

ORIGINAL ARTICLE

Disability and Labor Market Participation in the Department of Cusco

Discapacidad y participación en el mercado laboral en el departamento del Cusco

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Abstract

This article aims to identify the factors that influence labor market participation among persons with disabilities in the department of Cusco during 2022. A quantitative approach with an explanatory scope and a cross-sectional design is adopted, using data from the National Household Survey and a Probit model estimated in Stata 15. The explanatory variables are grouped into individual, human capital, and socioeconomic factors. The results show that language, age, and the presence of cognitive and motor disabilities significantly reduce the probability of labor market participation. Education and work experience are relevant variables, although with opposite effects. Likewise, residing in urban areas and receiving transfers from the "Contigo" program negatively affect labor market participation. It is concluded that, while individual factors explain labor market participation to a greater extent, human capital and socioeconomic factors offer greater scope for government intervention to promote inclusion and harness the economic potential of this population.

Palabras clave: labor force participation, people with disabilities, individual factors, human capital, socioeconomic factors

Resumen

Este artículo tiene como objetivo identificar los factores que influyen en la participación en el mercado laboral de las personas con discapacidad en el departamento del Cusco durante el año 2022. Se adopta un enfoque cuantitativo, de alcance explicativo y diseño transversal, utilizando datos de la Encuesta Nacional de Hogares y un modelo Probit estimado en Stata 15. Las variables explicativas se agrupan en factores individuales, de capital humano y socioeconómicos. Los resultados evidencian que el idioma, la edad y la presencia de discapacidades cognitivas y motoras reducen significativamente la probabilidad de participación laboral. La educación y la experiencia laboral resultan variables relevantes, aunque con efectos opuestos. Asimismo, residir en zonas urbanas y recibir transferencias del programa "Contigo" inciden negativamente en la participación laboral. Se concluye que, si bien los factores individuales explican en mayor medida la participación laboral, los factores de capital humano y socioeconómicos ofrecen mayores márgenes de intervención estatal para promover la inclusión y aprovechar el potencial económico de esta población.

Keywords: participación laboral, personas con discapacidad, factores individuales, capital humano, factores socioeconómicos

1. Introducción

People with disabilities (PWD)¹ represent approximately 15% of the world's population and face multiple structural, physical, and social barriers that limit their access to education, basic services, and employment (WHO and WB, 2011). These restrictions affect their well-being, reduce human capital, and generate significant economic losses, estimated at between 5% and 6% of global GDP, and between 3% and 7% in Latin America and the Caribbean (García, Schwartz, and Freire, 2021). In Peru, this exclusion amounts to up to 9% of real GDP (WB, 1995; cited by Metts, 2000).

Although the Peruvian government is developing a regulatory and institutional framework to promote inclusion, the labor participation of PWDs remains limited. According to the 2017 Census, only 40% of PWDs are economically active (INEI, 2019), although other institutions indicate that this percentage is even lower, at 23% (UNFPA, 2018). Evidence shows that this low participation is due to individual, human capital, and socioeconomic factors, the effects of which vary by region (Huamán, 2019; Zevallos, 2022; CONADIS, 2022).

In the department of Cusco, where 11% of the population has a disability (INEI, 2018), more than 90% of this group is of working age. The participation rate is 12% lower than that of PSDs. The main reasons for inactivity are health conditions (76%), dedication to the home (7.2%), and other factors (CONADIS, 2022). Despite this situation, there is little recent empirical research that allows us to understand the determinants of their labor participation.

In this context, the present study aims to determine the factors that influence the labor participation of PWDs in the department of Cusco during 2022. A quantitative, explanatory, and cross-sectional approach is used, through a Probit econometric model, employing data from the National Household Survey (ENAHU). The explanatory variables are grouped into individual, human capital, and socioeconomic factors, the results of which provide evidence for designing more inclusive public policies adapted to territorial realities.

