to adapt to the job, because the organization did not have adequate space to move around, so he needed help. Currently he is happy in his job, he feels that his work is valued, he receives bonuses for good work, his ideas are taken into account and the environment is pleasant.

For the interviewee (respondent: D2) it was easy to adapt to his job, since he had experience, and the company provided him with training before starting the job. He comments that he currently feels motivated in his work area because he has the help of his colleagues and he is offered continuing education, which makes it easier for him to perform his duties.

Finally, the interviewee (respondent: D3) said that it was difficult for him to adapt in his work environment because there was not enough support from his superiors and he felt excluded, currently he feels relatively well because he was able to establish ties with his colleagues and bosses, he does not feel very motivated in his work area so he would like to have more training, highlight good work and perform practices of recognition of collaborators; on the other hand, it is still missing that the company can adapt the jobs according to the needs of each disabled person belonging to the company, so it is difficult for him to develop his work properly.

5.4 Main findings in the interview of co-workers

Yeo and Moore (2003) point out that people with some type of disability face limited employment and income-generating opportunities, which is due to early discrimination such as childhood and/or continuing disability resulting in a lack of education, work opportunities, work experience and confidence.

It is therefore important to be able to protect the rights of people with disabilities to work on an equal basis with others, which includes fair working conditions, job opportunity, remuneration for work performed, but most importantly in safe and stable working conditions, validation of rights and protection from harassment or discrimination. According to the interview with co-workers many of them felt that it was difficult at the beginning to accept a person with a disability at work.

For the interviewee (respondent: T1) it was difficult to accept a person with a disability in his area, because at the beginning he thought that they would be a burden, would not contribute and would make his work difficult, but after dealing with these people he realized how important they are and that they can develop different skills in a job.

The interviewee (respondent: T2) had no problems with people with disabilities, from the beginning he supported so that they can perform better in the work area, since for him it has nothing to do with whether they are disabled or not. What he said is "It is important to give opportunities to people who have some kind of disability since many of them may be more capable than oneself for jobs".

At first the interviewee (respondent: T3) had the idea that people with disabilities would be a burden for the company and for him because it would delay the work, as well as they would also have a special treatment from the company, but over time he realized that in the company everyone is treated equally, but they need support to be able to achieve a good job.

The authors Pinilla-Roncancio and Rodriguez (2022) point out that corporate social responsibility in Latin American countries still differs in terms of labor equity. Although many companies have the incentive to be able to hire disabled employees, they still do not have a clear concept. When analyzing all the data of the people interviewed, it agrees with what was said in this article, since it is observed that both bosses and coworkers do not have much knowledge about the topic of disability and much less about the types of disability that exist, although they incorporate people with disabilities in different areas, it is difficult for them to feel familiar with the conditions that they need to develop in a better way, so many think that they are not productive enough and therefore could delay different areas, more they see it as a burden for the company (respondents: J1, J2, J3, T1, T2, T3).

Analyzing the article by Espinoza and gallegos (2018) the authors say that to achieve true labor inclusion many additional aspects must be considered, such as providing technology and technological tools, giving good treatment and building friendly relationships, which coincides with what was said by the interviewees who have some type of disability, since for them one of the most important factors are feeling valued by the company, having a good work environment and having adequate facilities to be able to develop (respondents: D1, D2, D3).

According to Bonaccio et al. (2020) the concerns that employers have when hiring people with disabilities are performance, adequate support, costs and safety, when comparing what was said by the interviewed managers mostly the implementation costs are the most worrying since being SMEs, they do not have the money for such a case (respondents: J1, J2, J3).

In addition, due to the perception of people with disabilities by many employers, they perceive them as unproductive and that their employment entails high costs of adaptation and technical resources for its implementation, so a timely intervention should be assigned to the control entities of public policy, this coincides with what was said by co-workers since they initially see people with disabilities as a "burden", they will not help at work and that will be a very high cost for the company (respondents: T1, T2, T3).