2. Theoretical framework

2.1 Background

García, Schwartz, and Freire (2021) analyze the socioeconomic conditions of PWDs in Latin America and the Caribbean, and according to their results, lower labor participation rates were identified in the 18–25 and 46–59 age groups, with insertion levels of 44.7% and 49.7%, respectively. Women also face lower participation, with a difference of 17.1% compared to men. In addition, people with intellectual disabilities have lower labor market participation, attributed to stigma and underestimation of their abilities. It also highlights that a significant proportion of PWDs enter the labor market with only incomplete primary or secondary education, which limits their access to skilled jobs and relegates them to informal and low-productivity jobs. Finally, the study warns that state monetary benefits, while providing economic support, can discourage job search and create dependency.

Benalcázar (2022) investigated the determinants of labor force participation among people with disabilities in Ecuador using a Probit model and data from the 2018 National Health and Nutrition Survey (ENSANUT). His results indicate that the probability of entering the labor market increases by 6.4% for each additional year of age, but begins to decrease slightly after age 40, by 0.1%. Women are 30.4% less likely to participate than men, while belonging to an indigenous ethnic group increases this probability by 8.1%. Education has a positive effect: having some level of education increases participation by 79%, compared to a 7.4% reduction among those with no schooling. Living in rural

1. The term "persons with disabilities" will be abbreviated as PWD, and "persons without disabilities" as PWD, as in previous research such as that by Cazallas (2016), Huamán (2019), and Jiménez (2020).

areas increases participation by 3.7%, but receiving non-labor income or a disability allowance reduces this probability by 25%.

Delgado (2022) analyzed the labor participation of PWDs in Colombia using data from the Quality of Life Survey (ECV) and a Logit model. His results show that having a disability reduces the probability of labor participation by 3.75% compared to those without a disability. In addition, each additional year of life reduces this probability by 1.24%. In contrast, formal education has a positive effect, as each additional year of study increases the probability of participation by 1.15%. However, participation in job training programs did not show statistically significant effects.

Huamán (2019) used a Logit model with data from the National Specialized Survey on Disability (ENEDIS) to identify the characteristics that differentiate PWDs who participate in the labor market. The results indicate that PWD with hearing impairments are 4% more likely to participate in the labor market, while being female reduces this probability by 8%. Achieving a higher level of education increases it by 1% and receiving job training by 18%. On the other hand, being a beneficiary of a social program or having a disability certificate is not significant. Differential treatment and family overprotection reduce participation by 3.9% and 4.6%, respectively. Likewise, being the head of the household increases the probability by 12%, while receiving alimony reduces it by 1.5%.

Jiménez (2020) used a Probit model with data from ENAHO (2016–2019) to analyze the determinants of labor participation among PWDs in Peru. The results indicate that, between the ages of 25 and 59, 70.5% of PWDs have higher participation, while among those over 60, the probability drops to 11.2%. Mental disability had the greatest negative effect, with a 0.46% drop in participation. In addition, living in an urban area increases the probability by 0.6%, receiving government transfers reduces it by 0.2%, each additional year of education increases it by 0.03%, and having a dependent person in the household decreases it by 0.06%. It also observes lower participation among women, with a reduction of 0.9%. The study concludes that educational level is not a determining factor in this group, given that the labor market values the development of practical skills more highly. Likewise, although transfers reduce labor supply, they are relevant for improving the living conditions of a highly vulnerable population.

Zevallos (2022), using a Logit model with data from the 2019 ENAHO for Lambayeque, found that all disabilities reduce labor force participation, with a more pronounced effect in cases of physical and mental disabilities related to comprehension, with a 14% drop in both cases. Assuming the role of head of household increases the probability of participation by 11%, while being married or cohabiting reduces it by 2.7%. Contrary to expectations, an additional year of education decreases this probability by 1%, and receiving subsidies reduces it by 7.9%. The author concludes that, although education can boost the employability of PWDs, structural barriers and discriminatory social attitudes persist, limiting their inclusion in the labor market.

2.2 Theoretical basis

Leisure-consumption model: This model posits that individuals choose between working and spending their time on leisure, evaluating the marginal benefit of each option. This theory allows us to understand how social transfers or other sources of non-labor income can modify the incentive to participate in the labor market (Borjas, 2013; Neffa, 2007).

Job search model: This introduces the concept of reservation wage, understood as the minimum acceptable income for a person to decide to work (Borjas, 2013). For PWDs, this wage is usually higher due to additional expenses related to their condition, such as transportation or medical care, and additional non-labor income, such as subsidies or pensions, which increase their reservation wage. When faced with a lower market wage, their willingness to enter the market decreases (Cazallas, 2016).

Human capital theory: Becker (1964) and Schultz (1961) explain that education and work experience are crucial investments for the development of human capital, so the labor factor is not homogeneous due to the quality of capital acquired. Lucas (1988) adds that human capital allows individuals to adapt to changes in the productive sphere and in their institutional environment.

Health capital model: Grossman (1972); Velarde, 2015; Cazallas, (2016) incorporate health as an essential component of human capital, therefore, it is a fundamental determinant of labor productivity; according to this model, illnesses or disabilities limit both a person's time and ability to participate in work activities, directly affecting their economic contribution.

Time allocation model: Becker (1965) and Pagán (2013) emphasize that work decisions are made taking into account family and social constraints. In households with dependents or disabled persons, the distribution of time and income can condition labor participation, especially in the case of women, who face a double burden due to gender and health reasons.

Social welfare stigma model: Moffitt (1983) argues that access to social benefits can generate a disutility associated with stigma, increasing the incentive to work. In the case of PWDs, this model explains why some prefer to remain beneficiaries rather than enter the formal labor market, especially if labor income does not compensate for the loss of subsidies (Bound and Burkhauser 1999; Huamán, 2019; García, Schwartz, and Freire, 2021).

3. Methodology

This study adopts a quantitative approach that is explanatory and cross-sectional in scope. According to Hernández, Fernández, and Baptista (2010), quantitative research is characterized by being structured and sequential, allowing for the formulation and testing of hypotheses through numerical measurement and statistical analysis. The design was cross-sectional, as data collected at a single point in time was used. In this case, microdata from the 2022 ENAHO, produced by the National Institute of Statistics and Informatics (INEI), were used.

The unit of analysis consisted of PWDs aged 14 and over residing in the department of Cusco who reported at least one permanent limitation. The final sample consisted of 347 valid observations.

Given that the dependent variable—economic participation of PWDs—is dichotomous: one (1) if they belong to the economically active population (EAP) and zero (0) if they belong to the economically inactive population (EIP), a binary choice Probit model was estimated, in line with previous studies such as those by Cazallas (2016), Benalcázar (2022), Delgado (2022), Huamán (2019), Jiménez (2020), and Zevallos (2022).

The functional form of the Probit model is expressed as:

$$P_i = \text{Prob}(y_i = 1|x_i) = \Phi(X_i\beta) \quad , \quad u_i \sim N(0, \sigma_u^2) \quad (1)$$

Where: y_i represents the dependent variable, X_i is the vector of independent variables, and Φ is the standard normal cumulative distribution function. According to Wooldridge (2015), this function transforms the linear index $X_i\beta$ into a probability within the range (0,1), and is represented as:

$$G(y_i) = \Phi(y_i) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{y_i} e^{-\frac{z^2}{2}} dz \quad (2)$$

The independent variables considered in the model were selected based on previous economic literature on labor participation of PWDs and are grouped into three analytical dimensions:

- Individual factors: Gender, language, age group, type of disability, head of household, and whether married or cohabiting with a partner.
- Human capital factors: Years of formal education, work experience, and their quadratic form to capture nonlinear effects.
- Socioeconomic factors: Area of residence, head of household, number of dependents in the household, perception of cash transfers from other households, and whether the household is a beneficiary of social programs such as "Contigo" or "Juntos."