Through the analysis of the results of the study, the factors that influence the labor integration of the PwD in the scope of the analyzed case were determined: a) the type of work, b) the adaptation of the work, c) the awareness for the work, and d) the evaluation of the abilities and performance of workers with disabilities. In this sense, after completing all the interviews, the assessment of the factors exposed in the opinion of the people who make up the investigation was considered; identifying the impact they could have on the organization's efforts and resources, as shown in Figure 2:

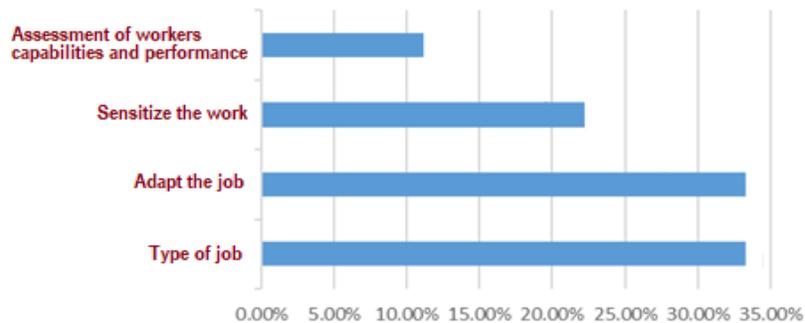


Figure 2. Importance of the factors that influence the labor integration of PwD

5.5 Proposed Model

After analyzing the results of the interviews, the following proposed model was developed. See Figure 3.

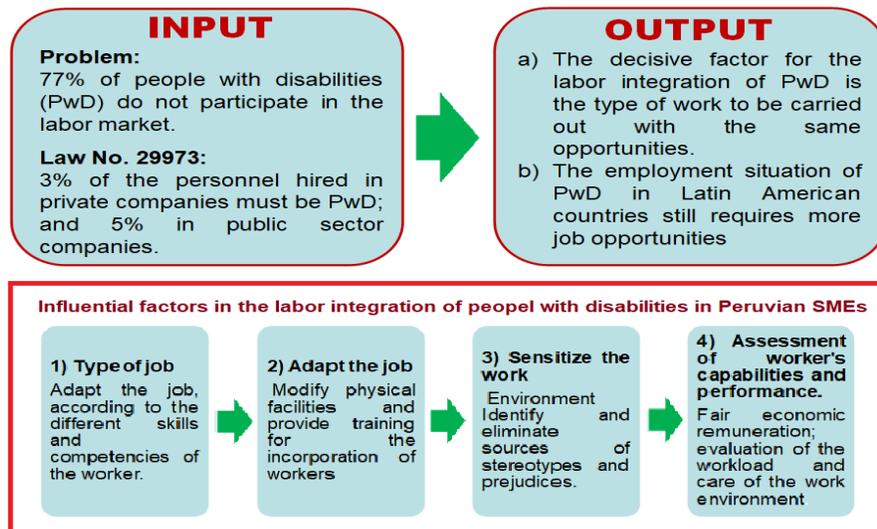


Figure 3. Knowledge contribution model

The following factors, analyzed in terms of their impact to favor the integration of workers with disabilities, placing the following factors in order of priority and influence on the results:

First: Type of job

Its impact is fundamental to the extent that different disability conditions can be more easily adapted to a position that requires different skills and competencies; and at this point it is necessary for the organization to have a personnel selection area that can evaluate the correspondence between what the position requires and what people with different conditions can adapt to the profile of the position. This aspect is closely related to the criteria of remuneration and fees in a balanced way that responds to a fair homologation.

Second: Adapt the job

Which includes adapting and modifying the company's physical facilities for workers with disabilities, training workers, incorporating workers with disabilities into emergency and contingency response procedures, changes in communication and operation methods and procedures, among others.

Third: Sensitize for work

Explained in the physical conditions of the workplace, as well as the acceptance of workers with disabilities by the rest of the workers and bosses; which can basically be achieved by defining an integration policy for the entire company and which the highest authority endorses; implying adapting operational procedures in all areas.

Fourth: Assessment of the skills and performance of workers

Factor that should have less impact if the organization has correctly adapted the previous aspects, in work methods, performance rating systems, fair financial remuneration, evaluation of the workload for each position, as well as strengthening of the culture organization and care of the work environment.

According to the article by Espinoza and Gallegos (2018), the authors mention that in order for there to be good inclusion, it is important to add technological tools, provide good treatment and cordial relationships at work. This is consistent with what was said by the people interviewed, since an important factor for them is having a good work environment in which their ideas are taken into account, benefits are offered, they are motivated and trained. Well, it is shown from their answers that there are still prejudices, stereotypes and a lack of opportunities.