The econometric analysis was performed using Stata 15 software. The coefficients of the Probit model were estimated, as well as their respective marginal effects, in order to assess the magnitude and direction of the impact of each variable on the probability of labor participation among PWDs.

4. Results

According to the results of the descriptive analysis, Table 1 showed that the 65+ age group had the highest percentage of PWDs, 54% of the total, while the younger age groups, such as 35–44 and 25–34, had the lowest percentages, with 2% and 7%, respectively. In addition, the older the age group, the higher the percentage of motor, visual, and hearing disabilities.

In terms of language, 77% of PWDs reported Quechua as their mother tongue, followed by Spanish with 16% and other languages with 6%. Among Quechua speakers, the highest percentages were for motor and visual disabilities, with 88% in both cases, while among those who reported Spanish as their mother tongue, emotional disabilities stood out, with 67%.

In terms of educational level, speech and cognitive disabilities were more prevalent among those with no formal education, at 50% in both cases. Overall, 35% of PWDs had no formal education, and an equal percentage had only completed primary school, while only 3% had access to higher education.

Table 1. Cusco: Sociodemographic profile of PWD: Age, language, and education, 2022

	Types of disability						Total
	Motor	Visual	Speech	Hearing	Cognitive	Emotional	
Age Groups							
14–24	3%	7%	44%	3%	23%	22%	11%
25–34	2%	1%	16%	5%	16%	16%	7%
35–44	1%	1%	6%	2%	6%	4%	2%
45–54	17%	5%	3%	10%	3%	16%	10%
55–64	18%	17%	3%	23%	18%	3%	16%
65+·	59%	69%	28%	57%	34%	38%	54%
Language							
Quechua	88%	88%	34%	83%	56%	2%	77%
Spanish	12%	11%	34%	11%	31%	67%	16%
Other languages	0%	1%	31%	6%	13%	31%	6%
Educational level							
No education	36%	26%	50%	29%	50%	40%	35%
Beginner	37%	41%	28%	33%	19%	35%	35%
Primary level	14%	27%	6%	25%	16%	10%	19%
Secondary edu- cation	9%	3%	6%	9%	8%	9%	7%
Higher education	4%	3%	3%	3%	3%	4%	3%
Special basic	0%	0%	6%	1%	3%	1%	1%

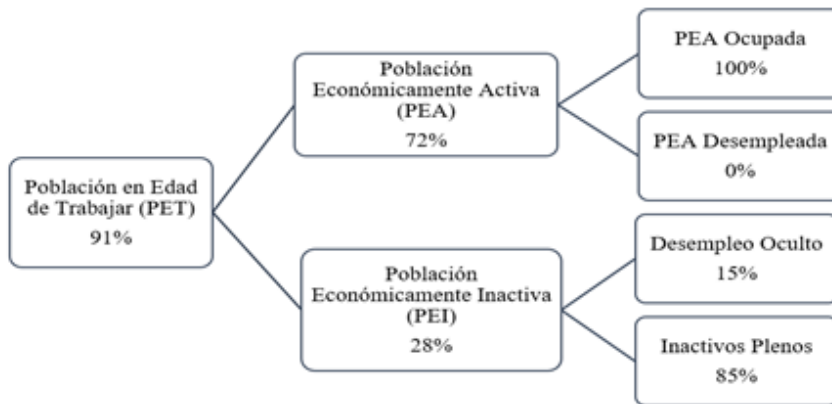
Note: Prepared using data from the ENAHO, 2022

In terms of employment status, Figure 1 shows that 91% of PWDs were part of the EAP. Of this total, 72% were part of the EAC, and 28% were part of the EAI. It should be noted that, within the EAP, 100% were employed; and within the IAE, 15% were in hidden unemployment, i.e., they were not looking for work due to discouragement or other reasons, but would be available to work. Finally, 85% were classified as fully inactive.

Table 2 shows that 79% of PWDs worked in the agricultural sector and 13% in services, commerce, and unskilled jobs, followed by the construction and restoration sectors with 5%, and technical and professional jobs with just 4%.

According to the results of the descriptive statistics, Table 3; shows a relatively balanced distribution by sex, with a high proportion of heads of household, 67%. With regard to disabilities, 43.2% of people reported visual impairment, 38.6% motor impairment, 33.1% hearing impairment, 19.6% emotional impairment, 17.9% cognitive impairment, and only 9.2% speech impairment.

Figure 1. Cusco: Employment status of PWDs



Note: Prepared with data from ENAHO, 2022

Table 2. Cusco: Sectors of employment for persons with disabilities

Activity category	%
Technical and professional	4%
Service, commerce, unskilled labor	13%
Construction and restoration	5%
Livestock farming and agriculture	79%
Total	100%

Note: Prepared using data from the ENAHO, 2022

In terms of education, the average was 5.05 years, and work experience reached 49 years; according to residence, 38% lived in urban areas. Finally, 15.3% were beneficiaries of the "Juntos" program, 8.1% of the "Contigo" program, and 92.5% received transfers from other households.

The Probit model estimation identified the main factors influencing the labor participation of PWDs in Cusco. Among individual factors, age group had a significant negative effect, with PWDs aged 65 and over having a 36.25% lower probability of labor participation compared to the reference group. Similarly, cognitive and motor disabilities significantly reduced labor force participation, with cognitive disabilities having the greatest negative effect, at 13.25%. In contrast, hearing disabilities increased the probability of participation by 12.52%; in addition, being the head of household increased labor force participation by 16.16%.

In terms of human capital factors, an additional year of education had a negative effect, minus 2.09%, while work experience had a positive influence, increasing the probability of participation by 2.59% for each additional year. The quadratic variable of experience was significant and negative, suggesting diminishing returns.

Regarding socioeconomic factors, living in an urban area reduced participation by 16.66%, being a beneficiary of the "Contigo" social program reduced it by 15.09%, receiving transfers from other households reduced it by 16.45%, and having a dependent person in the household reduced it by 3.47%.

5. Discussion

The results obtained show that the gender variable is not statistically significant. This result contradicts the international findings of García, Schwartz, and Freire (2021) and Benalcázar (2022), and some national findings such as those of Huamán (2019) and Jiménez (2020), who argue that women with disabilities are less likely to be economically active due to the double burden of discrimination based

Table 3. Cusco: Descriptive statistics of the variables in the econometric model

Variables	Mean	Std. Dev.	Min	Max
PEA	0.720	0.4494207	0	1
Gender	0.487	0.5005536	0	1
Language	0.207	0.4719304	0	2
Age groups	3.873	1.576948	0	5
Motor	0.386	0.4875727	0	1
Visual	0.432	0.4961077	0	1
Speech	0.092	0.2897527	0	1
Hearing	0.331	0.4714006	0	1
Cognitive	0.179	0.3836326	0	1
Emotional	0.196	0.3975152	0	1
Head of household	0.674	0.4692933	0	1
Married cohabiting	0.487	0.5005536	0	1
Years of education	5.055	5.015571	0	20
Experience	49.014	23.8803	0	87
Experience2	2971.037	1989.346	0	7569
Residence	0.380	0.4861871	0	1
Dependent persons	0.605	1.13141	0	6
Beneficiary of "Juntos"	0.153	0.360254	0	1
Beneficiary of "Contigo"	0.081	0.2727543	0	1
Transfer from other households	0.925	0.2636552	0	1

Note: Prepared using results obtained from ENAHO, 2022, and executed in Stata 15

on gender and disability. This idea is in line with Becker's (1965) time allocation theory, expanded upon by Cazallas (2016). However, in Cusco, the labor participation of PWDs does not seem to be conditioned by gender, but rather by the role they occupy within the household.