Unlike the article by Velarde et al. (2018) the present work focused on finding the factors that contribute to the integration of people with disabilities. However, they agree on an important point and that is that this article mentions that Peruvian law is not complied with when including people with disabilities, this is demonstrated in the previous points, since some interviewees mention that it is not counted with the appropriate facilities and environment when including them.

6. Conclusion

One of the factors that contribute favorably to the development and labor integration of PwD highlighted by the different people interviewed are the valuation and environment at work (their ideas are taken into account, benefits are offered, they are motivated and receive training), the type of job and the implementations that are made within the company according to the conditions of the people with disabilities hired. Although many companies have the incentive to hire disabled employees, some organizations in Peru still differ in terms of labor equity, many companies still do not have a clear concept about the inclusion of people with disabilities (PWD), when analyzing the interviews to bosses and coworkers, their perception is that people with some type of disability could delay the work, will not provide any benefit to the company and will be a high cost implementation, so many companies create additional positions (not important for the company). Therefore, it is important that the HR area has to be in constant training, and not just create a position that is not needed in the company to include them. On the other hand, it is highlighted that one of the biggest problems for people with disabilities when entering the companies were the inadequate facilities, which limits (makes it difficult) for them to develop in their work area, as well as the issue of the relationship with colleagues. Finally, the inclusion of people with disabilities in the workplace eliminates different stereotypes, generates a better work environment and changes workers' perceptions.

References

- Bonaccio, S., Conelly, C., Gellatly, I., Jetha, A. and Martin, K., The Participation of People with Disabilities in the Workplace Across the Employment Cycle: Employer Concerns and Research Evidence, *Journal of Business and Psychology*, vol. 35, pp. 135-158, 2020.
- Botha, P., and Leah, L., Exploring public sector managers' attitudes towards people with disabilities. *SA Journal of Human Resource Management*, vol.18, pp. 1-10, 2020.
- Bush, K. and Tassé, M., Employment and choice-making for adults with intellectual disability, autism, and down syndrome, *Research in Developmental Disabilities*, vol. 65, pp. 23-34, 2017.
- Cohen, N. and Gómez, G., *Metodología de la investigación, ¿para qué?: la producción de los datos y los diseños*, Teseo, 2019.
- Díaz, J., Discapacidad en el Perú: Un análisis de la realidad a partir de datos estadísticos, *Revista Venezolana de Gerencia*, vol. 24, no. 85, pp. 243-263, 2019
- Espinoza, M. and Gallegos, D., Labor insertion of people with disabilities in Ecuador, *Espacios*, vol. 39, no. 51, pp. 1-15, 2018.
- Friedman, C., The relationship between disability prejudice and disability employment rates, *Work*, vol. 65, no. 3, pp. 591-598, 2020.
- Gálvez, F., Morales, S., Rodríguez, V. and Martínez, V., Propuesta metodológica de indicadores de impacto en RSC para favorecer la inclusión laboral de personas con discapacidad: Un estudio de caso de Futurvalía Multiservicios Empresariales. *Revista Prisma Social*, vol. 35, pp. 91-116, 2021.
- Grześkowiak, A., Załuska, U., Kwiatkowska-Ciotucha, D., Kozyra, C., People with Disabilities in the Workplace: Results of a Survey Conducted among Polish and Finnish Employers. *International Journal of Environmental Research and Public Health*, vol. 18, no. 20, 2021.
- Hernández, R., Fernández, C. and Baptista, M., *Metodología de la Investigación*, 6^a Edición, McGraw Hill/Interamericana Editores S.A., 2014.
- Instituto Nacional de Estadística e Informática. *Perfil sociodemográfico de la población con discapacidad 2017*, 2021
- Jansen, J., Van Ooijen, R., Koning, P., Boot, C., and Brouwer, S., The Role of the Employer in Supporting Work Participation of Workers with Disabilities: A Systematic Literature Review Using an Interdisciplinary Approach, *Journal of Occupational Rehabilitation*, vol. 31, pp. 916-949, 2021
- Ley N.º 29973, Ley General de la Persona con Discapacidad, 2012.
- Lindsay, S., Cagliostro, E., Albarico, M., Mortaji, N., and Karon, L., The Participation of People with Disabilities in the Workplace Across the Employment Cycle: Employer Concerns and Research Evidence, *Journal of Occupational Rehabilitation*, vol. 28, pp. 634-655, 2018.
- Marshall, C and Rossman, G., *Designing Qualitative Research*, 3rd Edition, SAGE publishing, California, 1999.
- Muñoz, P., Escobar, J., García, R. and Aguaded, I., Educomunicación inclusiva y discapacidad en la región andina: revisión cualitativa de avances y logros, *Global Social Policy*, vol. 32, no. 1, pp. 67-78, 2021.
- Ngalula, A., Mukandu, L. and Lofandjola, j. Opinions and perceptions of people living with physical disabilities of the lower limbs regarding their recruitment in the public or private sector in Kananga city, *Medicine and Public Health*, vol. 15, 2020.
- Palacios, A., *El modelo social de discapacidad: orígenes, caracterización y plasmación en la Convención Internacional sobre los Derechos de las Personas con Discapacidad*, 1st Edition, Grupo editorial CINCA, 2008.
- Pinilla-Roncancio, M. and Rodríguez, N., Legislation on Disability and Employment: To What Extent Are Employment Rights Guaranteed for Persons with Disabilities? *International Journal of Environmental Research and Public Health*, vol. 19, no 9, 2022.
- Schloemer, A., Bader, B. & Böhm, S., The role of human resource practices for including persons with disabilities in the workforce: a systematic literature review, *The International Journal of Human Resource Management*, vol. 33, pp. 45-98, 2022.
- Taylor, S. and Bogdan, R., *Introduction to Qualitative Research Methods*, 1st Edición, Paidós, 2019.
- United Nations. Joint Employment and Disability Programme. 2019
- Velarde, A., Llinas, A. & Barboza, M., Inclusión de las personas con discapacidad en el mercado laboral peruano, *Equidad y desarrollo*, vol. 33, pp. 57-78, 2018.
- World Health Organization, *2011 World report on disability*, 2011.
- Yeo, R. and Moore, K., Including Disabled People in Poverty Reduction Work: Nothing About Us, Without Us, *World Development*, vol. 31, no. 3, pp. 571-590, 2003.

Biography

Sandra María Peña-Jara is a Tenth cycle student of industrial engineering at the University of Lima, Peru. Interested in supply chain management and logistics. With knowledge of SAP, Power BI, data analysis tools, process diagnostics, flowcharts, DAP and DOP. As a complement, she participated in The Fresh Connection, a complete supply chain simulator.

Carlos Augusto Lizárraga-Portugal is an Industrial Engineer from Universidad de Lima, Cum Laude. Master in Administration - ESAN; Doctor in Education, Universidad San Martín de Porres. Post Degree in Auditing and Implementation of Integrated Management Systems (Quality ISO9001, Environment ISO 14001, Occupational Health and Safety OHSAS18001, Social Responsibility). Business Consultant specializing in Strategic Planning, Occupational Health and Safety Management Systems, Logistics Management, Purchasing Management, Strategic Inventory Control - Supply Chain Management, Warehouse Management, State Purchasing Process, Costs and Production Management. Experience in Sectors such as Apparel, Plastics, Industrial Footwear, Fishing, Services, Marketing, Training, etc. Professor at the University of Lima in the Industrial Engineering Career, teaching courses on Integral Safety, Maintenance Management, Business Diagnostics and Research Projects. Trainer and facilitator in Seminars on Strategic Planning, Business Organization, Production Management, Operations Management, Strategic Inventory Control, Chain Supply Management, Industrial Safety and Integral Safety Management.

Juan Carlos Quiroz-Flores is an MBA from Universidad ESAN. Industrial Engineer from Universidad de Lima. PhD in Industrial Engineering at Universidad Nacional Mayor de San Marcos, Black Belt in Lean Six Sigma. Current is Undergraduate teaching at Universidad de Lima. Expert in Lean Supply Chain and Operations with over 20 years of professional experience in the direction and management of operations, process improvement and productivity; specialist in the implementation of Continuing Improvement Projects, PDCA, TOC and Lean Six Sigma. Leader of transformational projects, productivity and change generator. Capable of forming high-performance teams, aligned to company strategies and programs for “Continuous Improvement”. He has published journal and conference papers and his research interests include supply chain management and logistics, lean manufacturing, lean six sigma, business process management, agribusiness, design work, facility layout design, systematic layout planning, quality management and Lean TPM. He is member of IEOM, IISE, ASQ, IEEE and CIP (College of Engineers of Peru).