In particular, being the head of the household increases the probability of participation by 16.16%, in line with Becker (1965) and the study by Zevallos (2022), which suggest that this role entails greater economic pressure to contribute to household income. Likewise, the presence of dependents in the household—who require care and do not generate their own income—decreases the probability of participating in the labor market by 3.47% for each additional person, reflecting how the burden of care can restrict access to employment.

In relation to the type of disability, the results indicate that people with hearing disabilities are 12.52% more likely to participate in the labor market. This finding coincides with that of Huamán (2019) and Benalcázar (2022), who point out that, given their limitations in verbal communication, many of these individuals find employment in occupations where this skill is not essential. In the case of Cusco, a significant proportion are engaged in agriculture and livestock farming, which are predominantly informal and physically demanding activities.

In contrast, cognitive disability reduced participation by 13%, which may be due to the fact that nearly 50% of people with this condition lack formal education. This result is in line with García, Schwartz, and Freire (2021) and Zevallos (2022), who highlight how low educational levels, stigma, and underestimation of abilities hinder their entry into the labor market. Similarly, motor disability reduced participation by 7.37%, possibly due to architectural barriers and high transportation costs, as pointed out by the job search model adapted by Cazallas (2016).

With regard to age, the results show that PWDs aged 65 and over are less likely to participate in the labor market than those aged 14 to 24, by 36.25%. This finding is related to Grossman's (1972) health capital theory, which argues that declining health reduces productive capacity as age advances, a phenomenon also observed in the context of Cusco, where the older the age group, the lower the probability of participation.

In terms of human capital factors, years of formal education had a negative effect of 2.09% on labor participation. This result contradicts Becker's (1964) assertion that higher education is associated with higher labor participation. This discrepancy can be explained by the fact that in the Cusco context,

Table 4. Results of coefficients and marginal effects of the econometric model

Variables			Coefficients	Marginal Effects
			Coef.	dy/dx
INDIVIDUAL FACTORS	Gender	Female	(Ref.)	(Ref.)
		Male	-0.5592*	-0.0747*
	Language	Quechua	(Ref.)	(Ref.)
		Spanish	-0.5946	-0.0857
		Other Languages	-3.5039***	-0.5709***
	Age groups	14-24	(Ref.)	(Ref.)
		25-34	-1.8639***	-0.0787**
		35-44	-3.0425***	-0.1566**
		45-54	-2.7602**	-0.1362*
		55-64	-4.4999***	-0.2885***
		65+	-5.0890***	-0.3625***
	Types of Disability	Motor	-0.5562**	-0.0737**
		Visual	0.2625	0.0348
		Speech	-0.2217	-0.0294
		Hearing	0.9453***	0.1252***
		Cognitive	-0.9999***	-0.1325***
		Emotional	-0.1705	-0.0226
HUMAN CAPITAL	Head of household	No	(Ref.)	(Ref.)
		Yes	1.1094***	0.1616**
	Married-cohabiting	No	(Ref.)	(Ref.)
		Yes	-0.086	-0.0114
	Years of Education		-0.1574***	-0.0209***
	Experience		0.1954***	0.0259***
SOCIOECONOMIC FACTORS	Experience2		-0.0026***	-0.0003***
	Residence	Rural	(Ref.)	(Ref.)
		Urban	-1.0916***	-0.1666***
	Dependent persons		-0.2621*	-0.0347**
	Beneficiary of "Contigo"	No	(Ref.)	(Ref.)
		Yes	-1.1391**	-0.1509**
	Beneficiary of "Juntos"	No	(Ref.)	(Ref.)
		Yes	-0.31	-0.0411
	Transfers from other households	No	(Ref.)	(Ref.)
		Yes	-1.2413**	-0.1645**
Number of observations: 347			Significance level: *** p<0.01, ** p<0.05, * p<0.1	

Note: Ref. corresponds to the reference variable. Own elaboration, results of the Probit model executed in Stata15

PWDs have an average of 5 years of education and 35% have not reached any level of education. Furthermore, although a considerable percentage have low levels of education, this does not necessarily reflect a lack of interest in studying, but rather responds to the existence of attitudinal and infrastructural gaps that hinder their sustained access to education. In addition, due to the limitations inherent to their condition, many PWDs must choose between studying or working, which restricts their possibilities for comprehensive development.

On the other hand, work experience had a significant positive effect, increasing the probability of participation by 2.59% for each additional year. This finding reinforces the theories of Becker (1964) and Schultz (1961), highlighting that the accumulation of work experience is a key component of human capital. Therefore, in the case of PWDs in Cusco, it can be observed that the market values work experience more than formal education, although this does not necessarily translate into higher wages. This is because a large part of this social group is employed in low-productivity sectors such as agriculture and livestock, where unskilled labor is predominant. Furthermore, being part of the labor market does not guarantee that PWDs will overcome their vulnerability, as the jobs they tend to occupy are mostly informal and low-income.

With regard to socioeconomic factors, it has been observed that living in urban areas reduces labor participation by 16.66%. Although this finding contradicts that reported by Jiménez (2020),

in the context of Cusco it can be explained by the fact that job opportunities for PWDs are mainly concentrated in rural activities. In contrast, jobs in urban areas require higher levels of education and work experience, requirements that PWDs in the department are unlikely to meet, given that only 3% of them have attained higher education.

It has been shown that being a beneficiary of the "Contigo" program reduces the probability of labor participation by 15%. Although only 8% of PWDs are beneficiaries, this result is consistent with Zevallos (2022), Benalcázar (2022), and García, Schwartz, and Freire (2021), who argue that while state subsidies contribute to alleviating poverty, they can also create disincentives to work by encouraging dependency. According to Moffit (1983), people with low opportunity costs show a lower preference for work, as labor income fails to cover their basic needs. Likewise, Cazallas (2016) warns that being a beneficiary of social programs can reinforce the self-perception of vulnerability. In the case of the "Contigo" program, as it is aimed exclusively at PWD in extreme poverty and with severe disabilities, it could be reinforcing an identity of economic inactivity, which ultimately has a negative impact on the willingness to participate in the labor market.

Finally, income transfers from other households reduce labor participation by 16%. This result is in line with the income effect proposed in Becker's (1965) time allocation model, according to which an increase in non-labor income reduces the need to earn one's own income, thus reducing the labor supply. Similarly, the job search model adapted by Cazallas (2016) argues that these transfers raise the reservation wage above the market wage, discouraging active search for formal employment and negatively affecting labor participation.

6. Conclusions

It is evident that individual factors have a greater impact on the labor participation of PWDs in the department of Cusco. Specifically, variables such as advanced age, speaking another language, and cognitive and motor disabilities significantly reduce this probability. However, it was observed that being the head of household increases it, reflecting the impact of the economic role within the household on the decision to participate in the labor market.

In terms of human capital, accumulated work experience increases participation, while years of formal education have a negative effect, reflecting that, in contexts such as the department of Cusco, skills obtained in the labor market are more valued than formal education in the labor participation of PWDs.

Socioeconomic factors, such as living in an urban area, having dependents in the household, receiving cash transfers from other households, or being a beneficiary of the "Contigo" program, decrease labor force participation. This finding reinforces the hypothesis that certain forms of state support, while essential for alleviating poverty, can act as disincentives to entering the formal labor market.

In general, although individual factors explain labor participation to a greater extent, it is human capital and socioeconomic factors—particularly education and social programs—that offer the greatest scope for public policies aimed at increasing the stock of human capital, reducing the costs of access to the labor market, and correcting structural failures, thereby improving the efficiency and equity of the labor market for this vulnerable group.

Contribution of the authors

Rafael Fernando Vargas: [Methodology](#), [supervision](#), [validation](#), [visualization](#), [revision and editing](#)

Laydi Milagros Tecse Ortiz [Conceptualization](#), [investigation](#), [formal analysis](#), [drafting of original document](#),

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Conflicto de intereses

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